

THE PEARL INDUSTRY: IS THERE A MARKET OPPORTUNITY?

Liu Su, Alex Beamish, Paul Beamish, and Mila Bojic wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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In May 2018, Jane Li, a China-born entrepreneur living in Canada, was at a seaside market in Qingdao, China, inspecting inexpensive pearls. She wondered whether pearls presented a good market opportunity in the West. At markets in China, she consistently found cultured freshwater pearls that would cost far more in Canada. This experience led her to wonder whether this industry was attractive to enter on a wholesale basis, or perhaps at the retail level. Or was there a reason why pearls—such an old and timeless product—did not present more of a dynamic market opportunity in the West?

PEARLS THROUGH THE AGES

Pearls were one of the three biogenic gemstones, the other two being amber and ammolite.¹ As the sole gem made by a living animal, pearls needed no polishing or cutting. Their desirability, both in current and ancient times, made them distinct. Pearls were less associated with scandals than diamonds. In fact, pearls were said to “appeal to the better part of human nature.” The word “pearl” was a synonym for being uncommon and highly valued.²

Of all jewellery, pearls had the longest proven history. They had been popular with women in Roman and Elizabethan times, and often before that, as a symbol of purity or wealth.³ When Christopher Columbus undertook his search for a shortcut to the East and its riches, sponsored by King Ferdinand and Queen Isabella of Spain, pearls ranked at the top of the two monarchs’ wish lists. From ancient times to the 1970s, the primary sources of commercial pearls were the Persian Gulf, the Red Sea, and the Gulf of Mannar, between southeastern India and western Sri Lanka.⁴

FORMATION

During the pearl formation process in both saltwater oysters and freshwater mussels, a foreign object entered the mollusc, which could not eject it. As a result of the irritation, nacre (the same ingredient for growing a shell) was secreted around the object until, eventually, the layers formed a pearl. The nacre reflected light and lent pearls their lustre and even iridescence. In nature, only one out of every 10,000 wild oysters contained a pearl.⁵

RECENT HISTORY AND PRICES

In the 20th century, Gabrielle “Coco” Chanel played a key role in giving pearls mass appeal. She would wear multiple pearl strands that combined real pearls—cultured or natural—and plastic ones. Although she brought great popularity to pearls, using them for both high fashion and fast fashion, the effect was to make pearls ubiquitous and too common. Pearls even became associated with being old-fashioned and unstylish. However, in recent decades pearls had experienced something of a renaissance.

Although earlier fashion trends had favoured pearl strings, “big South Sea cultured” pearls became very popular in the 1990s. As a result, a necklace made of either large South Sea cultured pearls or black Tahitian cultured pearls could fetch a high price of £150,000⁶—10 times as much as a much rarer natural pearl necklace. However, natural pearls later regained their superior prestige.

The La Regente pearl, which the French emperor Napoleon Bonaparte once gave as a gift to his second wife, had been sold three times by Christie’s auction house. It sold for US\$143,000⁷ in 1987, for \$859,000 in 1988 (after its origin had been verified), and for \$2.5 million in 2005—the highest price ever paid for a pearl at an auction. In comparison, the highest price ever paid for a diamond was \$71.2 million.

Hong Kong and the Middle East constituted the main locations for buyers, with India not far behind. According to one expert, “prices will stay high because [pearls] are so genuinely rare. Like all markets it fluctuates a little bit but I think after 100 years of solitude, from the early 20th century to the early 21st century. . . the world has moved on and realized how precious they are.”⁸ In February 2009, the Dubai Pearl Exchange opened.⁹

CULTURED PEARLS¹⁰

As far back as the fifth century, the Chinese inserted small lead Buddha images into freshwater mussels in an attempt to create Buddha-like cultured pearls.¹¹ Around the end of the 19th century, English marine biologist William Saville-Kent, at work for the Australian Fisheries Department, successfully experimented with a “tissue graft” technique in pearl oysters.¹² In 1916, Kokichi Mikimoto of Japan patented his technique for culturing spherical pearls in 1916 and revolutionized the pearl world. Because his pearls seemed perfect in terms of colour, lustre, and shape, the “natural-pearl lobby” proclaimed his pearls to be fake.

