
Chapter Objectives

- To introduce background knowledge about a firm's globalization.
- To study the globalization of operations strategy from three views (competency, resource, and processes) of operations strategy.
- To discuss the globalization of manufacturing and basic manufacturing globalization modes.
- To discuss the globalization of service operations and basic services globalization modes.

2.1 Globalization of a Firm

With the increasing interdependence of national economies and cross-border movement of products, labor, information, technology, and capital, firms are going global to pursue profits in global market (see, e.g., Ethier 1986). This section examines how a firm goes global and presents globalization approaches, stages, components, and directions. Although the content is in global strategy, we present it as a foundation for the following global operations strategy.

2.1.1 Globalization Approaches

A firm can go global through two types of globalization approaches. In the 1960s and 1970s, global strategy literature emphasized the market entry models, as MNEs were expanding from Western countries to new markets. In the 1980s and 1990s, the major problem became the configuration and coordination of value-chain activities to optimize competitive advantages, as many MNEs had entered new markets. This section focuses on market entry models, and we will visit the second type in Sects. 3.2.4, 3.2.6, and 3.2.7.

“Buying versus building” is the basic decision in globalization, and acquisition and internal development are the primary globalization approaches (see Lee and Lieberman 2010; Yip 1982). Other approaches are interorganizational arrangements including joint venturing (Kim and Hwang 1992), licensing, and other partnerships. We present the following five approaches.

- Acquisition: A firm can enter market by acquiring an existing firm or a business unit. For example, Lenovo entered the US market by acquiring the personal computer unit of IBM.
- Internal development: A firm can enter a market organically through internal development and build wholly owned subsidiaries. For example, Microsoft built Microsoft Research Asia in Beijing.
- Joint venturing: A firm can enter a market by setting up a joint venture with another existing firm.
- Licensing: A firm can enter a market through a licensing agreement with other existing firms. Some global hotel chains and fast food chains will adopt this approach for going global.
- Partnership (excluding joint ventures and licensing): A firm can enter a market through a long-term supplier relationship. Huawei is selected as a preferred supplier and signs a global framework agreement with Vodafone. Airlines go global by building huge global alliances such as SkyTeam.

2.1.2 Globalization Stages

(1) Uppsala globalization stages

Johanson and Vahlne (1977, 1990, 2006) maintain the “enterprise gradually increases its international involvement” (Johanson and Vahlne 1990, p. 11), and market entry is usually disturbed by the psychic distance, from differences in language, cultural, and political systems, with larger gaps between the firm and the markets than physical distance. By increasing its experience overseas, the firm acquires new knowledge and can gradually gain a stronger commitment to overseas markets. Assuming that internationalization is the consequence of a series of incremental decisions and the main obstacles are lack of knowledge and recourse, Johanson and Wiedersheim-Paul (1975) introduce the Uppsala internationalization model, and identify four sequential stages of the internationalization process:

1. No regular export activities.
2. Export via agents.
3. Establishment of overseas sales subsidiary.
4. Overseas production and manufacturing units.

Johanson and Vahlne (1977, 1990) extend this model to a dynamic international model, assuming the market knowledge and market commitment affect both commitment decision and current activities, which in turn influence market knowledge and market commitment. Bradley (1995) thinks that foreign market entry strategies usually accord with the sequential stages of exporting, competitive alliances, acquisition, and foreign direct investment.

(2) The product lifecycle theory

Vernon (1966, 1971) presents a firm's internationalization process following the product lifecycle after observing that products were initially produced in the US, developed in other developed countries in their maturity phase, and finally serve developing countries. Vernon identified three stages:

1. New product. US firms are likely to be the first to develop new products with more flexibility in the introduction stage.
2. Maturing product. Firms try to achieve economies of scale through mass production with a degree of product standardization, and expand products in other developed countries.
3. Standardized product. Firms enter developing countries with standardized products.

(3) Other viewpoints on globalization stages

Many scholars (e.g., Andersen 1993) think that the stage internationalization model proposed in the 1960s and 1970s cannot explain the internationalization of many firms today. For example, different from Uppsala model, LVMH, a leading MNE in luxury products, does not globalize its manufacturing activities. Different from the Vernon theory, which presents one-way globalization from developed countries to developing countries, today's firms such as Tata, Lenovo, Haier, and Huawei are moving from emerging countries to developed countries.

The main opposition is from the "born global" theory (see Rennie 1993), arguing that many firms do not follow the incremental stage approach but start their international activities from their birth. The "born global" theory identifies two types of exporters: "domestic-based" firms and "born global" companies. The later ones are flexible, normally compete in niche markets, and move fast.

2.1.3 Globalization Components

Yip (2003) proposes the concept of the total global strategy, consisting of three separate components or stages.

1. Developing the core strategy. A firm may develop the core strategy in the home country, which is the basis of the organization's global competitive advantage.
2. Internationalizing the core strategy. A firm conducts the international expansion of activities and masters the basics of international business.
3. Globalizing the international strategy. A firm integrates the strategy across countries.

2.1.4 Globalization Directions

Figure 2.1 presents four possible internationalization directions. Simple directions from developed countries to developed ones or from developing countries to

Developed countries	Globalization 1 <i>Internationalization 1</i> Example: Walmart, McDonald's, Carrefour	<i>Internationalization 2</i>
Origins		
Developing countries	<i>Internationalization 3</i>	Globalization 2 <i>Internationalization 4</i> Example: Infosys, Hailer, Tata, Lenovo
	Developing countries	Destinations Developed countries

Fig. 2.1 Globalization direction

developing ones are not real globalization directions, which are supposed to include operations in both developed and developing countries. A firm’s globalization may develop along multiple directions in different stages. For example, Coca-Cola first grew from developed countries to developed ones, then to developing ones. Huawei first grew from developing countries to developing ones, then to developed ones.

1. From developed countries to developing countries.
Microsoft (US), IBM (US), Walmart (US), VW (Germany), Carrefour (France), and LV (France) grew from developed countries to developing countries. The advantages of these firms are in technology (e.g., Microsoft), advanced management experiences (e.g., Walmart and Carrefour), product quality (e.g., LV), and strong financial capacities (e.g., KFC). They enter developing countries for market, raw materials, labor, or to overcome trading barriers. They often meet challenges from legal (e.g., protection of intelligence property), political, social (e.g., poverty problem), and environmental systems (e.g., pollution).
2. From developing countries to developed countries.
Infosys (India), Wipro (India), Cemex (Mexico), Haier (China), Lenovo (China), and Huawei (China) grew from developing countries to developed countries. The advantages of these firms are in low-cost resources or special natural resources. They enter developed countries mainly for market, technology, and talent, but often meet challenges from product quality, world-class service, technology, and international business knowledge.

