

What You Need to Know About

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and Kevin McCormack

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It is no longer news that China has become “the factory to the world.” The business models for many large companies, such as Wal-Mart Stores and Dell, already depend on sourcing aggressively from the People’s Republic. Imports to the United States from China have soared from \$66 billion in 1997 to \$163 billion last year. By one estimate, foreign companies opened 60,000 factories in China between 2000 and 2003.¹ Many major companies whose first-tier suppliers have historically been geographically close are now evaluating Chinese sources in a concerted effort to slash their procurement costs.

China, however, is changing at a breathtaking rate. This means that policy makers and managers must constantly re-address a wide range of sourcing questions. The questions range from how much visibility you can expect to have into your Chinese partners’ planning processes to what level of environmental compliance can be expected of Chinese factories.

Answers to such questions often are based on weak assumptions, received wisdom, and even myths. Furthermore, much of the received wisdom comes from a time when the bulk of China’s product offerings were unsophisticated, many of its industrial managers *did* lack crucial skills, its factories were antiquated, and supply lines were unpredictable. Today, those characteristics

are confined to smaller and smaller industrial pockets in the nation’s hinterland. They certainly do not describe supply conditions in the flourishing provinces and cities of China’s east coast. Overall, the nation’s industrial practices, processes, and capabilities are changing faster than many Western managers realize. Yet, these changes affect the types of decisions Western managers must make when establishing a sourcing operation in China, the velocity of those decisions, and the way resulting agreements are made.

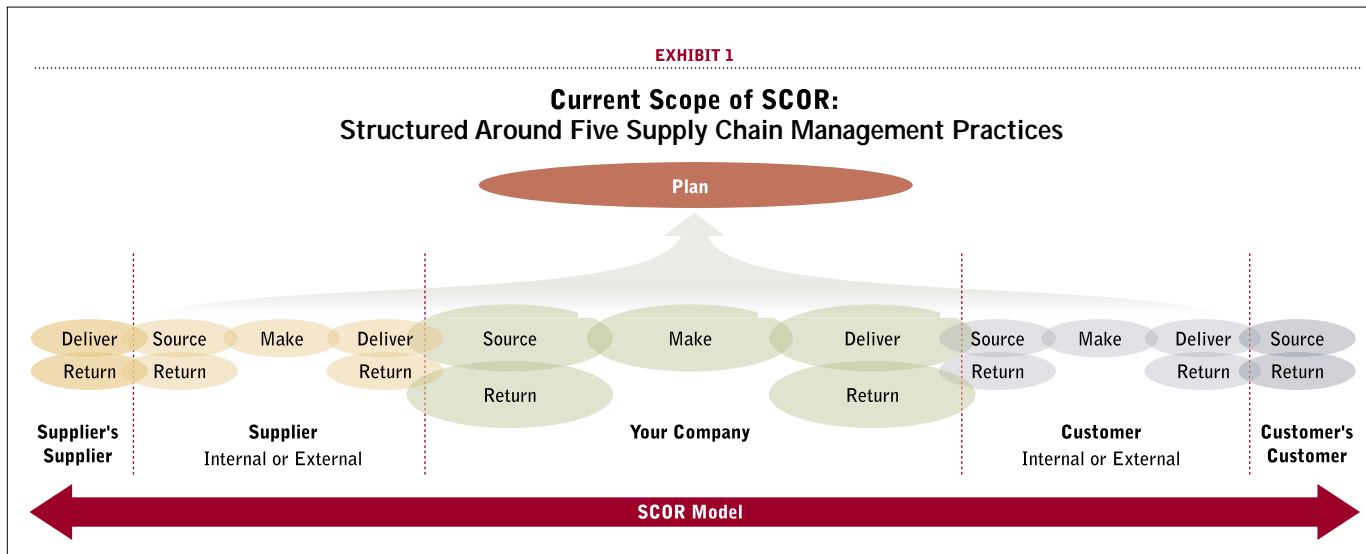
Therefore to succeed in China, Western managers must understand the pace of change. They must realize that basing a Chinese sourcing strategy on old answers to perennial questions is not only inefficient but also increasingly dangerous. To help managers better understand the capabilities of Chinese suppliers, we conducted supply chain maturity assessments and extensive first-hand interviews with managers of U.S. and European companies “on the ground” in China.

