

Chapter 13

Manufacturing of Watch in Hong Kong, China

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13.1. Background and History of the Company

The firm represented in this study was started in 1983 in Hong Kong. The current managing director worked for a different watch company for a decade before launching his own original equipment manufacturing (OEM) plant. In the early days, the company ordered components from global suppliers, designed products, assembled the products in Hong Kong, and shipped them out to customers in the United States, Europe and elsewhere.

In 1990, the company expanded by opening a watch factory in Switzerland. A year later, the company entered discussions about taking over another Swiss factory. The merger was completed in 1992, bringing other brands into the firm and adding another factory in Switzerland.

In 1999, the company augmented its manufacturing operations by establishing a retail business in Hong Kong and in Guangdong. Its retail outlets sell not only the company's own brands, but also other Swiss watches such as Omega, Longines, and Cartier. The company was then divided into three segments: manufacturing, branding and retailing.

Today, the company continues to manufacture mechanical movement watches for other brands as well as creating watch pieces with its own label. Customers in the US, Europe, Middle East, South Africa, Asian economies or South America may require as few as 500 pieces in an order. At its peak in the mid-2000s, the Hong Kong plant turned out 80,000 pieces a month. Now, with manufacturing split increasingly with Switzerland, the Hong Kong factory creates 50,000 pieces per month. The firm employs roughly 200 people in the factory and headquarters in Hong Kong.

The company also owns a factory that manufactures components for watches in mainland China as well as retail outlets in Shanghai. The company's component factory in the Pearl River Delta is important because prior to its acquisition ten years ago, the manufacturing operation was struggling with delivery delays and inventory management problems. The factory produces 25,000-30,000 boxes a month. The firm keeps nearly 90 percent of the output. The rest is delivered to a select few buyers. Capacity is limited.

For its retail shops, the firm has five multi-brand stores in Hong Kong as well as four individual brand stores that carry lines such as Omega, Breguet, and Piaget as well as their own brands. The shops in Hong Kong sell high-level multi-brand items like Cartier, Breitling, Longines, Bulgari, and Frank Mueller. The firm also helps the local Hong Kong office for Cartier with retailing their products.

In China, the shops carry fashionable and mid-range models with a different price range than the Hong Kong stores. The company also sells individual brands like Gucci in 3 multi-brand stores.

The company's own brand is carried by 12-15 stores in total—some owned by the company and others with different owners. The company has salespeople in its branch offices in Beijing, Shanghai, and Guangzhou. The Shanghai office, for example, employs 2-3 people to import watches from Switzerland and Hong Kong and serves as dealer for Cartier.

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13.2. Tracing the Creation of Watch Products

The company has a complex business model, as it manufactures for multiple brands and clients in different economies, as well as maintaining its own brands. A significant share of the company's business is creating products for client firms, usually by working for companies that secure brand licenses. For example, Fossil in the United States has licenses for brands like DKNY and Emporio Armani. Fossil orders watches for these licenses from many different suppliers, including the company featured in this case study. Another customer, a Japanese company, has a license for Hunting World. These client companies have no factories of their own but rely on OEM manufacturers like the Hong Kong firm in this study to make watches for different licensed brands.

Sales and design

For OEM watches, the value chain can be considered to start from the sales relationships with clients. The sales team travels to meet specific clients in different markets to discuss emerging fashion trends since watches have gone from being time pieces to fashion accessories². They also attend watch exhibitions to obtain information about trends and markets. They provide these inputs to the R&D team who take care of engineering and design. The design team creates designs that are submitted to clients for consideration. Every year, designers create 2-3 new collections in line with ever changing fashion trends. Some existing collections are maintained and others are replaced, depending on sales volumes.

Because the company designs watches for its own product line as well as for other customers, a design team of 10 people works with a product development team of six persons to create new items regularly. These R&D staff members, for example, look for new materials to use like creating watch cases of stainless steel, ceramics, or plastics. They search for new items in the market or new combinations. The straps, for instance, could be plastic, crocodile, or stainless steel.