Case Example: Globalization of Coca-Cola

Coca-Cola Company was a local company in Atlanta that was initially sold as a patented medicine. Now Coca-Cola Company is one of the largest MNEs in the world, and Coca-Cola sells a series of carbonated soft drinks sold in more than 200 countries (see Table 2.1), with more than 1.7 billion beverage servings sold each day.

The Coca-Cola products are globalized by increasing product mixes to respond to local customers throughout the world. The original version of

Table 2.1 Globalization of the Coca-Cola Company

Time	Location	Events
1886–1892	Atlanta	John Pemberton developed Coca-Cola and sold it at Jacob's Pharmacy in Atlanta, Georgia, as a patent medicine. Then Asa G. Candler secured rights to the business and became the company's first president
1893–1904	The US	In 1894, Joseph Biedenharn became the first to put Coca-Cola in bottles. In 1899, three businessmen in Tennessee obtained exclusive rights to bottle Coca-Cola, and developed the Coca-Cola bottling system
1905–1918	8 countries	In 1916, the bottlers approved the unique contour bottle. The company entered Canada, Panama, Cuba, Puerto Rico, France, and others
1919–1940	53 countries	In 1919, Asa Candler sold the Coca-Cola company to the Woodruff family. In 1923, Robert Woodruff became the president and led the expansion of Coca-Cola overseas. In 1928 Coca-Cola supported the Amsterdam Olympics
1941–1959	120 countries	During World War II, the company grew rapidly and Coca-Cola was introduced to many countries and peoples for the first time
1960–1981	163 countries	The company expanded with product types (e.g., Sprite). The company's presence worldwide grew rapidly, and it entered China in 1978
1982–1989	165 countries	The company released Diet Coke and New Coke into global competition
1990–1999	Nearly 200 countries	The company expanded through acquisitions of brands like "Limca" in India and Cadbury Schweppes' beverage brands
2000–present	More than 200 countries	Coca-Cola is one of the most ubiquitous brands in the world. The Coca-Cola company becomes a symbol for the globalization of MNEs

Coca-Cola launched in 1886. In the process of globalization, the company launched Diet Coke in 1982, the caffeine-free version of Coca-Cola in 1983, Coca-Cola Cherry in 1985, Coca-Cola with Lemon in 2001, Coca-Cola Vanilla in 2002, and Coca-Cola Citra in 2006.

The production and distribution of Coca-Cola are globalized with a franchising operational mode. The Coca-Cola Company produces only concentrates, beverage bases, and syrups, which it sells to bottlers in the world. Bottlers, holding Coca-Cola franchises in specific geographical areas, produce the final drink by mixing the syrup with filtered water and sweeteners, and then carbonating. Then the bottling partners package, merchandise, and distribute the final branded beverages to customers and retailing partners, who then sell products to consumers.

The organization of Coca-Cola is globalized in two dimensions. Vertically, Coca-Cola is globalized along the supply chain and of relevance to the franchising system. The Coca-Cola supply chain comprises Coca-Cola Company and nearly 300 bottling partners worldwide. Horizontally, Coca-Cola is globalized in

different regions, by building six operating groups – Eurasia, Africa, Europe, Latin America, North America, and the Pacific – and employing approximately 146,200 associates.

(Source: The Coca-Cola Company Heritage Timeline)

Case Questions

1. How did the Coca-Cola Company go global as a firm?
2. How did the Coca-Cola Company go global in terms of operations strategy (competency, resource, and process)?

2.2 Globalization of Operational Competencies, Resources, and Processes

2.2.1 Globalization of Operational Competencies

Globalization can enhance the operational competency of a firm by providing new conditions, reduce the competency of a firm by imposing new constraints, change the definition of a competency from the domestic market, and influence elements constituting a competency.

- Cost

Globalization brings new cost challenges in transportation, tariff, tax, and duty. Globalized cost control needs to examine not only manufacturing cost, but also total landed cost and total cost of ownership in the global supply chain. Globalized cost competency is based on the low cost among not only domestic rivals, but also global competitors. Fortunately, globalization provides new processes like outsourcing, new resources like low-cost labor and raw materials, new technologies to reduce production cost, new facilities to reduce manufacturing and logistics costs, and new management skills such as tax-aligned supply chain management to reduce total landed cost.

- Flexibility

Global flexibility refers to the ability to change manufacturing products and services to respond to fluctuations of global demand in the dimensions of both time and scope. On the one hand, a global operations strategy needs the construction of flexibility to exploit uncertainty over future changes (Kogut 1985). On the other hand, market heterogeneity and region differences impose higher requirement on scope flexibility of products and service.

Globalization can lead to either product and service standardization in some fields such as medicine products, or increase willingness to manifest localized taste differences in other fields such as clothing and foods. Global companies can benefit from capabilities to respond to local taste differentiation, rather than simply overriding it in pursuit of economies of scale. With increasing international transfer, global flexibility in production diversity and service heterogeneity is used to leverage the demand differences among regions.

- **Quality**

Global quality competency refers to maintaining a significantly high level of quality among competitive products or service worldwide. Globalization brings new challenges in quality. First, it is more difficult to achieve quality competency on a global scale since international competitors can easily enter any marketplace with the convenience of global transportation and global communication, and globalization is changing quality standards in different regions. Second, the globalization of some products like food and healthcare products poses risks for the safety and quality of ingredients. In a global environment, quality control is more important than before. Third, the globalization of quality reduces product heterogeneity for some products such as laptops and cameras, while goods can cross regions. However, in other cases, corporations seek to satisfy local taste and thereby reduce homogeneity for products such as foods. Finally, MNEs must consider more cross-value problems, and incorporate social and environmental values in global quality management.

- **Time**

Globalization increases the difficulty to achieve time competency, considering longer shipping time and intercontinental physical distance between agents in a global supply chain, and longer manufacturing time from manufacturing configuration complexity, as well as the requirement to rapidly respond to local customers in different regions. The abilities to overcome these difficulties and to address competitiveness in speedy distinctiveness can help sustain a firm's strategic advantage in a dynamic environment. For example, Zara uses global operations systems to speed its design, manufacturing, and distribution process, to make the distinctiveness of fashion. Globalization influences time elements constituting the competency in fashion.