In creating the assessments, we applied the Supply-Chain Council’s Supply-Chain Operations Reference (SCOR) model. As shown in Exhibit 1 on page 30, the SCOR model consists of the five major processes associated with supply chain management—plan, source, make, deliver, and return. (For the purposes of our study, we chose to exclude return elements because benchmarks for that process are still in development. Additionally, we meshed a “supply chain design” element into the source process.) Our maturity assessment

SOURCING FROM CHINA

Sourcing finished products and raw materials from China can be a challenging experience, replete with risks and obstacles at every turn. But the downside of ignoring China as a supply chain source far outweighs any of the potential pitfalls. New research and on-the-ground observations can help companies source more effectively in the industrial powerhouse that China has become.





model was built on questionnaires for each of the major processes. The responses were scored on a scale of 1 to 5. The maximum possible scores differed among the SCOR elements because there were different ranges of questions for each. (For more on the research effort, see the sidebar on page 32.)

The following sections discuss, in general terms, Chinese suppliers' abilities and challenges in each of the SCOR areas. The attributes discussed are based on a consensus drawn from the maturity assessments and subsequent interviews.

Plan: Estimating How Well China's Factories Manage for Tomorrow

Planning is one of Chinese suppliers' biggest challenges—with capacity planning perhaps at the top of the list. The importance of planning becomes clear when you consider that China's gross domestic product grew by 9.5 percent in 2004. Furthermore, this growth occurred in spite of the fact that Beijing officially tried to rein in the rate of growth to 7 percent. (The planned growth rate for 2005 is four percent.) Indeed, few Chinese companies worry about the government's growth-containment efforts, and most are continuing to plan for as much as 50-percent annual increases in revenue.

Yet supply chain planning capabilities, for the most part, cannot be considered robust. In our conversations with Chinese operations managers, we were surprised to discover that less than 10 percent of companies have formal sales and operations planning (S&OP) processes. Moreover, a great majority of the suppliers have few or no plans for how to expand production and distribution networks. While Chinese executives tend to focus on marketing and sales, they generally have limited understanding of the implications for supply chain planning. The nation's high levels of economic growth are not being translated into realistic supply chain plans and forecasts.

Our quantitative research, however, turned up an impor-

tant nuance. As the graphic in our research sidebar on page 32 shows, Chinese suppliers show high levels of planning maturity for their *manufacturing* activities. The mean results of the survey were 104 out of a maximum score of 125, well above the mean of 75.8 for our database of U.S.-based companies.

For the most part, however, Chinese suppliers do not do well at cross-functional and cross-company planning. Further investigation revealed a marked lack of planning between functions such as marketing and purchasing—particularly when compared to world-class planning norms.

A root cause of the problem is the poor standards for the forecasting processes that we witnessed. Even in Chinese companies with formal S&OP processes, forecasting typically consists of predicting a total volume growth of X percent across all product lines, with no breakdown by SKU. Further, there is little planning for obsolescence and inventory levels and poor communication between sales groups and their end customers. Few Chinese companies have a formal forecasting, demand management, or market intelligence unit for capacity and inventory planning. Their U.S. customers often have to ask about specific plans for delivering to forecast. Nor are Chinese managers' assurances that they "will make it happen" good enough to ensure that products will arrive on time. This is especially true with seasonally sensitive products.

Design and Source: Identifying and Negotiating with Chinese Suppliers

Our studies of supply chain design—the configuration and interaction of supplier networks and relationships—revealed that Chinese suppliers are not experts in thinking about how to structure their end-to-end supply chains. As a rule, Chinese suppliers have mostly transactional relationships with their own suppliers, and visibility back through the supply chains is a rarity. The findings are very similar when it comes to the SCOR model's source component. Our surveys

show that Chinese suppliers have limited abilities in source planning and execution. (See Exhibit 2 on page 32.) The mean score for Chinese suppliers on our scale of 0 to 70 was just 43. (But U.S.-based companies did not do much better: Their mean score is 44.5.)

One important consequence is that many Chinese suppliers will struggle to demonstrate “upside flexibility”—or the ability to comfortably meet increased demand. That flexibility is especially important in environments with rapid and large-scale changes in demand, such as with seasonally sensitive products.

Make: Assessing China’s Production Capabilities and Working Conditions

In our research using the SCOR-based survey, we found high levels of maturity in Chinese suppliers’ make processes (see Exhibit 2). Our maturity assessments showed that Chinese producers rated a mean of 50 on a score of 0 to 60—compared to mean of 38.5 for our database of U.S.-based companies. In general, Chinese production lines are predictable and very reliable; managers are skilled at production planning and scheduling.