In the early 20th century, excess harvesting harmed many oyster habitats. Cultured pearls started to be mass-produced at around the same time that commercial-scale natural pearl harvesting stopped. The price of natural pearls fell precipitously, regardless of their new scarcity. Although natural pearl prices eventually rose again, natural pearls remained, by historical standards, rather cheap in the 2000s—close to early 20th-century prices.

In 2009, according to official figures, China was producing 1,500 tonnes of freshwater cultured pearls per year (although some estimates were closer to 3,000 tonnes).¹³ In 2010, China produced 20 tonnes of saltwater akoya cultured pearls. That same year, Australia produced 10 tonnes of South Sea saltwater cultured pearls.¹⁴ Top-quality Chinese freshwater pearls could feature amazing shades of peach and apricot, or compete with saltwater akoya pearls in the roundness of shape and lustre. This competition caused anxiety for Japanese producers because the Chinese pearls could cost one-tenth of the Japanese pearls. Treatments such as polishing, bleaching, and dyeing were commonly applied to pearls, both in China and beyond.¹⁵

In 2017, the global production of cultured saltwater pearls amounted to \$400 million, with South Sea pearls occupying \$230 million of this amount. Yet, cultured saltwater pearls, by volume, amounted to no more

than “5 per cent of what China produces in its freshwater,” according to an analyst at the Gemological Institute of America.¹⁶

PEARL TYPES AND QUALITIES

Pearls made without any human intervention were called natural pearls. They were extremely rare. Cultured pearls, on the other hand—sometimes mistakenly referred to as “fake pearls”—were much more common and fell under two categories: freshwater and saltwater pearls. Oysters could produce only one saltwater pearl every two and a half years, and saltwater pearls were more expensive than freshwater pearls.

Mussels produced freshwater pearls in hatcheries and each harvest could produce 20 or more pearls, which were smaller than saltwater pearls. Each batch of pearls required 18 to 24 months to grow.¹⁷ Freshwater pearl mussels were nucleated with 1-millimetre (mm) squares of mantle tissue within the body of the mussel.¹⁸

Keshi pearls were produced by various types of oysters and freshwater mussels. These small, irregularly shaped pearls developed when a foreign object planted in the mollusc was rejected, which produced a pure nacre pearl with significant lustre.¹⁹

Chinese artificial lakes and reservoirs were the primary sources of freshwater pearls. In contrast, saltwater pearls—such as the classic, iconic akoya pearl, and Tahitian and South Sea pearls—developed in inlets, atolls, and bays in many international locations.²⁰

The value of a pearl was appraised according to characteristics such as size (bigger was better), shape (rounder was better), number of flaws (fewer was better), lustre, and colour. Unlike diamonds, pearl grading was not standardized.²¹ Button- and teardrop-shaped pearls were significantly cheaper than round pearls. Most freshwater pearl harvests contained semi-baroque and baroque (irregularly shaped) pearls. Although sought after, genuine round freshwater pearls constituted less than 3 per cent of the yearly harvest. The most common freshwater pearl inclusions or blemishes were chalky spots.²²

The three primary species of oysters producing cultured saltwater pearls were (1) the *Pinctada fucata*, which made the small and round akoya pearls used by the jewellery house Mikimoto; (2) the *Pinctada maxima*, which could reach the size of a dinner plate and made the white South Sea pearl (the industry’s largest and most lustrous); and (3) the *Pinctada margaritifera*, which made black Tahitian pearls.²³

The broad hierarchy of pearls by market value was South Sea first, Tahitian next, then akoya, and freshwater pearls after that. South Sea pearls ranged from approximately 9 to 19 mm, Tahitian pearls were approximately 9 to 12 mm in size, and akoya pearls were approximately 5 to 10 mm. Freshwater pearls varied considerably in size.