2.2.2 Globalization of Operational Resources

The resource-based view of global operations strategy is to tailor global real assets in a global environment. MNEs can use VRIO (valuable, rare, inimitable, and exploited by organization) resources to achieve competitive advantages. The resources are globalized in sizes, times, types, and locations.

The globalized capacity size decision needs to examine global demand, which is more difficult to forecast than local demand, study capacity structure problems across different regions, and investigate regional size problems considering local variables such as local cost, political environment, and tax system.

The global timing problem first reconsiders five generic capacity-timing strategies including leading, lagging, smooth, demand-chasing, hybrid timing, and follow-your-competitor strategies on a global scale. A leading strategy in one region may be a lagging strategy in another region. Second, timing drivers including demand growth forecasts, discount rate, scale economies, underage opportunity cost of lost sales, cost of capacity, and cost of holding inventory are different across regions. Third, the capacity-timing problem is linked with the time sequence of market entries in different regions.

It is more difficult for MNEs to improve resource flexibility in production input, production capacity, and production output, since the asset types and flexibility problem is globalized in the speed of changeovers and the breadth of activities across regions, and flexibility value drivers (e.g., economies of scale, risk mitigation, and real options) are redefined in a global setting.

Choosing an appropriate location for global manufacturing, global service, or global R&D is an important decision to reduce the cost, get access to markets, acquire knowledge, and recruit talents in GOS. For example, Chang'an Automobile, a Chinese company, is building research and development centers in Japan, Italy, Germany, and the United States to acquire technologies and marketing information. Louis Vuitton, the leading French luxury producer, chooses upscale areas in the largest cities to obtain access to high-end customers in Asia-Pacific regions.

2.2.3 Globalization of Operational Process

In the globalization of firms, operational processes like supply chain management, technology management, revenue management, and risk control are globalized.

The supply chain is globalized to meet dynamic needs of growing markets and new consumer segments, to balance risks caused by economic and political uncertainties, and to manage costs complexity. MNEs consider possibilities of global outsourcing, global distribution, global supply chain strategic alliance, and global coordination. Apple builds a complicated global supply chain, with the design in the US, components and parts purchasing in Korea and Japan, assembly in China, distribution in China and the US, and global retailing. Airbus had built a huge global supply chain network to produce different parts, components, and airplanes.

Revenue management companies use the global service chain, vertical integration, horizontal integration, and sector integration to provide global platforms for global revenue management. MNEs manage global revenue by dynamic pricing, dealing with global demand fluctuation and global capacity control in different regions. Particularly, global alliance (e.g., SkyTeam) revenue management has been a trend to optimize price and capacity control.

Product development and R&D processes are globalized, driven by market or technology factors across regions. Global product development strategy considers global manufacturability, different staff learning curves, customer heterogeneity, and product standardization versus localization to apply an open innovation paradigm and manage global R&D activities.

When going global, firms are exposed to more natural, economic, political, and social risks. MNEs can formulate a speculative strategy, hedge strategy, flexible strategy, and safety strategy to control its material flow risks, financial flow risks, and information flow risks. Firms are struggling to manage the complexities of global risks by coordinating global supply management, demand management, finance management, information management, and product management.

Case Example: Operational Globalization of Lenovo

In 1984, Liu Chuanzhi founded New Technology Developer Inc. in Beijing, then renamed it Legend in 1987. The company was incorporated in Hong Kong in 1988 and grew to be the largest domestic PC manufacturer in China in the 1990s. Realizing the limit of domestic market, Legend set globalization as the target in 2003. Chairman Liu Chuanzhi presented how Legend had made the decision about the globalization approach:

We recognized that there were two primary ways to globalize. One was to grow organically. We were aware, however, that this approach would involve a very long process. Another way was to expand through mergers and acquisition: this was, however, a very risky process. With the help of external advisers and consultants, we decided to adopt the second approach (Liu 2007, p. 574).

Since 2004 Legend carried out a “three-step globalization strategy.” The first step to prepare for globalization was to change its name to Lenovo in 2004, as Legend had been registered overseas. Second, Lenovo acquired the former personal computer division of IBM (IBM PC) in 2005. The third step was to go global with Olympic Games in 2008. Today, Lenovo is the world’s second-largest PC vendor, with more than 26,000 employees in more than 60 countries, serving customers in more than 160 countries (For the globalization timeline of Lenovo, see Table 2.2).

- Globalization of competencies

In the 1980s, Lenovo only had cost competency and distribution capabilities to serve foreign PC companies. In the 1990s, Lenovo was the first company to introduce the home computer concept in China and grew into a national company with 27 % market share in the domestic market. Compared with foreign PCs, Lenovo’s competency lies in its deep understanding of the domestic market and rapid response to local customer demand. After acquiring IBM PC, Lenovo established firm-specific competency in world-class cost control and operational efficiency.

- Globalization of resources

In the 1980s, Lenovo only had distribution resources to serve foreign PC companies. In the 1990s, Lenovo built manufacturing, R&D, and marketing resources in China and became the largest domestic PC producer. The milestone event to globalize the resource was to acquire IBM PC. After acquisition, Lenovo obtained a powerful global distribution and sales networks, absorbed and integrated important human resources and administration skills, acquired IBM’s leading PC technologies, and got global brand recognition and an international customer base. In 2011 Lenovo set up a joint venture, “Lenovo NEC,” with the Japanese company NEC to boost Lenovo’s sales in Japan.

Lenovo has globalized its resources by building headquarters in Beijing and North Carolina, major research centers in Yokohama, Beijing, Shanghai, Shenzhen, and Morrisville, and manufacturing factories around the world in the US, Mexico, India, China, and Brazil.

Table 2.2 Globalization timeline of Lenovo

Time	Location	Events	Globalization of competencies	Globalization of resources	Globalization of process
1984	Beijing	Founded New Technology Developer Inc	Low-cost distribution in local market	Distribution of resources in local market	Distribution process for foreign PC
1987	Beijing	Renamed itself Legend	Low-cost distribution in China	Distribution of resources in China	A part of global outsourcing
1988	Hong Kong	Incorporated		Financial resource out of mainland China	
1990	China	Began marketing its own products	Building competitive advantages on a national scale	Built manufacturing, R&D, marketing resources on a national scale	Built national process networks
1991	Germany	Establishment of Legend Germany	Began to build competency in Europe	Began to globalize the resource	Began to globalize the process
2004	China	Renamed Lenovo		Prepared intangible resource	
2005	The US	Acquired the personal computer division of IBM	Began to build competency on a global scale	Obtained global distribution networks, and human resources and technologies	Globalized the supply chain, R&D management, risk control processes
2008	Beijing	Went global with Olympic Games		Built global reputation	
2011	Japan, Netherlands	Established a PC joint venture Lenovo NEC	Boosted Lenovo's sales competency in Japan	Marketing and channel resource in Japan	Distribution process in Japan
2012	Customers in 160 countries		Provided affordable, high-quality products with rapid response to local customers	Established headquarters in China and the US, research centers, and manufacturing factories around the world	A highly efficient global supply chain

- Globalization of processes

In the 1980s, the operational process of Lenovo, mainly just the distribution process, was a part of global sourcing, since it served foreign PC companies. In the 1990s, Lenovo built national processes in research and development, production, marketing, and service. After acquiring IBM PC, its processes became global. To avoid excessive reliance on original equipment manufacturers and keep costs low, Lenovo adopted vertical integration by integrating processes from design and manufacturing to distribution and sales.

