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Abstract

China has become a manufacturing giant in less than 10 years but with that growth have come quality inadequacies and an opportunity for corruption in the industry. The allure of China's low-cost manufacturing has been almost too good to be true. However, recent quality issues and product recalls have hindered China's success and jeopardized consumer confidence in Chinese-made products. Product recalls on all types of items have occurred but the most dramatic have been with children's toys, food items and drugs. Chinese workers are overworked and underpaid and in some cases not paid. The root cause of quality related issues are many. The main three include the major focus on ridiculously low-cost subcontract manufacturing, opportunistic entrepreneurs taking advantage of the lack of quality resources, and lack of proper quality systems due to such rapidly industrialized growth.

Chinese Manufactured Product Issues

Since 2001, China has become a manufacturing superpower and worked its way to the top of the World Trade Organization (WTO). The appeal and implementation of China's low-cost manufacturing for many major U.S. companies has made good business sense. Recently, however, quality issues and product recalls have put a damper on China's success and jeopardized consumer confidence in Chinese-made products. From tainted seafood, poisoned toothpaste and pet food, to exploding cell phone batteries,

disintegrating tires and lead contaminated children's toys, defective consumer products from China are forcing American companies to rethink the benefits of China's low-cost manufacturing. Likewise, the world demand for low-cost manufacturing from China has initiated substandard worker treatment and quality standards far below those in the U.S. or Europe. In 2007, according to the U.S. Consumer Product Safety Commission (CPSC), 60% of all product recalls were traced back to being made in China. In August 2007, Mattel, Fischer-Price division recalled nearly 1 million Chinese manufactured toys from 83 types that were finished with a lead-based paint. Before this round of recalls, 24 types of Chinese manufactured toys had been recalled in the United States in 2007. In June 2007, Chinese manufactured recalls included 68,000 folding chairs, 2,300 toy barbecue grills, 1.2 million space heaters, 5,300 earrings, 19,000 children's necklaces, and 1.5 million Thomas the Tank Engine toys (Banham, 2007).

The U.S. Food and Drug Administration (FDA) recently warned consumers to avoid using tubes of toothpaste manufactured in China. These products have been found containing the poisonous chemical diethylene glycol (DEG). Solvents and antifreeze products contain the DEG ingredient. The products are usually found at the budget retail outlets across the U.S. After reports surfaced that contaminated toothpaste was being found in other countries, the FDA began testing samples of Chinese made toothpaste and other dental

products. As a result of the testing, FDA inspectors identified and detained one shipment of toothpaste at the U.S. border. This toothpaste shipment contained about 3 percent DEG by weight. Toothpaste products from a distribution center and a retail store were also tested. The highest level of DEG found was between 3-4 percent by weight. The product at the retail store was not labeled as containing DEG but was found to contain it. The FDA is aware of reports of patient deaths and injuries in other countries over the past several years from ingesting DEG-contaminated pharmaceutical preparations. These products include cough syrups and acetaminophen syrup (FDA, 2007).

Chinese Worker Concerns

To better understand the major sources of China's quality issues it is beneficial to review the profile of the average Chinese worker in a region known as the Pearl River Delta (PRD). Many migrant workers in this region, also known as the "world's factory", have been frustrated with and leaving their low-wage assembly line positions which has created a significant labor void. In the last twenty-five years peasants have come from their farms to work in the PRD and helped it to become one of the fastest growing regions in the world. The migrant worker population in the PRD has grown to over 30 million, but many of these workers are disgruntled at the unfairness of company owners in keeping business profits and not sharing any of the wealth. This fact is illustrated by the affluent lifestyle of the upper hierarchy while general factory workers are under-paid and overworked. The estimated labor shortage in small and medium-sized factories in the Guangdong province is up to 2 million workers. Sixty percent of the factories in cities like Dongguan need laborers. Workers have lost motivation due to forced overtime, monthly wages of \$50, excess workplace injury, frequent nonpayment, and noncompliance with labor laws. Area inspectors also ignore and avoid knowledge of factory worker abuse. Poor worker treatment is also being communicated around China further deterring potential workers laboring in

factories. The manager of the largest private employment agency in the city, Yang Qi of Chitone jobs market, said factory owners insist on cutting wages as much as possible to maintain global competitiveness (Johnson, 2004).

