Total Recall: A Flawed System of Trade

by Ryan Finstad

UNITED STATES SEN. Charles Schumer, when asked about the recent apology by a Mattel executive to the head of China's product safety agency quipped: "It's like a bank robber apologizing to his accomplice instead of to the person who was robbed." Sen. Schumer has also gone on record saying, "China should be apologizing as well to consumers around the world."

Unabashed China bashing has become a mainstay in the wake of the product recalls that are sweeping the U.S. Product safety is a sensitive issue that strikes close to home for many Americans, and the chance to score points with populist voters has not been missed by savvy politicians. A long list of grievances makes China an easy target, and the recalls have provided a convenient pretext for the all-out, public-relations assault that has ensued.

Atop this list is the burgeoning trade deficit which rose 15.4% to more than $230 billion last year, the largest imbalance with a single trading partner on record. Critics like Sen. Schumer focus much of their ire on the undervalued Chinese currency, already having gone so far as to introduce a bill that would impose a 27.5% tariff on Chinese imports if the yuan is not allowed to appreciate more drastically. But politics and rhetoric aside, the issue is more complex than a simple rate of exchange. The bottom line is that American consumers are addicted to cheap goods, and at present many of these goods are made in China. Low wages, poor working conditions and nonexistent environmental controls are some of the comparative advantages that factories leverage to produce these cheap products. As China's economy has begun to mature, however, many of these advantages are drying up. In the face of rising costs, manufacturers have struggled to find new factors in the manufacturing process to exploit. Unfortunately, the factor with the most room to give has been quality.

The recalls are symptomatic of a basic flaw in the contract-manufacturing paradigm that is pervasive today. By failing to

Mr. Finstad is director of operations for Cathay Solutions, a Shanghai-based consultancy that provides procurement and advisory services to the printing and packaging industries.

adequately monitor the production and inspect the quality of the goods that they buy, companies create what economists call a moral hazard for their manufacturers. Rising production costs and intense price pressures make it increasingly difficult for manufacturers to keep profit margins intact. In the face of this, failing to implement quality verification is essentially an invitation to cheat on quality and produce substandard goods.

Rising Costs of Production

SINCE BEIJING BEGAN to let the currency float in 2005, the yuan has appreciated more than 9% against the dollar. As development booms, energy and raw material prices have followed a similar upward trend, and just this summer the Chinese government implemented a sudden change to the value-added tax that effectively increased taxes by as much as 17% on some exports. Although there is no official data, estimates put annual labor cost increases in the range of 10%. This is painful for importers and exporters alike, but it should come as no surprise that production costs are rising in concert with improving standards of living. This is perhaps best demonstrated through the eyes of Chinese workers that have moved on from factory life.

One such former laborer is Tina Zhang, a native of rural Anhui province who worked at a number of factories across Eastern China before deciding to call it quits. Her hometown offered scant opportunity for people her age, and like many in her high school class she left "in search of opportunity and the outside world." She worked her way from one industrial metropolis to another, finding jobs in Fujian, Wenzhou and Guangzhou before finally making her way to Shenzhen. But in 2001, Ms. Zhang quit her job and enrolled at a computer-training center, living with a relative and using the money she had saved to pay for tuition. "Hours at the factory were too long, and for the pay it was not worth it anymore," she recalls. At that time, her monthly salary was just 400 yuan ($53.42). Ms. Zhang learned to use a computer and the internet and studied English in her spare time. After finishing school she found a job as a hostess at a hotel in Shenzhen and later at an export company in the same city. Today, she runs her own small trading company from home via the internet. By the time her younger brother graduated high school, Ms. Zhang was able to help her parents pay to send him to college where he studied computer science; he would not work in a shoe factory.

Ms. Zhang's story is inspiring, but it is not unique. Research has revealed that the once widely reported "labor shortage" in southern China was nothing more than a fallacy. When interviewed, managers and officials explained that there was actually an abundance of workers seeking the higher paying manufacturing jobs, and factories that paid employees well did not report any recruitment trouble. "We are hiring more workers every day," said Mike Lai, Plant Manager at DuPont Shenzhen, when asked about the labor shortage.