Case Questions

1. In 2003, why did Legend plan to go global?
2. In acquisition versus internal development as modes of market entry, which mode did Lenovo mainly choose? Why did it not choose another entry mode?
3. Why did Lenovo prefer vertical integration in its global supply chain?

2.3 Globalization of Manufacturing Operations

2.3.1 Globalized Manufacturing and Key Operational Elements

The diminution of international trade regulations and free trade agreements facilitate global manufacturing. New communication and transportation technologies make global manufacturing networks more effective and efficient. Decreasing tariffs and taxes stimulate the development of global manufacturing. Overseas professional talents or low-cost raw materials drive global outsourcing. Facing global markets and competition, firms have globalized their manufacturing. Examples of global manufacturing include:

- Manufacturing plant implementation,
- Overseas facility construction,
- Global production line design, planning, and implementation,
- Overseas mechanical equipment design and construction,
- International globalization project management,
- Overseas manufacturing planning, supervision, and quality control,
- Offshore design,
- International purchasing and supply chain management, and
- Overseas product quality inspections.

Several operations elements are important for the success of global manufacturing: total landed cost, global quality control, global product planning, technology, workforces, and dependability.

(1) Total landed cost

When making decision in manufacturing globalization, particularly a decision on manufacturing locations, a firm should consider not only manufacturing

cost, but total landed cost (TLC), the total end-to-end costs from inputs to product outputs with customers. TLC incorporates all the costs incurred in a supply chain to make the products available for customers, including manufacturing costs, transportation, inventory costs, trade costs, insurance, duties, and taxes, among others. TLC enables companies to capture both explicit and hidden costs associated with manufacturing relocation, revealing the true cost of global manufacturing activities like sourcing. The low cost competency of global manufacturing cannot be simply measured by manufacturing cost, but can by TLC.

(2) Global quality control

Globalization of quality control is driven by global quality standard, and standardized inputs have matured globalization processes. For example, ISO 9001 is the internationally recognized standard for the quality management of businesses. ISO 9001 is one of the standards in the ISO 9000 family, which applies to the processes that create and control the products an organization supplies and prescribes systematic control of activities to ensure that the needs of customers are met. Second, total quality management is no longer a functional integration in a company or a single region. The linkage is broader and encompasses one or multiple supply chains across country boundaries. Finally, manufacturing globalization can lead to risks in quality control.

(3) Global production planning

In global manufacturing, product planning is globalized. Different sources and location-specific comparative advantages can determine manufacturing locations of different components even for one product. Global production planning is complicated and will increase the difficulty of manufacturing management. Efficient information and communications system can improve the performance of global production planning.

(4) Global technology innovation

Global manufacturing needs continual innovation to sustain its competitive position in the future. While global manufacturing from developed countries to developing ones is typically supported by advanced technologies, global manufacturing from developing countries to developed ones may seek technological resources in global manufacturing.

(5) Global workforces

Globalization brings about the mobility of workers and job seekers across the world in a volume unprecedented in history. Global workforce management comprises several areas such as recruitment, selection, and formation processes, person-to-job assignation, pay systems and incentive policies, and job performance evaluation, considering both competitive and comparative advantages. One of the major challenges is to find the right skills in the labor forces and managers. Another important challenge rests on the definition of that human resource policy that aligns a firm's global operations.

Table 2.3 Examples of basic manufacturing globalization modes

	Outsourcing	Joint venture	Wholly owned
Resource seeking		TNK-BP, Chinalco Rio Tinto	Adidas factory in Indonesia, Lenovo purchased IBM PC, Huawei R&D center in India
Market seeking		Valin ArcelorMittal Automotive, Shanghai GM, Shanghai Volkswagen, Dongfeng Peugeot-Citroën Automobile	Toyota Motor Manufacturing in Texas, Haier manufacturing in the US, Airbus assembly plants Tianjin
Efficiency seeking	Apple outsources to Foxconn, Mattel outsources to China	GE Xianmen factory, Samsung joint ventures in China (e.g., Samsung Corning LCD factory)	Toyota Motor Manufacturing Texas
Asset seeking			Lenovo purchased IBM PC, Tata Steel acquired UK Corus, Tata Motors purchased Jaguar and Land Rover from Ford

2.3.2 Basic Manufacturing Globalization Modes

Manufacturing globalization modes can be classified along two dimensions: control levels and motivations. By the control level, there are three modes: wholly owned production units with the strongest control, joint venturing manufacturing units, and outsourcing with the least control on manufacturing activities. Based on the motivations of international production, Dunning and Lundan (2008) identify four modes of international manufacturing, resource seeking, market seeking, efficiency seeking, and asset seeking (see Table 2.3). These modes are not exclusive to each other, and a company may choose to develop global manufacturing with multiple motivations or multiple control levels to maximize its competitive edge. The reliability and coordination issues of these globalization modes require additional investments and resources.

- Resource seeking

A primary motivation for global manufacturing of a home-country firm is to gain access to certain resources in a foreign country, including natural resources (e.g., minerals and raw materials) or human resources like inexpensive or professional labor. In 2011 global miner Rio Tinto and Chinese aluminum producer Chinalco established a joint venture, “Chinalco Rio Tinto Exploration,” to seek new mineral deposits in China. BP, the British oil giant, jointly with Alfa Access Renova built TNK-BP, a major vertically integrated Russian oil company headquartered in Moscow to seek oil resources in Russia and Ukraine.

A firm, particularly from developing countries, will try to acquire not natural resources, but technological capability, management expertise, and organization skills. For example, China-based Lenovo purchased the personal computer unit of IBM to acquire its technological capability, marketing resources, and management expertise.