Quality

A major issue hindering the Chinese ramp up to meet U.S. quality standards is that U.S. consumers and business owners may be conflicted about the added cost of requiring more quality from their largest trading partner. Americans have proven they desire the savings received by purchasing inexpensive goods received from China. Masaaki Kotabe, professor of international marketing at Temple University's Fox School of Business says, "The heavy investment in China by many U.S. businesses was because they wanted to avoid this country's regulations and added costs." Kotabe further states, "As the economy suffers Americans are likely to be even more drawn to Chinese-made goods. The more cost-conscious they are, the more likely they are buying products from China." Marshall Meyer, a management professor at the Wharton School, places some of the blame on American companies, who have made low cost their priority with the Chinese. Suppliers, he said, "will meet those cost constraints, but you don't want to know how they did it." Meyer goes to China several times a year and also teaches a course on management of Chinese firms. Meyer also said, "The Chinese use more subcontractors than Americans expect or know about." "Often U.S. firms don't have enough people on the ground to monitor this properly," he said. "It costs money to manage long supply chains and most of our business we do with China is based on price (Burling & Loyd, 2008, p. 5)."

The magnitude of China's opportunity to attempt to meet the world demand for low-cost products brings unlimited quality challenges. The director of food-policy initiatives for Consumers Union, Jean Halloran said, "China has good product standards but has not been able to enforce them." "At the root

of all of this," she said, "is that China is an economic powerhouse that's industrialized extremely rapidly and has not developed a consumer and product safety function commensurate with the speed of its industrialization." Twenty-five years ago and just across the border of Hong Kong in the city of Shenzhen was a little fishing village. In its place today are nine million residents at the center of China's manufacturing body. The rapidly changing high-growth Chinese manufacturing environment contains a high employee turnover rate. A manager who has been with a single company for five years is rare. Chinese exporters may today be adopting production, management and quality control (QC) techniques that have long been standards in the U.S or Europe. This results in a diverse manufacturer pool of various standards, from high quality, squeaky clean factories to those with dirt floors and no QC system; hence, not all factories are up to meeting the quality requirements of overseas buyers. Sales departments are making promises, but because of the pressure of exporters that the production and quality control personnel may not be able to keep. Cliff Waldman, economist for the Manufacturers Alliance/MAPI trade group said, "It's impossible to know what percentage of Chinese-made products are actually sub-par. China's statistical system is back where ours was in the Depression." Experts say aggressive and opportunistic entrepreneurs continue to take advantage of the country's chronically weak enforcement of regulations, choosing to blend fake ingredients into products; to sign contracts agreeing to sell one thing only to later switch the raw materials for something cheaper; and to doctor, adulterate or even color old, stale foods to make them look fresher or more appetizing. In mid 2007, the government even said it had shut down about 180 food factories nationwide because of food safety violations. From December 2006 to May 2007, regulators said, they uncovered 23,000 cases involving fake or low-quality food (Barboza, 2007).

The majority of China's product quality issues come from small and medium

manufacturers. These smaller Chinese manufacturers get much of the sub-contracting or smaller jobs for larger Chinese manufacturers so they may not have a quality program or process in place. To obtain work these smaller factories tend to offer products at an even lower cost than the larger factories. In this case, with the supply chain long, there are little or no ties with U.S. or European companies for technical or design assistance when process issues arise. Even U.S. subcontractors require clear communication of design requirements, process insight, and input to successfully produce for its contractors. Some of the solutions that could help the Chinese quality dilemma would be for the U.S. to communicate and transfer manufacturing assistance to the Chinese companies needing support. For example, Cargill, a U.S. Food and Agriculture company, could establish a joint food safety management training program with China's Quality, Inspection and Quarantine Service (AQSIQ). Cargill said it will provide Chinese government officials and business and academic leaders with a two-week food safety training program to expand their knowledge in food safety management. Cargill said that this was part of a global initiative involving the company and selected academic, inter-governmental and non-governmental institutions to better harmonize global food safety systems. The firm hopes in this way to share its food safety expertise with its Chinese partners. Greg Page, Chairman and Chief Executive of Cargill said,

The minister of AQSIQ, and I reached an agreement on this program by direct communication. Safe food is a global concern. We produce food in China to the same standards we do in the United States or Europe. I'm very pleased that AQSIQ will work together with Cargill to provide cooperation on global best practices in the food safety management area. (p. 1)

Cargill said that participants will have the opportunity to talk with their western government counterparts, intergovernmental organizations and multinational corporate partners (Rano, 2008).