In Shenzhen, the minimum wage was 690 yuan per month, the highest in China. But Wu Liyong, an official at the Shenzhen Labor and Social Welfare Bureau, estimated that a monthly salary of 1,000 yuan was necessary for companies to keep enough staff to maintain production levels in the city. Companies that paid just the government-mandated minimum salary could not attract enough workers to keep churning out their cheap goods. Following a simple economic model, salaries should have increased to the equilibrium level that would keep jobs filled, and these increases should have been built into the cost of goods in the form of higher prices. The mystery—why was there such a long time lag before the labor market stabilized?

REUTERS

The bank robber and the accomplice, Mattel's executive vice president and China's Li Changjiang meet after Mattel's apology to China.

The phenomenon was explained over the course of discussions with managers of these cheap-goods factories: economic models out the window, the foreign buyers of these products were simply not willing to accept price increases.

The Wal-Mart Effect

DISCUSSING MANUFACTURING TRENDS with factories managers in China invariably leads back to one topic: Wal-Mart. Critics both at home and abroad deride Wal-Mart for what they say are unethical employment and business practices. A common defense of the company is that its consistently rock-bottom prices give low-income consumers access to products that they would otherwise not be able to afford. One of the ways the retail giant achieves this is through economies of scale, using its enormous buying power to purchase in bulk and negotiate cheaper prices from suppliers. Wal-Mart contracts with more than 5,000 factories to produce its goods in China and the eye-popping $18 billion worth of goods the company purchased last year makes it China's eighth-largest trading partner (ahead of Russia). Though it is undoubtedly the largest, Wal-Mart is not alone in this industry. Aside from the retailers themselves, brands that sell their goods in these stores are subject to similar pressures and operate in much the same fashion. All of these companies compete with one another to offer the lowest prices, and they are notorious amongst Chinese manufacturers for the ferocity with which they negotiate.

While most Chinese producers love to bemoan the headaches of doing business with the world's biggest customers, for most it is difficult to avoid. Those that prefer to do without sales to discount retailers still usually end up supplying them indirectly through branded products that they produce under contract for Western firms. In the end, the sheer volume of the industry means that few producers are insulated from the downward price pressures that ripple throughout the supply chain.

Contract Manufacturing

THE LARGE CAPITAL investment entailed in a wholly foreign owned enterprise and the concerns associated with joint ventures have made contract manufacturing the paradigm of choice for foreign firms that procure finished goods from China. This means that when you purchase an "Uncle Sam's Brand" widget at your hypermarket, it is likely that it was produced by "People's Manufacturing Company." Let's take a look at the relationship between these two hypothetical entities to better understand how the signals that they send each other ultimately dictate the final product.

Having accepted the order at Uncle Sam's lower price target, People's Co. now has to decide if it will sacrifice some of its profit margin or cut costs by substituting cheaper materials. On the flip side, Uncle Sam's must decide if it will send in a quality inspection team. Neither knows in advance what his counterpart will do, and therefore each bases his own action on what he expects of the other.

People's Co. has the highest payoff when

By failing to monitor the quality of goods they buy, companies create a moral hazard for manufacturers.

it can reduce costs by lowering the quality of the goods it produces without getting caught. Uncle Sam's has the highest payoff when it purchases goods that meet its quality standards without having to expend resources to verify this. Both parties pay a price if they are caught selling sub-standard goods, and thus must make a cost-benefit analysis by weighing the potential savings against the potential costs.

In reality, Uncle Sam's Brand will pay an extremely high penalty if the product it buys and subsequently resells to Western consumers does not meet quality standards: a product recall. In addition to the direct costs of removing its goods from supermarket shelves, the company may face lawsuits from injured customers, fines from the retailer and immeasurable damage to its brand name. Although it differs for every industry and product, the cost of implementing quality inspections is almost always much lower than the costs endured in the case of a product recall.