- **Market seeking**

A firm will adopt a market-seeking mode of global manufacturing when it chooses to produce its goods near a target market to understand the customers' needs and to adapt and tailor the product to respond to local demand changes. ArcelorMittal and the Valin Group built a downstream automotive steel joint venture, Valin ArcelorMittal Automotive (VAMA), to supply high-strength steels and value-added products for China's fast growing automotive market. Almost all leading Western automotive companies, including GM, Ford, BMW, PSA Peugeot Citroën, Benz, Volkswagen, and Fiat, have built joint ventures to seek market opportunities in China.

Second, the global market brings higher requirements on product delivery and logistics, which has opened the door to global manufacturing networks, which could be a result of optimizing product delivery networks. For example, when the transportation distance of moving finished goods to the marketplace is long and both delivery accuracy and delivery time are influenced, the company may locate assembly plants near the market.

- **Efficiency seeking**

A growing mode for global manufacturing is efficiency seeking to restructure a business's existing investments for achieving an efficient allocation of international economic activities. The mode takes advantage of different factor endowments, economic policies, institutional arrangement, and demand patterns to obtain benefits in product and factor prices, economics of scale, economics of scope, and risk controls.

Global sourcing can be an efficiency-seeking mode to seek resource saving and improved efficiency by rationalizing the structure of global supply chain activities. Many firms offshore and outsource their manufacturing abroad to benefit from cost reductions and productivity improvement.

Some countries offer an investment incentive program, consisting of tax breaks, grants, and subsidized land, to encourage economic development, which may attract global manufacturing. Efficiency-seeking global manufacturing can be attracted by specialized spatial clusters like science and industrial parks, and specific industrial areas like the "auto plant corridor" from Mexico City to Atlanta.

For example, to attract Toyota Motors to build manufacturing facilities in Texas, the city of San Antonio paid for 2,600 acres of land and agreed to sell electricity to Toyota at a low price; the municipality also contributed to constructing a training center, the state of Texas provided funding for infrastructure development, and the federal government provided grants for training and transportation.

- **Strategic asset seeking**

This mode is not just to seek cost and market benefits, but also to acquire strategic assets including physical assets and strategic human resources to enhance their ownership-specific advantages or weaken the advantages of

Table 2.4 BMW global manufacturing networks

Country	Plant (scale in the employee number; main manufacturing activities)
Germany	Berlin plant (1,900 employees; producing motorcycle parts and BMW automobile components), Dingolfing plant (18,600 employees; producing BMW vehicles, body shells for the Rolls-Royce Phantom, and BMW chassis components), Eisenach (235 employees; producing large metalworking tools), Landshut plant (3,000 employees; producing engine components), Leipzig plant (a new plant that will hire 800 employees; producing BMW automobiles), Munich plant (6,800 employees; producing BMW automobile, internal combustion engines, and high-performance power units), Regensburg plant (9,000 employees; producing BMW automobiles), Wackersdorf plant (2,000 at the Wackersdorf Innovation Estate, producing components for BMW)
Italia	Cassinetta plant (260 employees; producing Husqvarna Motorcycles)
UK	Hams Hall plant, near Birmingham (260 employees; manufacturing four-cylinder petrol engines for both BMW and MINI), Oxford plant (3,800 employees; producing MINI automobiles), Swindon plant (800 employees; producing steel pressings and complex sub-assemblies), Rolls-Royce Motor Cars and its Goodwood plant in West Sussex, England (about 1,000 employees; producing Rolls-Royce cars)
South Africa	Rosslyn plant (1,700 employees; producing BMW 3 Series Sedan)
China	Shenyang, a joint venture (3,000 employees; producing BMW 5, X1, and 3 Series long-wheelbase version)
USA	Spartanburg (7,000 employees; producing BMW X3 and X5 Sports Activity Vehicle and the X6 Sports Activity Coupe)
Austria	Steyr plant (3,600 employees; engine manufacturing)

competitors. For example, China-based Lenovo purchased the personal computer unit of IBM to enhance its ownership-specific advantages with physical assets and strategic human resources in the US. India-based Tata Motors purchased the high-class brands Jaguar and Land Rover from Ford Motors, and built Jaguar and Land Rover as a British multinational automotive company headquartered in Whitley, Coventry. As a wholly owned subsidiary of Tata Motors, the principal activity of Jaguar Land Rover is the development, manufacture, and sale of Jaguar and Land Rover vehicles. The motivation of Tata Motors' global production is not simple market seeking or efficiency seeking, but the long-run strategic development of Tata Motors.

Case Example: BMW Global Manufacturing

BMW built the first production plant in Munich in 1916. From a small company it became one of largest automobile producers in the world. The BMW Group manufactures and sells three car brands operating in the premium segments: BMW, MINI, and Rolls-Royce. The group has a strong market position in the motorcycle sector and operates a successful financial services business.

Currently, BMW produces cars and motorcycles in plants in Germany, the UK, the US, China, Italia, South Africa, and Austria (see Table 2.4). BMW adopts contract production with production a partner in Graz, Austria.

To respond to market demands around the world, and to enter markets with customs regulations governing the importation of complete automobiles, BMW manufactures automobiles from parts kits in assembly plants, called a “completely knocked down” (CKD) production process. The BMW Group uses CKD assembly to manufacture automobiles with partners in six locations including Thailand, Malaysia, Russia, Egypt, Indonesia, and India, and to manufacture motorcycles in Brazil.

Case Questions

1. Rolls-Royce has been a leading brand of luxury car. BMW acquired its assets and managed its manufacturing plants. What is this manufacturing globalization mode?
2. Shenyang plant is a joint venture between BMW and Brilliance China Automotive to product the BMW long-wheelbase version, only for the local market. What is this manufacturing globalization mode?
3. Which manufacturing globalization mode has been used in BMW’s CKD assembly plants?
4. What are different advantages achieved by BMW through various global production modes of wholly owned plants from origin (e.g., Munich plant), wholly owned plants by acquisition (e.g., Rolls-Royce plant), joint venture (e.g., Shenyang plant), and contract production (Graz plant)?

2.4 Globalization of Service Operations

2.4.1 Global Services and Key Operational Elements

The development of telecommunications facilitates the globalization of the information-intensive service. Unbundling service components activates the movement of back-office service. Increasing demand and the distribution imbalance of service capacity cause the movement of high-quality professional service. The production globalization increases the global delivery of relevant services such as design, project management, quality controls, management strategic consulting, and accounting. With the globalization of market and competition, firms are globalizing their services. Examples of global service include:

- Global hotel service by hotel chains and hotel agencies,
- Global tourism service by tourism agencies and theme parks,
- Global travel service by global railroad system and airline alliances,
- Global management consulting and strategic planning,
- Global accounting service,
- Offshoring hospital,
- International project management,
- Quality evaluation and audit,
- Risk analysis and management,

- Global investment advice and financial service,
- Global IT service such as enterprise resource planning consulting, and
- International supplier selection and assessments.