According to the head of the Gemmological Association of Great Britain:

There are so many different kinds of pearls available and most people don’t know the difference between natural and cultured, saltwater and freshwater cultured, cultured with natural colour, or the various treatments that are used. They don’t understand what these things mean and how they can affect what a pearl is worth.²⁴

If Li did pursue the pearl business, she knew it would be worthwhile to complete a pearl certification course, such as the specialist course offered by Pearls As One.²⁵

Scientific modifications went well beyond dyeing to create new possibilities. Chinese producers used various culturing techniques and nuclei to grow hollow soufflé pearls with iridescent colours, Edisons, Ming pearls, ripples, and giant fireballs. Some Chinese freshwater pearls had sizes, colours, and lustres approximating those of South Sea pearls. However, not everyone was as optimistic about these mussel-grown luxury pearls.²⁶

ENVIRONMENTALISM AND PEARLS

Oysters were an effective barometer of the fitness of the waters they lived in.²⁷ “You can only produce high-quality [saltwater] pearls by working in a pristine marine environment,” according to Laurent Cartier, a pearl sustainability researcher. He believed that the pearl industry was being significantly affected by climate change. Increasingly, frequent hurricanes and typhoons could decimate harvests, rising carbon levels led to ocean acidification that hindered oyster shell formation, and increasing ocean temperatures could harm oyster shells. The saltwater pearl industry had a natural interest in sustainable practices in order to ensure the survival of the product.²⁸

Prior to pearl farming, pearls had to be discovered in nature. This meant that many thousands of oysters or mussels had to be opened to find a tiny amount of pearls, which led to centuries-long overfishing and exploitation of oysters and pearls.²⁹ Thus, some argued that the farming of cultured pearls had exerted a greatly positive effect on pearl oysters, and had instilled in pearl farmers an interest in maintaining and even improving marine ecosystems.³⁰ In some cases, as in the Kimberley Coast (which led Australia’s pearl industry), pearls overlapped with natural resources and their extraction threatened ecosystems.³¹

Freshwater pearls were generally produced in football-field-sized ponds in China and other places. The mussels were grown in old rice paddies that had been excavated and flooded to become artificial lakes. Although freshwater mussels were less dependent on a pristine environment than saltwater oysters, there was still a need for clean water; however, industrial pollution from neighbouring areas—quite outside the control of pearl farmers—could hinder freshwater pearl development. Some farmers in China found it impractical or uneconomical to grow freshwater pearls and had migrated to other industries.³² Freshwater pearl farms could sometimes grow other products concurrently with pearls.

Some pearl processors, who received the pearls from freshwater and saltwater pearl farmers, practised unsustainable techniques, such as the use of bleaches and dyes.

Ultimately, although sourcing certifiably sustainable pearls could offer differentiation, it was nonetheless a great challenge. Li might be able to find saltwater pearl farmers who used demonstrably sustainable techniques, but her research did not yield any leads for sourcing sustainable freshwater pearls—the type of pearl that would likely be her main focus if she pursued the pearl business. Therefore, a sustainability angle did not provide any obvious and feasible niche, and might not even be possible with many of the pearls.

OPTIONS

Li realized that she had various decisions to make. She first needed to decide whether to enter the pearl industry at all. Was it sufficiently attractive? If she did enter the pearl business, should she focus on wholesale or retail sales, or both? Should she open an online store or have a physical location (possibly seasonal) at a mall or farmers’ market? Maybe she could sell pearl jewellery to a corporate gift program or via house parties. What kind of jewellery would she offer (e.g., earrings, necklaces, rings)? Would she make any of the jewellery herself? Should she target in-home jewellery makers? What segment of the market

would she target (e.g., high-end fine jewellery, lower-end fashion, or costume jewellery)? How would she differentiate her business? Perhaps she could leverage the link between pearls and classical or vintage fashion. Her preliminary investigation suggested that it could be quite easy to source a large quantity of relatively inexpensive cultured freshwater pearls from China that would be attractive to regular consumers. However, sourcing good saltwater pearls was exponentially more difficult. Li realized that she had many questions to resolve if she proceeded with her venture.