It is always worthwhile, however, to visit Chinese suppliers’ facilities. Although the large Chinese factories are impressive in their size, scope, and product quality, smaller facilities may have problems. Indeed, some large U.S. companies have not been able to scale up their sourcing from China because they have not yet found suppliers that produce to their quality standards.² Chinese companies, however, are using the money from increased sales to invest in their production facilities to improve both scale and product quality.³

Companies sourcing from China should also pay attention to working conditions in manufacturing facilities there—particularly to humanitarian and environmental issues. Several Western companies have learned those lessons the hard way, having been targeted by human-rights groups and consumer activists for buying products made in so-called sweatshops, for example. (Note that China is by no means the only nation whose producers have been identified with such practices. Sweatshops have even been discovered in U.S. cities.)

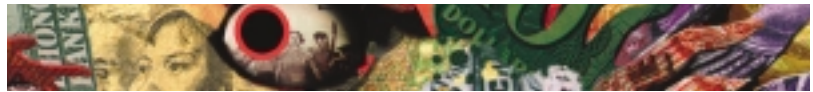
Even by official Chinese government figures, the nation has had more deaths from work-related illness than any other country, amounting to more than 386,000 affected workers in 2002.⁴ Companies should monitor the workplace conditions and environmental practices of their Chinese suppliers, either first-hand or through trusted third parties. There are at least three organizations that certify factories for compliance: the Fair Labor Association, Social Accountability International (SAI), and Worldwide Responsible Apparel Production.⁵

New guidelines suggest that monitoring first-tier suppliers is not enough. In China (as well as countries like Japan and

Israel), there are some first-tier suppliers that subcontract to state prisoner-rehabilitation programs or to networks of home-based workers. The latter are the least controlled parts of overseas supply chains and are particularly notorious for labor exploitation. They often utilize child labor and have unsafe working conditions, unmonitored work hours, and subminimum wage levels. First-tier suppliers may plaster their walls with codes of conduct and worker regulations, but subcontracting facilities rarely adhere to the same codes.

Managers sourcing from China also need to be aware of the rapidly changing makeup of the labor force there. The majority of the current factory workers are known as the *liudong renkou* (or the “floating population”), which are esti-

China’s industrial practices, processes, and capabilities are changing faster than many western managers understand.



mated to comprise more than 114 million migrant workers.⁶ For the most part, the *liudong renkou* are relatively well-educated young people from rural backgrounds who are drawn by the promise of the big city. A study in the mid-1990s by the Chinese Academy of Social Sciences found that 78 percent of female migrants to the cities had a junior high school education, compared to the national average for rural women of 43 percent. The education gap hints at an important economic factor: The remittances sent home by migrants are now the biggest source of wealth accumulation in rural China, according to economists.

The working conditions for the *liudong renkou* are not comparable to those of Western workers. In many Chinese enterprises, employers pay less than minimum wage (\$50-\$70/month on the more “Westernized” east coast) and require more than the 49 hours of work a week as permitted by law.⁷ There are few benefits for pregnant or injured workers, and enforcement of labor laws is lax. Workers are often housed in cramped and less-than-pristine dormitory-style housing. And those who are unhappy and decide to quit may relinquish up to two months of pay.

But things are changing. The spending power, sophistication, and expectations of the *liudong renkou* are climbing fast, and these young workers are increasingly reluctant to work under such conditions. In many large cities, job fairs are emerging in response to growing worker mobility. Although the fairs are intended mostly for technicians and managers, many factory workers are showing up in hopes of finding better jobs. Some of the clerical positions offered can pay as much as \$100 a month, plus room and board. While this is

