

Textile Makers in Taiwan Carve Out A Niche in High-Tech Clothing

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furniture and protective gear for firefighters.

"These fabrics have special production, coating and lamination processes, and we want to keep those patents here," said Robert Jou, a director at the state-financed Taiwan Textile Research Institute.

Data from the Taiwan Stock Exchange for 2010, the most recent year for which figures are available, show the average net margin at textile companies was 12.7 percent, compared with 7.6 percent for companies producing electronic products like semiconductors, computers and communication components.

Singtex owns 34 patents, including one for S.Cafe, a polyester cloth with coffee grounds mixed into it. The coffee grounds, recycled from local 7-Eleven convenience stores and Starbucks cafes, absorb odors, giving the fabric added value for athletic clothing. Singtex counts the Timberland and Hugo Boss brands as its customers and has even landed a deal to supply fabric for the Liverpool soccer club's uniforms.

Mr. Chen's company survived the industry's exodus to China, but many others did not. Exports dropped by 44 percent in dollar terms from 1997 to 2009, according to data from the Taiwan Ministry of Finance. Mills that did not do research and development, or have the ability to invest in innovation, could not compete and went out of business.

There were 7,752 textile companies in 1997, but by 2010, only 4,299 were left, according to the textile institute's data.

"The ones that survived focused on innovative products to



Sample garments made of fabrics produced by Singtex.

serve higher-value demand in Europe and United States," said Chen Lee-in, a senior economist at the state-financed Chung-Hua Institute for Economic Research. "It really turned the notion that textiles was a low-tech industry on its head."

This new business environment spawned companies like Hyperbola Textile, whose 24 employees work in a chic loft office in Neihu, a high-technology hub in Taipei. Hyperbola found its niche in designing high-performance outdoor clothing, like ski jackets and raincoats, and supplies brands like Canada Goose, Lululemon and Patagonia. It also produces fade-resistant outdoor cushions.

The company has no factory. Instead, it finds mills in Taiwan to make the fabrics.

Tina Wang, Hyperbola's founder, said that although her clients made smaller orders in Taiwan than they would in China, they needed fabrics that could withstand harsh weather conditions and demanding environments, which Chinese mills often lack the technology to produce.

In 2011, Ms. Wang's company

and its partner mills produced 350 types of fabrics to satisfy that demand.

"We chose to stay here because we saw that Taiwan still had very innovative mills," she said. "But their marketing was very weak. We provide the design and marketing platform so that they can grab a share of the global market."

Nimble companies like Singtex and Hyperbola have powered the textile sector's resurrection. Exports for the entire industry, at \$12.7 billion in 2011, have climbed to 24 percent below the 1997 peak. But another measure of value, the unit price of fabrics, has risen by 41 percent since 1999 to \$5.20 per kilogram, or 2.2 pounds, an indication that the industry has shifted to higher-value products.

For those who made the shift to more expensive cloth, profits have surged. Singtex's revenue increased by 35 percent in 2011 from 2010 and its gross margin sales revenue minus the cost of the goods - rose to more than 25 percent in 2011, according to Mr. Chen of Singtex. He plans to take his company public in 2013, and declined to disclose more figures.

Ms. Wang also declined to disclose Hyperbola's financial performance, but said, "Let's just say, it's way better than most of Taiwan's tech companies.'

Yet the good times might have a short shelf life. Chinese textile mills are learning and adopting production technologies that were first brought to the mainland by investors from Taiwan. Ms. Chen, the economist, estimated that China was five to 10 years behind Taiwan technologically, which keeps the pressure on companies in Taiwan to keep innovating.



Jason Chen, top left, founded Singtex Industrial to focus on developing higher-value, waterproof synthetic cloth. Singtex owns 34 patents, including one for S.Cafe, a polyester cloth with coffee grounds mixed into it. The Singtex factory, above, is in the Guanyin Township of Taiwan.

"Our companies took a few pages to the mainland, but they avoided bringing the whole manual," Ms. Chen said. "Technologies like ultrathin, waterproof, breathable fabrics, we still own. In the future, we may need to build spacesuits to stay ahead."

Peter Huang, the chairman of Kingwhale Industries, a thermal fleece supplier, said his clients came to his company only after failing to find mainland factories that could meet their needs. "They literally see our product, tell us it's nice, then fly to Shanghai or Guangzhou with our sample the next day," Mr. Huang said. "Then we get an awkward request from a Chinese factory asking us to teach them how to set up the production process."

Kingwhale is looking to become partners with American fabric labs to keep its edge. Mr. Huang is planning a trip to North Carolina State University this month to buy a patent, and will also check on the price of land nearby for a possible factory to supply fabric directly to the United States. He aims to find a new fabric and turn it into a brand that can be as recognizable as Gore-Tex, the breathable, waterproof fabric.

Another company, the Lealea Group, is taking a similar approach by building its own clothing brand. The company, a major global nylon supplier, spent a year designing about 150 pieces

for a new clothing line called FN Ice and opened its first store in Taipei in September.

FN Ice's creative director, Zoe Chen, said Taiwan would eventually lose its technological edge, and when that happens, the "only way to add value will be through promoting brands and lifestyle."

She said the textile industry constantly had to adapt to the harsh reality that there would always be a country that could make what you were making at a fraction of the price.

"The Chinese are smart," she said of the mainland companies. "They will catch up. So Î'm always thinking of new ways to push this fabric forward to become something more."