The team, however, does not create new watch movements because it finds the technology too complex. Quartz movements, however, could be created in-house, but mechanical movements are not easy to develop or manufacture. In fact, only a few companies in the world can create these movements. For the Swiss factory, all movements are sourced from the same two companies in Switzerland that can create them. The two companies left to create movements are Swatch (although they largely manufacture only for their own brands) and Selecta. For the Hong Kong factory, movements may be sourced from Japan or China. Citizen and Seiko make movements, although quantities are limited and mostly used for their own brands. Increasingly, the Chinese firm of Seagao is creating movements. The quality is not Swiss, but it is improving. It used to be the case that Russian companies also made mechanical movements, but they no longer do so.

Once the client is satisfied with the design, drawings and samples, they may place an order with the company for large-scale manufacture.

Materials sourcing

The purchasing team then goes to different suppliers to examine samples and find new sources for materials and parts, and start purchasing components. For the case study firm, the movement is generally Swiss or Japanese. Components like the case or bracelet are usually sourced from China or Japan. Other components come from China and Thailand.

² Perhaps, this is why about 70-80 percent of firm production is ladies' watches.

Proximity of suppliers

The suppliers, some of which are affiliated companies, are all located near to the Hong Kong factory so that the company can communicate easily. If the company ordered cases, dials and buckles in Shanghai or elsewhere, it would be more challenging to manage. The relationship would not be worth pursuing, unless the factory had specialized skills or higher quality. As it is, the Pearl River Delta has strengths for manufacturing, particularly for more sophisticated goods. In addition, the logistics and supply chain connections are good. The close location of parts and components suppliers allows the firm to save money on logistics and waste less time. If they encounter quality problems, the engineers from the plant can be dispatched to fix them the same day. If the suppliers were far from Hong Kong, such as in Fujian, they would have to work off plans. This is more problematic and generally means more work and difficulties for both sides.

For Chinese components, most suppliers deliver the items directly to the Hong Kong factory. These firms handle logistics and customs declarations.

It used to be the case that dials and watch boxes were ordered from Thailand. At that time, orders were given to the supplier and the company approved the samples and gave specific air shipment instructions. However, the Thai company has since relocated production to China and the packaging is now delivered directly by ground to Hong Kong.

Synchronization of component availability

Inventory control of components is a challenge because the parts may not arrive at the factory at the same time. Sometimes the case might be ready in 3 months, but the dials are not ready for four months. The procurement team has to make sure it synchronizes the preparedness of all the components. If there is a delay in a component, say the bracelet, the watch assembly cannot be completed. The parts to be managed, overall, are relatively modest in number and include the hands (hour, minute and second hands), movements, bracelets, crowns, buckles, and cases.

Quality control of materials

The orders are generally crafted to the specifications drawn up by the firm's client, and the fabrication is high precision. The engineering department has to follow up to make certain that all components meet the requisite criteria before proceeding to manufacture samples. Sometimes the company sends quality control people to the suppliers to inspect on site. This is because, without a conversation with their engineers and production teams, quality issues can emerge later. If the firm waits until parts are delivered to the factory floor to undertake inspections, it is too late because it could take 3 months to have new parts delivered.

After the quality control process is complete, the samples can be sent to factories for approval. If everything is satisfactory, the components are delivered to the factory. The incoming quality control team examines the parts before handing them over to the production department for final assembly.

Production, packaging, delivery

From the time the samples are approved, it takes 1-2 weeks to complete an order which includes assembly and final testing. Quality control on the final product is performed in-house.

After this is finished, the watches are transferred to the shipping department for final packaging. Then the order is sent to the client according to their shipping instructions. After that, the claims department follows up with clients for payment.

Because the factory has two facilities, clients can choose where they want watches manufactured—in Hong Kong or in Switzerland. Increasingly, clients and customers are demanding that the watches be assembled in Switzerland since these are perceived to be of higher quality. This is true even though costs of labor in Switzerland are higher.

Under Swiss law, watches must have at least 60 percent of the value made domestically in order to be considered of Swiss origin. In practice, this means using only Swiss-made movements with either the hands or crowns also from Swiss component suppliers. The cases and bracelets can come from Hong Kong or other places, as long as the total value of imports does not exceed 40 percent. The company's Swiss factory has less than 30 employees.