RETAIL PRICES AND EXPERIENCE

In considering the prospect of retailing pearls in Canada, Li visited various malls to examine the prices and service. It quickly became apparent to her that sales staff at most jewellery stores—even at big iconic chains—lacked extensive knowledge of both pearls in general and of particular store offerings. At the first store she visited—a key international jewellery retailer—one of the sales staff said, “Some of our pearls are freshwater, and some of them are cultured,” when in reality *all freshwater pearls sold in stores were cultured*. This salesperson grew visibly annoyed at the prospect of answering questions. Li did not dare add the topic of saltwater pearls into the mix. She did, however, find out that this store sold 6-millimetre to 7-millimetre (mm) freshwater pearl silver stud earrings for CA\$120, and 9-mm to 10-mm freshwater pearl silver stud earrings for CA\$159. The store also sold a strand necklace of 6-mm pearls for CA\$199 and a silver pendant with one 6-mm pearl for CA\$160.

The staff at the second store she visited was somewhat more knowledgeable about pearls and its pearl products, and seemed to know the difference between freshwater, saltwater, cultured, and natural pearls. And yet, pearls did not claim any special place among the store’s offerings nor elicit any enthusiasm, which was perhaps representative of the “timeless-yet-forgettable” positioning of pearls in the minds of many consumers. This store offered 7-mm to 8-mm freshwater silver stud earrings for a range of CA\$90 to CA\$120, and an 8-mm freshwater pendant with silver and zirconium (“fake diamonds”) for CA\$150. It also offered a freshwater pearl strand necklace with 9-mm to 10-mm pearls for CA\$249, and an akoya saltwater strand necklace with 9-mm pearls for CA\$899.

Li wondered whether something about this mall was not conducive to pearls or luxury items, and so she decided to visit a more upmarket mall. In the second mall, she entered a more recently launched international chain store and found the sales staff to be enthusiastic and the offerings to be simple, elegant, and affordable. Sample products included silver drop earrings with 7-mm freshwater pearls for \$35, a 45.7-centimetre freshwater pearl strand made with silver for CA\$99, and a 10-karat gold strand necklace with freshwater pearls for CA\$219. The products were more modern and the sales staff more effective in the new store, and yet she knew she could source pearls for lower prices. She also felt that it was very unlikely that a general jewellery store would take any special interest in promoting pearls.

In fact, it became apparent to Li, after some reflection, that pearls offered a story like that of no other product, and that this story was left untold and undersold by jewellers. What kind of difference could it make to have a knowledgeable staff member who could talk passionately about pearls? Perhaps a kiosk in a mall or farmers’ market could, for example, show videos of pearl farming in the South Pacific in order to elicit curiosity from shoppers. Improving the sales experience and accessibility of pearls did not need to be prohibitively expensive or difficult. She imagined mothers and daughters coming to her booth and making impulse purchases that were luxurious, exotic, and exciting—and yet, affordable.