Government Regulations and Insurance Coverage

The U.S. government and Congress are moving toward tougher regulation of imported goods. Bills addressing the issue recently passed both houses, but have not made it to President Bush's desk. Late in 2007, the Chinese government pledged to U.S. officials that it would certify and meet U.S. quality and safety standards for agricultural feed, drugs and medical devices produced in China. Chinese authorities agreed to electronically track products from production to exportation. Chinese authorities also stated they would adopt quality-assurance methods. "The food, safety and product quality issue has been one of the major areas of cooperation and dialogue between the two governments," said Bao Dong Wang, spokesman for the Chinese Embassy in Washington. Rachel Weintraub, director of product safety and senior counsel for the Consumer Federation of America states, "The root of the problem is that companies are really abrogating responsibility for safety to their contract manufacturers and they're not being rigorous enough in their testing of products (Burling & Loyd, 2008, p. 5)."

Despite recent product recalls, brokers and insurers are rising to the challenge of insuring the Chinese manufacturing industry for recalls. However, leading insurance broker and risk management consultant Aon is warning that companies need to boost their commitment to quality control to secure coverage. Chinese manufacturers are beginning to realize that to trade on a worldwide basis many customers will make it a contractual requirement for their suppliers buy product recall protection. But this coverage will only be available after comprehensive assessment of the individual risk by insurers. Effective quality control does not stop with the manufacturers. Mark advises companies across the supply chain to conduct due diligence with suppliers' quality control processes: "Businesses trading with China need to consider the knock on effect to their business. Recent EU legislation means that companies are

obligated to inform authorities in the event of a recall and as such should also have robust checks in place to test products before being released to the public ("Chinese Manufacturers," 2007)."

China still has an opportunity for a bright future to manufacture a great deal of the world's products. Cliff Waldman feels that Chinese manufacturers will make quality a higher priority because it "values us as a trade partner" and is very interested in how it is viewed globally. He thinks the Chinese government may also step in. In fact, Chinese politicians have started a "Made in China" campaign at home to upgrade its image. "It's trying to get the word out that if quality is poor," he said, "it will damage the national brand of China" (Burling & Loyd, 2008). There are Chinese websites for propaganda purposes trying to maintain that Chinese quality exists and is not a problem. Large Chinese manufacturers need to screen smaller companies that cannot comply with proper quality standards or assist in bringing them up to the level needed. There must be government intervention into companies that risk the "made in China" label. Manufacturing costs will go up overall but if done properly the country of China can bounce back like the Japanese did when Dr. W. Edward Deming helped to turn their product quality around after World War II using his "14 points."

The American Chamber of Commerce in China said that rising labor costs were the second most-cited risk for member companies in the coming years, overshadowed only by the threat of a domestic economic slowdown. While U.S. companies generally remain optimistic towards China, rising costs are affecting some of them adversely and prompting a few to go to other countries. While China's growth is a significant consideration in investment decisions and expansion, the rapid growth of the domestic economy has also allowed the development of a very competitive business environment that is causing significant cost increases. Rising labor costs, higher costs for raw materials, distribution, taxes and

real estate have been contributing to a “paradigm shift” especially among low-end manufacturers focused on very low-cost manufacturing. The once endless supply of low-cost, unskilled labor may be drifting away (Subler, 2008).

Conclusion

Figure 1 illustrates the many issues confronting Chinese manufacturers. In essence, Chinese manufacturing is in trouble in terms of product quality and satisfied customers. Failure to address these concerns has made global customers pensive and inclined to reconsider purchase of American-made, or anywhere else-made, goods. Product quality issues are exasperated through Chinese worker treatment in relation to long work hours and low pay. While Americans and the global community may want to purchase inexpensive goods, quality still must be integrally-entwined in products and the workers who make them.

It has been stated that United States businesses want to avoid manufacturing regulations in order to reduce product manufacturing costs. This sounds reasonable for processes that do not result in value-added substance; although avoidance is unreasonable if the non-compliance result in product quality or safety concerns. Buying inexpensive products is expected, buying “cheap” and “dangerous” should not be an option for consumers.

If Chinese manufacturing is to grow and meet quality demands, Chinese manufacturers must be trained and regulated through effective quality management systems that meet country specific, and hopefully stringent, government regulations. While in the United States it may be true that customers expect a bargain in a depressed economy, these same customers still expect to purchase products that are

Figure 1. Chinese Manufactured Product Issues and Concerns



safe to use and meet performance requirements for a reasonable amount of product life. Ideally, fulfilled product expectations by Chinese manufacturers may indeed require product recall premiums that force producers to better manage their supply chain. At its heart, the term “supply chain management” is its own definition.

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