If the customer chooses to have the watch made in Hong Kong, by contrast, the complete movement does not need to come from Switzerland, and could have Japanese, Thai or Chinese parts.

The company's own brand value chain

Besides OEM watches, the company also has its own-brand watch which is manufactured at the factory in Hong Kong. The company's research and development skills, often honed for creating OEM products, are also used in creating the company's in-house branded products. A similar value chain to that for OEM watches is involved, from material sourcing to assembly and delivery, once the in-house design is finalized. About the only thing that is different in this value chain is the lack of intensive discussions on designs with the firm's clients. Most of the components used in own-brand watches come from the Pearl River Delta in China. These parts include the case (with the glass), bracelet or straps, hands and the buckle. The movement is from Japan, and the dials (face) and watch boxes either from China or Thailand.

Although the supplier of movements for the firm's brand is Japanese, this company has a branch office in Hong Kong. This means there is no need for the Hong Kong firm's staff to travel. The stock is kept by the Japanese company in Hong Kong and therefore the case study firm does not import its movements directly for their own branded watch.

After-sales service

After-sales services do not make up a big part of the revenue for the company. It does, however, maintain some stock of watch components in the Hong Kong factory in order to be able to service and repair their high-end watches.

13.3. Services in the Value Chain

Approximately 42 separate services enter the watch manufacture and retail value chain. These services correspond to some 80 percent of the cost of producing the watch. Only 13 services are fully or partially outsourced. Eight of these are fully outsourced and 5 are partially outsourced. The services entering the value chain and information about their sourcing are listed in Appendix A.

In-house services

Most of the company's services are supplied in Hong Kong alongside the factory by around 130 of the factory's staff. An additional 70 staff can be found on the factory floor – the ones directly involved in manufacturing. Services provided in-house include sales, purchasing, design, research and development (R&D), accounting, quality control, engineering and shipping.

The reasons given for preferring where possible to supply services in-house are the level of trust, quality control and belief that such specialized services are better handled by the company. Services are outsourced where the government or exclusively mandated external entities are required to supply the service (audit, government inspections) or where networked advantages are inescapable or intrinsic to the service (insurance, IT security alarm services, financial services, and certain advertising).

As for in-house supply, the company's reliance as far as possible on its own workforce means, for example, that it does its own in-house cleaning of the factory. The firm does not want to outsource this activity because external service providers may not meet certain requirements for a clean manufacturing environment. With the high value of watch components, the firm also handles security with in-house staff. Over the years, the system of reporting any theft directly to police has meant that few problems have arisen with security. Strict confidentiality agreements between the firm and their clients also preclude allowing many non-employees' access to the factory premises. Upcoming fashion development in watches under design and production must be kept secret.

Inventory and stock control are managed in-house. Parts have to be ordered in excess of the total amount anticipated for watch delivery, since some pieces will be lost or have insufficient quality. In addition, the company maintains an inventory of spare parts for customers since consumers often request new buckles, hands, or crystal pieces for years or even decades after a watch has been sold.

Factory equipment and machines are also largely maintained in-house. Much is automated, such as dial assembly machines and waterproof testing machines. Most machines are not terribly sophisticated and the staff can handle routine maintenance issues. The firm's factory in Hong Kong was the first to receive Swiss machines 8-10 years ago. These machines were necessary to reduce labor costs and keep the company going in Hong Kong.

The use of automation is necessary to stay competitive. Even in the Swiss factory, automation is important, but the kind of watches the company produces cannot be completely made by machines. Trained staff members in both locations must handle the final assembly and the placement of the movements in watch cases.

If, for some reason, the automation equipment breaks down in a way that cannot be repaired by on-site staff in Hong Kong, parts and equipment could take as long as 1-2 weeks to arrive from Switzerland. In the meantime, workers would take over the tasks by hand. Efficiency falls by 30 percent, but in 8-10 years, workers have only had to step in for the equipment twice.

The equipment to make the factory a dust-free environment is also maintained in-house.