ONLINE OFFERINGS

Online retail was an option that could be relatively easy to implement. Pearl Paradise, a \$20 million business run by the pearl expert Jeremy Shepherd, had a huge selection of relatively affordable and quality pearl items. The online store's products included 7.5-mm to 8.0-mm AAA-quality freshwater pearl stud earrings for \$105,³³ 7.0-mm to 7.5-mm white Akoya AA+-quality pearl stud earrings with 14-karat gold for \$125,³⁴ and an 8-mm to 9-mm white Freshadama pearl pendant for \$201.³⁵ Most pendants used a somewhat larger and more valuable pearl than would be found in necklace strands and earrings. Pearl Paradise also offered a 7.5-mm to 8.0-mm 45.7-centimetre long AAA-quality freshwater pearl strand necklace for \$253.³⁶

Another online retailer, Pearls Only, offered 7-mm to 8-mm AA-quality freshwater cultured pearl silver earrings for CA\$75,³⁷ 7.5-mm to 8.0-mm AA-quality Japanese akoya cultured pearl white gold earrings for CA\$185,³⁸ a 9-mm to 10-mm AA-quality freshwater cultured pearl pendant for CA\$85,³⁹ and a 7-mm to 8-mm A-quality freshwater cultured pearl strand necklace for CA\$79 to CA\$95.⁴⁰

The online giant Amazon.com, Inc. offered a white AAA-quality freshwater round cultured pearl necklace for CA\$160, Ever Faith 925 sterling silver AAA-quality freshwater cultured pearl button stud earrings for CA\$18,⁴¹ and 6.0-mm to 6.5-mm white akoya AA+-quality cultured pearl stud earrings in 14-karat gold for CA\$99.⁴²

Peoples Jewellers sold 7.0-mm to 10.5-mm button freshwater pearl front/back silver earrings for CA\$109⁴³ and 7.0-mm to 7.5-mm akoya pearl stud earrings in 14-karat gold for CA\$119. It also offered a set of a 6-mm to 8-mm freshwater pearl and crystal bead necklace, a bracelet, and earrings in sterling silver for CA\$249.⁴⁴

Michael Hill International Ltd. sold simple drop freshwater pearl silver earrings for CA\$29.⁴⁵ It also offered a freshwater strand necklace with a 10-karat yellow gold clasp for CA\$199⁴⁶ and a pendant with a cultured freshwater pearl and cubic zirconia in sterling silver for CA\$59.⁴⁷

POSSIBLE WHOLESALE PRICES

Freshwater pearls were abundant and readily available online, as could be confirmed by a quick Internet search. This availability partly reflected the much higher yield of freshwater mussels than saltwater oysters. However, it seemed to Li that there was a dubious element to many of the listings she found online, and was particularly pronounced in the case of eBay Inc. (eBay), which featured a large amount of fake pearls from China. Both freshwater and fake pearls were regularly sold as saltwater pearls on eBay. The site's review system was often "gamed" so that sellers pushed back hard against negative reviews and would simply give partial or full refunds rather than allow a negative review. This response allowed them to keep selling mislabelled items.⁴⁸ It seemed to Li that sourcing pearls cheaply, beyond freshwater pearls, was not necessarily easy.

Li considered her options for sourcing pearls. Having determined that eBay was out of the question, she decided that she could source pearls and pearl-based jewellery from a Hong Kong-based dealer. She could buy loose 7.0-mm to 7.5-mm freshwater pearls at \$4.30 for round pearls, \$1.20 for drop-shaped pearls, and \$0.70 for button-shaped pearls. The button shape best described the pearls she had purchased in China at seaside markets for a low price. A loose, round-shaped 7.0-mm to 7.5-mm akoya saltwater pearl would cost her \$10.70. She figured that selling the more luxurious Tahitian or South Sea saltwater pearls was beyond her purview, although she could possibly make them available for special orders. Li also realized that sourcing reliable wholesale pearls—beyond freshwater pearls—was not easy for someone lacking connections in Hong Kong and Asia. She would likely need to attend a trade fair in Hong Kong or Guangzhou and negotiate with multiple suppliers to secure the best prices and a reliable supply.