Chase (1978), Collier (1985), and Haywood-Farmer (1988) identify the critical operational elements in service operations: customer contact, customization, cultural adaptation, and labor intensity. McLaughlin (1992) and MacLaughlin and Fitzsimmons (1996) propose more elements including telecommunications, the potential for unbundling service components, teamwork, and reengineering opportunities. Based on these studies, the key operational elements for service globalization are:

(1) Customization

Global service needs to respond to the customized demand of local regions in a global reach. Global restaurants will change the menu to suit local tastes. Global hotel chains will change room layout, room service, and foods to provide customized service.

(2) Cultural adaptation

Service companies have to decide whether to adapt their initial service package to the local culture. Disney Hong Kong incorporated Chinese cultural elements, speaking in Cantonese, English, and Mandarin, and increased the Chinese New Year celebration show. Overseas service organizations need to consider adapting to local culture when hiring local employees. With about 99.9 % employees being local Chinese, KFC China adapted to local Chinese culture and tried to be a part of Chinese society. Unlike Disney's American theme parks, Disney Paris aimed more for permanent employees than seasonal and temporary part-time employees.

(3) Information intensity

Telecommunication technologies such as the Internet facilitate the diffusion of information, and have helped with the globalization of services. With the development of new telecommunication technologies, physical distance becomes less important and new service modes such as foreign call centers became possible. Once information is digitized, it becomes instantaneously accessible for customers all over the world. This stimulates the development of informant-intensive services.

(4) Service unbundling

Service can be viewed as a dichotomy between the front office to contact customers and the back office to complete additional processing (Chase 1978), the dichotomy of which increases the possibility of service globalization by relocating back office service. With advanced communication systems, service companies can unbundle services and focus their operations strategy on core services while outsourcing back office services to other sites.

(5) Labor intensity

Labor intensity influences the globalization of service. Firms outsource labor-intensive service like information processing and routing software development to low-cost sites to reduce cost or to labor-intensive locations to acquire trained talent.

(6) Service innovation

Service globalization is often accompanied or even driven by service innovation, including but not limited to service product innovation, service processes innovation, and service organizations innovation. The Metro, a leading Germany-based retailer, uses radio frequency identification (RFID) to provide a new service mode, “future store,” for catering to customer needs better and making the shopping experiences easier. Global banks like HSBC and BNP Paribas use new automaton technologies to provide self-service, globalizing its customer contact at a low cost.

2.4.2 Basic Service Globalization Modes

The difference between the manufacturing globalization mode and service globalization mode is of relevance to the inseparability of service supplier and customers in service. By the interaction between service suppliers and customers, we identified six service globalization modes of four movement types.

(1) Movement of service

- When the service market is characterized by a number of routine services or relatively standard service, a firm will globalize its service through the movement of the service organization to the customer’s countries by multi-site expansion, based on the duplication of the key success elements of the service worldwide. For example, Pizza Hut, Starbucks, and KFC build retail chains throughout the world by means of multisite expansion.
- When service needs a high level of customization, a firm will globalize its service through the movement of the service organization to the customer’s countries by either joint venturing or using wholly owned subsidiaries to provide tailor-made service. The firm may change service organizations and service packages to fit local tastes. For example, Huawei, a telecom equipment maker, builds joint innovation centers for its large customers to provide a tailor-made technology consulting service.
- The third mode is through the movement of individual service staff or a service team to the customer’s countries. A management-consulting firm may not establish a subsidiary in a country, but may send a consultant team to provide service to a foreign firm. A firm of large-scale machine equipment may send a technical expert to its customers to help with maintenance and repair.

(2) Movement of customers

- The fourth mode is through the movement of customers to the place the service is delivered. For example, in a “hub and spoke” airline system, the customers are attracted from different regions to a hub, and then take a long-distance flight from a hub to another hub. Disneyland (Paris and Orlando), Europa Park (Germany), Efteling (Netherlands), Macau Fisherman’s Wharf (Macau), and other theme parks attract customers from foreign countries.

(3) No physical movement

- The fifth mode is through cross-border communication between service providers and consumers. A global service firm can divide its activities into front-desk and back-office services, and then organize a global outsourcing strategy. For example, a firm can outsource the back-office service like call centers to India, and consumers can obtain service by communication.

(4) Movement of both customers and service

- Some global service companies, instead of targeting local customers, are trying to chase their clients overseas. For example, a French restaurant in China focuses its offer on attracting French customers living as expatriates.

Case Example: KFC Global Service

We take KFC China as an example to introduce the service globalization of KFC, since it adopts a similar operational mode in other regions. The first KFC restaurant opened in Beijing in 1987, and expanded to more than 3,800 stores in 800 cities or towns by 2012, with one new restaurant opening a day. KFC is managed by Yum Brands, an American fast food company, and entered China through a multisite expansion strategy. Yum creates its own distribution company and sources with local suppliers with uniform quality standards. At the store level, Yum makes sure that the service's quality is consistent and trains employees based on uniform standards.

KFC first operated through joint ventures and franchises because of the government restrictions, but since 1992, most restaurants have become company-owned units. Its ownership strategy aims to:

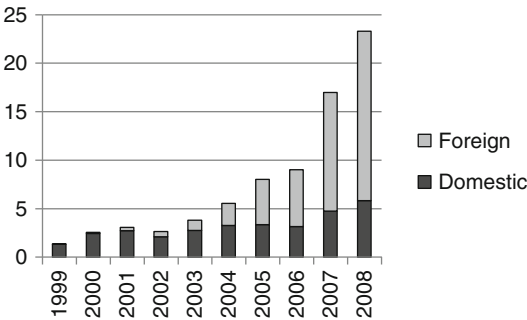
- Unify its quality standards through the country,
- Set centralized purchasing systems,
- Focus on brand building and consistent communication strategy, and
- Offer a consistent and high-quality service.

From the beginning, KFC had tried to build a fast-food chain "rooted in China, be part of China." Of its 300,000 employees, 99.9 % are local Chinese. KFC had also built local supply chain networks and purchased more than 90 % of food materials from 570 suppliers in China. While maintaining its classic foods like original recipe chicken, colonel's crispy strips, and hot wings, KFC has offered a special menu to suit Chinese tastes and styles of eating, and developed about 150 new foods including rice items, egg tarts, Chinese doughnuts, and soy milk drinks to respond to local demand.