The completed watches are boxed as the client so requests. For some customers, watches are placed 10 per tray. For others, the watches are individually boxed with price tags to save the client labor costs.

For the firm's own branded models, shops typically want 1-3 models of roughly 30 pieces at a time. These items are delivered in plastic bags with the boxes delivered separately to the shops. The boxes are made in China and delivered to the company.

The company handles human resources in-house. It directly sources and hires regular employees like factory floor workers, drivers and so forth. For management candidates, every 2-3 years the company might outsource the job of finding suitable applicants.

The company has a Corporate Social Responsibility (CSR) Department that encourages the staff to engage in recreation, although the company does not have facilities on site. The firm, in general, participates in a range of CSR activities.

Outsourced services

Legal services are not handled in-house. The marketing department works with an agency for advertising. Advertising costs for the branded product are quite high. The company has hired an entertainment personality to promote the brand.

The workshop employees are provided with uniforms. The acquisition and laundering of uniforms is outsourced.

In Hong Kong, many services are delivered through government agencies. For example, water, electricity, and sewerage are all supplied by the main grid. IT and telecommunications use normal providers in Hong Kong. The government also mandates medical insurance and the company is required to pay into the pension scheme. By the nature of supply of these services, these necessarily have to be outsourced.

The company used to outsource its on-site catering service, but now it just provides an extra payment for workers to find food outside.

13.4. Government Policy Interaction and Other Business Challenges

Locational advantage of Hong Kong

While there used to be many watch manufacturers in Hong Kong, the case study firm is one of the few left. Some moved factories to the Pearl River Delta. In price, these factories are more competitive. However, design, quality and service are also important to customers. These elements are at present easier to maintain at a high level in Hong Kong than on the mainland. The “made in Hong Kong label” still means something to final customers.

This is true even if the products made in Hong Kong cost a bit more. The price of a watch assembled in China might be 3 USD. In Hong Kong, by contrast, the company has to pay up to USD9 for assembly. However, since the production cost of a watch is a relatively minor element of the overall price, as long as total production costs are no more than USD6 or so higher in Hong Kong than in China, the company can still make a profit.

Travel time to the supplier factories in China averages 1-3 hours. Given transportation issues in China, it might take the same length of time to travel between factories even if the firm relocated its Hong Kong plant to the Pearl River Delta area.

Labor issues

The watch design workers tend to leave every 2-3 years for new positions elsewhere, usually into other watch or toy factories. The firm hires junior or young people out of design schools. They also check with vocational training colleges for staff. Fresh graduates work well during their brief tenure with the company.

There is pressure on labor costs as unions press for the establishment of minimum wages and standard working hours.

Permits and inspections

The factory needed to apply for a license to operate. Most of the inspections undertaken by various government agencies are related to health and safety. For example, the Labor Department comes to check on working hours. Overtime permission must be approved by the government. There is no limit on the amount of overtime, but the firm needs to submit an application before it can permit workers to do overtime work. It used to be the case that many workers put in 1-2 hours of overtime each day, but this has become very expensive.

The Fire Department inspects the facilities periodically and the firm needs a separate license from the Department to operate.

Incentives

The company does not receive incentives from the Hong Kong government. But it would support plans to bring back manufacturing to Hong Kong, particularly in high value-added activities. The company believes that manufacturing is needed to give young people a place to work. Otherwise, there are likely to be no positions available for young citizens much beyond banking and property companies. Jobs in manufacturing can be of high quality. These positions also generate home-grown skills and knowledge, as well as other jobs in the local economy and in the region.