Conversely, the penalty to People's Co. for failing a quality inspection is relatively low. It will have to absorb the costs of reworking the goods to a higher standard or scrap the batch and start over. It may be subject to fines from the customer and if it is a recurring problem, may jeopardize the potential for future business. China People's Co., however, does not have a well-developed brand name and is unlikely to be held liable in a Chinese court. The manager of the company tends to take a short-term business outlook and is more focused on maximizing profits from the next deal rather than the next decade. Don't be fooled by the Chinese government's recent example making of Cheung Shu-hung, owner of the infamous Lee Der Industrial Co. that produced tainted toys for Mattel; in the case of being discredited publicly, many companies may simply change their name without so much as closing the factory doors. Though there is also some industry and product variance, the savings from substituting cheaper materials can be quite high relative to the costs of infrequently rejected shipments. Of course, the more regularly a manufacturer is caught the greater his average cost becomes. The pivotal factor in the decision making process, therefore, is how high People's Co. estimates the likelihood of a quality inspection to be.

Using this analysis to understand the logical process is the first step in preventing a quality problem. The average cost that People's Co. pays for each substandard batch is dependent on two variables: Percentage of bad shipments caught and the cost of each shipment caught. Both of these factors can be altered by the way Uncle Sam's Brand applies its quality controls. The second step in prevention, then, is ensuring that quality control is implemented in a way that maximizes these factors.

Changing the Rules of the Game

THE TEXTBOOK SOLUTION to this principal-agent problem is to alter the incentive structure. In practical terms, this means that Uncle Sam's must increase the likelihood that it will catch substandard shipments by improving its quality-assurance regime. This will result in a decreased frequency of low-quality shipments as manufacturers internalize the greater likelihood that batches will be given quality inspections.

Uncle Sam's can add further pressure by increasing the penalties for failing a quality inspection. An effective way to increase penalties is to pass on all the tangible costs of a failed quality inspection to manufacturers. This may include the cost of remaking the goods, fines imposed by retailers for late delivery and air-freight costs to get the remade goods to market faster. Uncle Sam's Brand can also require that factories pay for a third-party factory audit after failing a finished goods inspection and could even tack on an outright fine.

Hindsight being 20-20, it may seem curious that not all companies have robust and well documented policies in place. However many companies and, indeed, entire industries have decades-long track records of international sourcing without incident. Companies that have long-standing relationships with their manufacturers have naturally become more lax over time. As these firms searched for ways to cut costs, they may have reduced or eliminated monitoring of manufacturers that had historically performed well. At the same time, the changing economic landscape in China has presented new incentives for manufacturers to sacrifice quality. Companies like Wal-Mart are lauded for their ability to lower prices by pushing inefficiencies out of their supply chain, thereby forcing manufactures to find ways to make things cheaper. But where do we draw the line on what is an acceptable modification to the manufacturing process? With a clear incentive to water down the quality of their products and all the pressure in the world to lower prices, manufacturers must not be left to answer this question alone.

It would be difficult to overstate the importance of relationships in China and this analysis is by no means meant to downplay that factor. Purchasing is more than a math equation, and cultivating relations is an essential part of business. It is, however, no substitute for factual verification.

Developing a vendor manual that details all requirements is a vital tool for communicating with suppliers. John Tang, former director of sales and marketing in Asia for furniture components manufacturer Hickory Springs, explains another reason to develop written protocols: "A frequent problem we saw was that our sales and procurement teams were not always on the same page regarding what level of variance was acceptable." In one example, inspectors did not regard chipped paint on internal parts as reason to reject a shipment, as this does not affect usability and the parts are not visible on the final product. Salesmen, however, found that customers regarded this as a sign that there might be further problems below the surface. "There was a total disconnect," said Mr. Tang.

In addition to ensuring that departments see eye to eye internally, compiling a written document that lays out specifications serves as a basis for the second part of the equation: quality inspections. Ideally, a vendor manual should include a list of approved ingredients, banned substances and testing methods. Requiring vendors to implement a system of lot-coding creates a paper trail that will be useful in tracing any problems that come up during testing back to the various batches of raw materials used. Finally, the manual ought to explain the procedure for dealing with shipments of substandard goods; making transgressions as costly as possible for manufacturers is the most effective way to ensure their interest in compliance.

It is easy to point fingers and demonize Chinese manufacturers that produce toys with lead paint for children and poisonous food for dogs. At the end of the day, however, a balanced analysis provides some much-needed perspective into the systemic problems behind these revelations. Rather than spending time deciding who ought to apologize to whom, every company should be taking a hard look at making improvements to its quality-assurance program that will rectify the structure of perverse incentives threatening supply-chain integrity.