Case Questions

1. What is the service globalization mode of KFC? Why did KFC not use other service globalization modes?
2. How has KFC responded to local demand in the process of global expansion?

Fig. 2.2 The domestic contracts versus foreign contracts of Huawei (in US\$ billion)



Case: Globalization of Huawei

1. Introduction

Huawei Technologies Co. Ltd, a multinational networking and telecommunications equipment and services company headquartered in Shenzhen, China, is the largest telecommunications equipment maker in the world in terms of revenue in 2012, overtaking all its competitors, including Ericsson, Alcatel-Lucent, Nokia Siemens Networks, and ZTE.

The past 25 years have witnessed the rapid growth and globalization of Huawei (see Fig. 2.2). In 2011, Huawei achieved revenue of \$32 billion by selling products and services to customers in more than 140 countries, including 45 of the world’s 50 largest telecoms operators. Huawei Technologies was one of six telecom industry companies included in “The World’s Most Respected 200 Companies” list by *Forbes* magazine in 2007, and was in the list of “The World’s Most Influential Companies” by *Business Week* in 2008.

2. Globalization stages

Using the Yip globalization component theory, we identify the following three stages for Huawei globalization. Table 2.5 presents the relevant timeline.

• 1987–1997: Domestic development

Established in Shenzhen originally as a sales agent of Private Branch Exchange, it switched to targeting rural markets in 1987, and Huawei expanded into metropolitan areas of China in 1998. Huawei established a core competency of low cost, based on its strong R&D capabilities in its home country.

• 1997–2004: Internationalization

In 1997, Huawei obtained its first overseas contract for network products with Hutchison Whampoa in Hong Kong, which is a milestone to show when Huawei entered the stage of internationalization. In 1999, Huawei opened an R&D center in Bangalore, India. Then Huawei entered developed countries and established R&D centers in Europe and the US. In 2004, its milestone contract with Dutch operator Telfort was a symbol of the success of internationalization.

Table 2.5 Timeline of Huawei globalization

Time	Location	Events	M&A	Joint venture	Internal develop
1987	Shenzhen	Established originally as a sales agent			
1990	Shenzhen	Embarked on independent research and commercialization of PBX technologies			
1997	Hong Kong	Obtained its first overseas contract			
1997	Russia	Set up a joint venture Beto-Huawei with Russian Beto Konzern and Russia Telecom		+	
1998	Algeria	Established an office in Africa			+
1999	India	Established R&D center in Bangalore, India			+
1999	Brazil	Established the first office in Latin America			+
2000	Sweden	Established R&D center in Stockholm, Sweden			+
2001	US	Establishes four R&D centers in the US			+
2001	US	Established North American headquarters in Texas			+
2003	US/CN	Established joint venture with 3Com		+	
2004	Germany	Established joint venture TD Tech with Siemens		+	
2004	Netherlands	Achieved milestone contract win Dutch operator Telfort			
2005		International contract orders exceed domestic sales			
2005	UK	Selected as a preferred supplier and signed global framework agreement with Vodafone			
2005	UK	Selected as a preferred supplier by British Telecom			
2006	Shanghai	Established joint R&D center with Motorola		+	
2007	UK	Established joint venture with Global Marine		+	
2007	US	Failed in acquiring American company 3Com	–		
2007	Chengdu	Established joint venture with Symantec		+	
2008	Australia	Developed a mobile innovation center with Optus		+	
2010	Belgium	Acquired Belgian chipmaker M4S	+		
2010	US	Failed in acquiring American software supplier 2Wire	–		
2010	US	Failed in acquiring Motorola 's mobile network infrastructure unit	–		
2011	US	Failed in acquiring 3Leaf Systems	–		
2011	Hong Kong	Acquired Symantec's shares in Huawei Symantec at USD 530 million	+		

+ success, – fail, *otherwise* not applicable

(Source: Huawei milestones)

Huawei overseas organization					
Europe	North American	Asia-Pacific (Excluding China)	Africa	Middle East	Latin America
- 2 regional offices (Düsseldorf and Warsaw) - 10 R&D centers - 9 training centers - 2 logistic centers	- Headquarters in Plano, Texas - 8 regional offices - 9 R&D centers	- 4 regional headquarters - 20 representative offices - 2 R&D centers - 6 training centers	- 4 regional headquarters - 20 representative offices - 2 R&D centers - 6 training centers	- Headquarters in Bahrain - Offices across 10 countries	- Headquarters in Mexico City - 19 regional offices - 3 software R&D centers - 3 training centers

Fig. 2.3 Huawei organic growth

- 2005–2012: Globalization

In 2005, international contract orders exceeded domestic contracts, which shows that Huawei entered the stage of internationalization. At this stage, Huawei took an integrated method to globalize its core competency across both developed and developing countries.

3. Globalization direction

Different from Haier (for Haier, see the case example in Sect. 3.2), Huawei avoided Western Europe and the US and chose locations with less competition. Huawei called this strategy “surrounding the cities with rural areas,” which means developing a rural market first and then the urban market, and comes from successful experiences in its previous domestic development.

It set up a joint venture with Russian Beto Konzern and Russia Telecom in 1997. After getting the first order in Russia in 2000, the business of Huawei in Russian market grew quickly. After 2000, Huawei extended its marketplace to Southeastern Asia, the Middle East, and Africa. In 2001, Huawei began to sell products in the Western Europe market, including German, France, Spain, and the UK, through the local agents. Then Huawei established R&D centers in Europe and the US.

4. Globalization approaches

From Table 2.5, we can observe that Huawei had first used internal development from 1997 to 2001, and then joint venture from 2002 to 2008. It tried to use acquisition from 2007 to 2011, but was not successful. This timeline roughly fits Bradley’s three stages theory, arguing that foreign market entry usually follows three stages: exporting, competitive alliances, and acquisition (Bradley 1995).

- Organic growth

The globalization of Huawei relies on its organic growth. Huawei had built subsidiaries in seven regions including China and six overseas regions, a number of region offers, R&D centers, training centers, logistics centers, technical assistance centers, outsourcing factories, and multi-language call centers (see Fig. 2.3). A vice president heads each of regional headquarters. The regional offices are organized by product lines with technical support departments, and two departments of client relations and business development.