The Research Effort

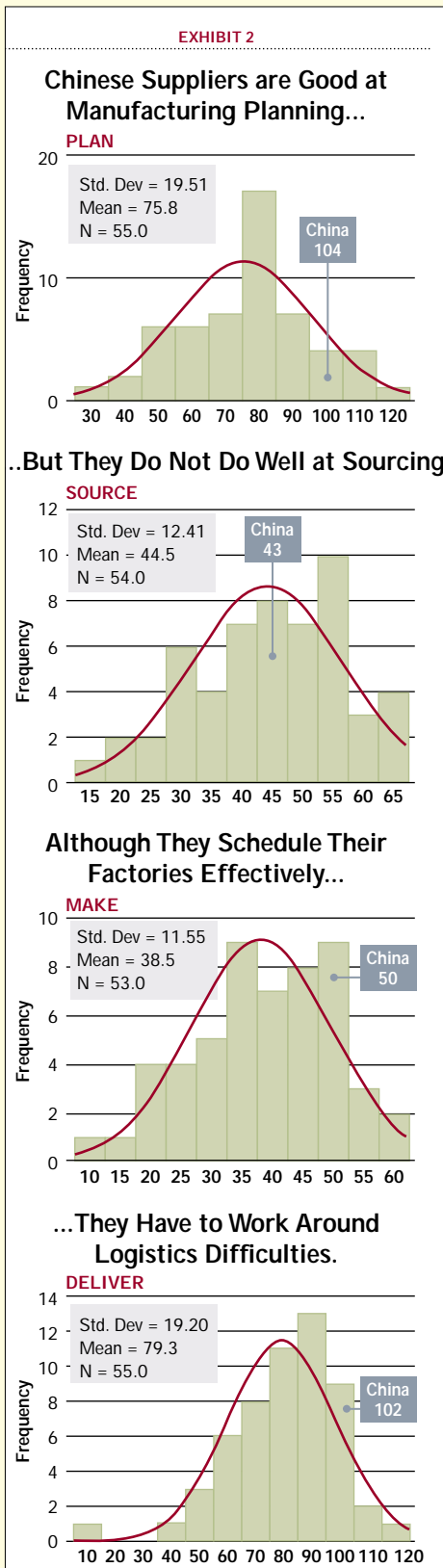
The material in this report is based on specific assessments and data collected from *Fortune* 500 companies working in China. We made the assessments and collected the data during a week spent in the Shanghai and Suzhou regions and a five-day interactive seminar with 25 executives representing *Fortune* 500 companies with major operations in Shanghai. Although our research took place in Shanghai and Suzhou provinces, where many Western companies are already active, we believe our conclusions are broad enough to apply to many other fast-growth regions of the country.

We assessed each participant's supply chain maturity based on the Supply-Chain Operations Reference (SCOR) Model. The SCOR model provides a common, process-oriented language for communicating among supply chain partners. As such, it allowed us to ensure conformity in the results and map the progress of the average Chinese supplier to aggregate responses for U.S. companies in the same industry sectors.

During the seminar, we discussed aspects of the four SCOR elements: plan, source, make, and deliver. We concluded with an in-depth discussion of responses to the SCOR model. The responses were validated and found to be accurate based on discussions with each individual participant. (N=number of respondents on each element.) Although the assessments are based on observations and data from a small sample of companies, they provide an important set of insights for businesses that are now developing sourcing channels from China.

As part of the research effort, we also recorded examples of projects that the participants were undertaking as a result of the session discussions. These projects were classified according to the SCOR assessments.

Thus we were able to evaluate the Chinese manufacturing environment quantitatively and qualitatively and to identify the chief challenges of sourcing from China. (The graphics in Exhibit 2 depict those challenges in the context of the SCOR model.) The quantitative measures were compared to a similar database of U.S.-based companies collected over the past five years, using the same data set and questions.



exciting for workers, it can be tough for manufacturers that rely on trained and skilled workers. Many executives who we interviewed complained about high turnover. They cited examples of workers who would stay two to three months before jumping to other employers that offered twice the salary they had been earning.

Astute U.S. managers will want to find out about labor trends at their Chinese suppliers. Not only will they inquire about labor cost trendlines, but they will find out about retention and hiring programs. In China, retention can improve when employers offer continued education and training. Western business people will also want to listen to local managers' concerns about the dearth of midlevel management talent. The biggest problem cited is the inability of midlevel Chinese managers to make independent decisions—a drawback generally traceable to the Communist upbringing of middle-aged and older Chinese.

Deliver: Evaluating the Ease of Moving Goods

Logistics capabilities and on-time delivery are also big concerns in China. The transportation infrastructure is nowhere near U.S. or European standards. Bottlenecks and congestion abound, not just due to capacity constraints and equipment performance but also because of red tape, local power politics, and unsophisticated logistics planning. Simply finding and hiring a logistics carrier can take several days.

The challenges are not confined within China's borders. The length and complexity of supply chains between China and the United States increase logistics risks and costs. In 2002, the dock workers' strike at Long Beach near Los Angeles backed up containers as far away as ships docked in the Port of Shanghai and barges mov-

ing on the Yangtze River.