SAMPLE ORDER

To gain more clarity on actual quality, true prices, and product range, Li investigated a variety of websites in China. In July 2018, she placed a modest order with one of the companies she had researched. Before shipping, the supplier provided Li with the following terms for all orders: all items are “silver white,” except the button pearl and akoya pearl; all pearls are freshwater, except the akoya pearl; all pearls are grade AA; the buyer is responsible for the entire shipment from door to door (referred to as EXW or ex works), excluding transfer commission, shipping, insurance, or tax; prices vary due to metal prices and exchange rate; minimum order quantity is five pieces in silver; lead time of two to three weeks after payment may be affected by order quantity; packaging includes a small plastic bubble bag and carton, but no jewellery boxes; shipping takes three to five working days to most countries; and payment is required before production.

The product arrived in good order and quality was as promised. In fact, the local jeweller, who seemed very knowledgeable about pearls, even commented about the high quality of the akoya pearls. In addition, Li felt that she had a clear idea of the total landed costs for each product, including all transportation and related fees (see Exhibit 1).

DECISION

By August 2018, Li would need to make a decision. She could enter the pearl industry, perhaps by opening a kiosk in a mall or a market. But what about an online store? Also, would she make the jewellery herself or source it directly from China or Hong Kong? Or should she just stay away from the business altogether? It was possible that although consumers enjoyed the look of pearls—which had positive, symbolic, classical, upmarket, tropical evocations—they would not be receptive to shopping at a booth or making an effort to seek out the product. Maybe there was a reason why the pearl market had endured stagnation and malaise. And yet, she could not help wondering whether a pearl product that was updated for current consumers (i.e., was affordable, stylish, and accessible) was exactly what people wanted, whether or not they realized it.

The authors would like to thank jewellery designer Cathy Beamish for her input on this case study.

EXHIBIT 1: BREAKDOWN OF ORDER COSTS

Image	Name	Unit Price (in US\$)	Quantity	Total Cost (in US\$)	Total Cost (in CA\$)	Adjusted Amount (in US\$)	Adjusted Amount (in CA\$)	Adjusted Cost per Item (in US\$)	Adjusted Cost per Item (in CA\$)
	Pearl earring (pair)	\$6.00*	10*	\$60.00*	\$79.80	\$79.80	\$106.13	\$7.98	\$10.61
	Pearl Necklace	\$18.90*	5*	\$94.50*	\$125.68	\$125.68	\$167.15	\$25.14	\$33.43
	Pearl Pendant	\$7.00*	5*	\$35.00*	\$46.55	\$46.55	\$61.91	\$9.31	\$12.38
	Three Pearl Pendant	\$15.50*	5*	\$77.50*	\$103.08	\$103.08	\$137.10	\$20.62	\$27.42
	Button Pearl	\$0.70*	40*	\$28.00*	\$37.24	\$37.10	\$49.28	\$0.93	\$1.23
	Akoya Pearl	\$11.00*	5*	\$55.00*	\$73.15	\$73.15	\$97.29	\$14.63	\$19.46
				70*	\$350.00*	\$465.50	—		
Delivery (via DHL) to Canada:					\$35.00*	\$46.55	—		
PayPal commission paid by seller:					\$18.00*	\$23.94	—		
Total charge from seller (in US\$):					\$403.00*	\$535.99	—		
Excess charge to buyer by paying using VISA credit card:						\$0.67			
Total charge from seller (in CA\$):						\$536.66*			
Customs clearance fees:				Canadian duty charges (8.5% of \$465.50):		\$39.56*	—	-	-
				Canadian HST fees (5.0% of \$465.50):		\$23.28*	—	-	-
				Custom broker processing fee:		\$11.87*	—	-	-
				Transaction fee:		\$5.37*	—	-	-
Total cost to buyer:						\$616.74*			

Note: Adjusted amounts allocate all costs for shipping, duties, taxes, and other fees to each product in equal proportions; actual costs are marked with an asterisk (*); customs clearance fees in countries other than Canada are not shown; for the currency exchange calculations in this exhibit, US1 = CA\$1.33 on June 25, 2018; HST = harmonized sales tax.

Source: Created by authors based on Jane Li's order.

ENDNOTES

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