- Joint venture and partnerships

Huawei goes global via a number of partnerships. In 2003, Huawei and 3Com Corporation formed a joint venture company, 3Com-Huawei, for data networking products. Huawei set up a joint venture with Siemens in 2005, a Shanghai-based joint R&D center with Motorola in 2006, a joint venture company with American security firm Symantec in 2007, and a joint venture with a UK-based marine engineering company in 2008.

- M&A

Although Huawei had tried to acquire overseas assets, M&A is not a main approach for Huawei to go global, partially because of political barriers and the defense sensitivity of telecommunication technologies. The most famous example is the 3Com acquisition. In 2007 Huawei, in conjunction with Bain Capital, failed in acquiring leading American [computer network](#) infrastructure products manufacturer 3Com, a company making anti-hacking computer software for the US military, after the Committee on Foreign Investment in the US examined the national security risks of the deal. For a similar security reason, Huawei failed in acquiring American software supplier 2Wire in 2010, Motorola's mobile network infrastructure unit in 2010, and American Technology Company 3Leaf Systems in 2011.

Huawei had acquired M4S, Belgian wireless Internet equipment maker Option's wholly owned semiconductor company. But the influence is not significant because the acquisition scale is just approximately eight million EUR.

In 2012, a US congressional panel warned that Huawei posed a security threat to the US. Huawei denied the accusations in front of the panel in September 2012. Huawei Vice President William Plummer said the accusations were "dangerous political distractions." China's Foreign Ministry urged the US to "set aside prejudices" about Huawei.

5. Operational globalization: competency, resources, and processes

Compared with its competitors, Huawei maintains cost and price advantages when it has gone global. Another competency is the rapid response to local customers with global reach. The high diligence, core enterprise culture of Huawei helps build the competency of rapid response in the global market. Deng Tao, vice president of Huawei, said: "After receiving feedback from customers, while the responses of other companies are relatively slow, Huawei usually works overtime with extreme diligence and responds to customers rapidly."

This competency is confirmed by its large clients. In 2001, when Huawei contacted Neuf, a French telecom operator, Neuf did not trust this newcomer. But after Huawei rapidly completed telecom networks construction in two French cities including Lyon in less than three months, Huawei got the contract from Neuf to build a network throughout France. Michel Paulin, CEO of Neuf, said: "This project helps us achieve the competency of speed. Previously the

French market was dominated by France Telecom, but now we have become its rival. Why? Because we move faster. Of course, our price is lower, based on Huawei equipment.”

In 2004, Huawei, competing with Ericsson, the number one telecom equipment maker at that time, obtained the first significant contract in Europe valued at more than \$25 million USD from Dutch operator Telfort. Van de Wiel, CTO of Telfort commented on the competency of Huawei: “People may think Huawei obtained this contract by low cost. We actually appreciate its fast response.”

We take R&D as the example to explain the globalization of resources, as R&D is critical for a high-tech company and Huawei’s globalization level of R&D is high. As of December 2010, Huawei employed more than 110,000 persons, 51,000 of whom are based outside China, and around 46 % of whom are engaged in research and development. Huawei operates a global network of 20 R&D facilities in the following locations:

- Bangalore, India, focusing on software.
- Moscow, Russia, focusing on wireless algorithm, application, and software.
- Dallas, USA, focusing on ASIC technologies and wireless algorithm.
- Ottawa, Canada, focusing on wire-line, wireless, optical, and IP networking.
- Munich, Germany, focusing on an all-IP network, core network, and high-speed transmission.
- Paris, France, focusing on telecom standard GSM-R.
- Milan, Italy, focusing on microwave.

Huawei’s R&D globalization follows three modes. Since 1999, it has built R&D centers in India and Russia to acquire talent. Since 2000, it has built R&D centers in the US and Europe to acquire knowledge and technology and to understand the market. In addition, Huawei has established more than 20 innovation centers, jointly with large customers, focusing on developing tailored solutions.

We use a management consulting project about business processes, “IT Strategy and Planning” by Huawei and IBM Consulting, to study the globalization of its processes. Beginning in 1998, Huawei and IBM started a consulting project together with 50 IBM consultants to improve and transform business processes to learn IBM experiences in business processes transformation. In five years, Huawei invested about \$50 million to improve internal business processes. “IT Strategy and Planning” is a project to design and plan a business processes and IT support system, consisting of eight items such as integrated product development and integrated supply chain.

Previously, Huawei mainly reduced costs in manufacturing, but when implementing “IT Strategy and Planning” project it realized the importance of optimizing business processes and minimizing the cost in the whole supply chain, including purchasing, manufacturing, logistics, and customer service. “IT Strategy and Planning” is an example of Stage 2 (internationalizing the core strategy) in the Yip globalization component theory. Through this

project, Huawei enhanced its competency of low cost, mastered the know-how of international business, and laid a foundation for globalization.

6. Operational globalization: manufacturing and service

In manufacturing globalization, Huawei chooses to manufacture in domestic locations, and then export its branded products to foreign locations. Although Huawei built some outsourcing factories (e.g., Hungary-Pecs, Hungary-Komarom), the scale is not large. Compared with Haier, with a high level of manufacturing globalization to localize its products, the level of manufacturing globalization is lower in Huawei. Domestic manufacturing reduces the cost since labor and operational cost is low in China.

Compared with the low level of manufacturing globalization, service is highly globalized. Taking Huawei service in Europe as an example, it has built two technical assistance centers (UK, Romania), nine training centers (France, the UK, Germany, Italy, The Netherlands, Spain, Belgium, Poland, and the Czech Republic), four network operation centers (Romania, Spain, Switzerland, and Italy), two logistic centers (The Netherlands and Hungary), two regional spare parts centers, 41 country-level spare parts centers, and multi-languages call centers. It also has more than 320 certified service partners.

Case Questions

1. Compare the approaches of global expansion (M&A, partnerships, and organic growth) for Lenovo and Huawei. Why do they use different globalization approaches? (Hints: Lee and Lieberman 2010, p. 143)
2. Compare the globalization direction (see Fig. 2.1) for Haier and Huawei at their early stage (for Haier, see the case example in Sect. 3.2). Why do they choose different globalization directions at their early stage (or component 2 in the Yip globalization component system)?
3. Analyze the globalization stages of Huawei. Did Huawei follow the Uppsala internationalization stages? Did Huawei follow the Yip globalization component system?
4. Compare the manufacturing globalization of Haier and Huawei (for Haier, see the case example in Sect. 3.2). Why did they choose different global operations strategies for manufacturing globalization?
5. Summarize the globalization modes of R&D activities in Huawei.
6. Study the influence of the political separation on the global growth of Huawei.

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