Appendix A

Services for the Manufacture and Retailing of Watches

Stage of Supply Chain	Service	Corresponding CPC Ver. 2 Code	In-firm Supply	Outsourced and to whom?	Reason(s) for House Supply/ Outsourcing	Remarks
Pre-Manufacture	Procurement agent for materials sourcing	85999-Other support services n.e.c.	Yes		In-house team knows product and needs	
	Quality assurance services of materials and components	83441-Composition and purity testing and analysis	Yes		In-house team knows product and needs	
	Freight transportation services	Division 65-Freight transport services	Yes			
	Storage of parts and components	67290-Other storage and warehousing services	Yes on site and in China facility			
	Conception and design of product	83920-Design originals	Yes			
	Industrial design	83912-Industrial design services	Yes			
	Patent acquisition	83960-Trademarks and franchises n/a	Yes	Yes		Split responsibility depending on brand, but own brand is wholly handled in house
Manufacture	Product Administration-Production management	83115-Operations management and consulting services	Yes			
	Product Administration-repair and maintenance of factory equipment	87156-Maintenance and repair services of commercial and industrial machinery	Yes		Concern over delays and lack of outside specialized	

					knowledge of equipment	
Quality assurance services of manufactured product	83441-Composition and purity testing and analysis	Yes			In-house team knows product and needs	
Warehousing services for parts and components	67290-Other storage and warehousing services	Yes				
Cleaning services for factory	85330-General cleaning services	Yes			Specialized equipment needs particular care	
Security guards for factory and warehouses	85250-Guard services	Yes			High value parts, components and final products need tight security	
Government inspections on fire prevention, health hazards, labor regulations	91290-Public administrative services related to public order and safety affairs		Yes		Government mandated	
Personnel search and referral services-recruitment of workers	85112-Permanent placement services, other than executive search services	Yes				
Social insurance for factory workers	91320-Administrative services related to government employee pension schemes; old-age disability or survivor's benefit schemes	Yes				

Services in Global Value Chains: Manufacturing-Related Services

	Medical services	93121-General medical services	No			Workers receive government medical benefits
	Design of packaging	83919-Other specialty design services	Yes			
	Packaging services	85400-Packaging services	Yes			
Post-Manufacture	Customs-related services	85999-Other support services n.e.c.	Yes	Yes	Depends on whether delivery to customers or own retail shops in HK or China	
	Land transport of goods	65112-Road transport services	Yes	Yes	Own conveyances and external suppliers	
	Repair and maintenance for fleets	87143-Maintenance and repair services of trailers, semitrailers, and other motor vehicles n.e.c.	Yes	Yes	Ad hoc in-house and regular servicing outsourced to specialists	
	Air transport services	6531-Air transport services of freight		Yes		
	Retail services	622-Specialized store retail trade services	Yes	Yes	Both in-house retail and other retail outlets even for own brand	
	Retail administration-Operation management	83115-Operations management consulting services	Yes			
	Retail administration-Operation management	83116-Supply chain and other management consulting services	Yes			

Back Office Support	Auditing on financial accounts	Group of 822-accounting, auditing and bookkeeping services		Yes	External auditing mandated	
	Financial services	7112-deposit services 7113-credit-granting services		Yes	Requires financial institutions	
	Internal auditing (including audits of financial accounts and corporate governance)	83118-Head office services	Yes			
	Insurance services for machinery	71332-Marine, aviation, and other transport insurance services		Yes	Requires insurance providers	
	Company secretary services	83990-All other professional, technical and business services, n.e.c.	Yes			
	Corporate communications, marketing and public relations	83114-Marketing management consulting services	Yes	Yes	Split between in-house person who works with outside advertising agency	
	Human resources management	83113-Human resources management consulting services	Yes			
	Human resources management- Personnel search and	8511-Personnel search and referral services	Yes			

Services in Global Value Chains: Manufacturing-Related Services

	referral services for back-office staff					
	IT and information system management	8316-IT infrastructure and network management services		Yes	A networked service	
	Safety and security services	85230-Security systems services		Yes	External suppliers of alarm systems	
	Safety and security services	85250-Guard services	Yes			
	Uniform-Laundry	97130-Other textile cleaning services		Yes		
	Legal services	82120-Legal advisory and representation services concerning other fields of law		Yes		
	Product development R&D	81129-Research and experimental development services in other engineering and technology	Yes			
	Product development R&D	81400-Research and development originals	Yes			
	Retail administration-advertising	83611-Full service advertising		Yes		Includes hiring an entertainment personality
	After-sale services-warranty and repair services	Group of 872-Repair services of other goods	Yes			