Our research using the SCOR-based survey revealed high levels of maturity in the deliver processes of Chinese suppliers. The mean results of the survey were 102 out of a maximum score of 120 (see Exhibit 2), well above the mean in our database of U.S.-based companies (79.3). But these scores owe much more to the Chinese managers' skills in developing logistics "workarounds" than to their overall mastery of the delivery pipeline. Although most Chinese suppliers are reliable when it comes to the deliver processes over which they have control, they have very little ability to affect delivery once shipments leave the factory's dock. One consequence: Customers must bear significant responsibility for visibility into and influence over delivery activities.

For this reason, Western companies need to understand some of the regional economic shifts that have had a big impact on delivery within and from China. The majority of China's industrial growth has occurred in the Pearl River Delta (PRD). The PRD was transformed from a rural backwater into the world's workshop through the economic reforms of former premier Deng Xiaoping and from its proximity to the capital, technology, and business skills in Hong Kong. The PRD centers on China's richest province,

In general, Chinese production lines are very reliable; managers are skilled at production planning and scheduling. What is less predictable is the impact of China's labor practices.



Guangdong, and is home to some of the world's largest suppliers of everything from television to toys. But worsening pollution, crumbling infrastructure, power bottlenecks, severe labor shortages, and rising wage costs are combining to take the edge off the PRD's success. The region is starting to lose investors to the Yangtze River Delta area (notably to Shanghai and environs), which enjoys better access to China's huge domestic market. In particular, areas such as the Suzhou Industrial Park have witnessed phenomenal growth; on a recent visit, we observed that an average of one plant per day is opening there.

The PRD has responded by announcing the creation of a "Pan-Pearl River Delta" zone that would extend regional

cooperation in trade and investment from China's south and east to the center and west. Also known as the "9+2," the zone would link the nine provinces of Guangdong, Fujian, Jinagxi, Hunan, Guangxi, Hainan, Guizhou, Yunnan, and Sichuan with the two special administrative regions of Hong

exports, and almost 40 percent of its economic output.

The upshot: U.S. managers are urged to understand the sharp rivalries between provinces, towns, and local districts. They need to trace the logistics linkages they will have to use to reliably source from their selected Chinese suppliers. The better they understand the political rivalries, the better they can accommodate scenarios such as duplicate investments in ports and airports in provinces such as Guangdong and the more easily they can cope with the concomitant red tape and trade barriers.

Similarly, if U.S. managers can pinpoint the bottlenecks in their Chinese supply chains, they can begin to plan around them. Bottlenecks and hold-ups are everywhere. Cargoes traveling within China are routinely loaded onto different trucks at provincial borders because trucking companies are predominantly regional. Rail bottlenecks and railcar

shortages are common on the state railway systems. Truck capacity is a problem; it is difficult to schedule trucks given the tight relationships between existing suppliers and trucking companies. And although China's government is investing more than \$300 billion in the next few years to build a major transnational highway grid, the nation's infrastructure is poor by Western standards.

With all of the risks and barriers associated with sourcing from China, is it worth the effort? Long term, the risks of not doing so are likely to be far greater.



Kong and Macau via a new web of roads, rail, and air routes.⁸ At the same time, trade and nontariff barriers between the provinces would be eliminated to allow the PRD to develop new markets and free up the movement of labor. The 9+2 area has a population of 450 million and a gross domestic product of some \$630 billion. It encompasses a fifth of China's land, a third of its people, one-third of the country's

Don't Underestimate the Importance of Guanxi

Guanxi is the Chinese term for the reliance on trust and partnership within a web of relationships to achieve certain advantages. To do business in China successfully, a foreigner needs to understand and respect this ancient social system.

Guanxi provides an entrée into Chinese society that no other form of introduction can rival. During the early years of the 20th century, when Chinese markets were opening up to international competition, some foreign companies were able to use the guanxi of their Chinese partners to build fast and reliable distribution networks of considerable scope. Yet guanxi can also be a formidable constraint to geographic expansion if relationships run out of energy before market space does. Furthermore, because relationships are innately personal, guanxi only gets you so far: It does not globalize easily, nor is it readily transferable. Further, guanxi is not "owned" by an organization but by the individual and, consequently, its influence can apply only to a very particular circumstance and time.

But isn't guanxi being superseded by an age of Web and e-mail connections? Aren't today's Chinese managers much more attuned to merit and objective performance than to kinship, referrals, and shared experiences? It is true that the mindset is changing, but there are many enduring cultural reasons why we should expect guanxi to be around for a long time. Author Francis Fukuyama has argued that in societies where people cannot trust "the system" for fairness, they put their trust in relationships they know they can depend upon.⁹ This is as true for business leaders in many parts of the Western world as it is for business people in China.

When dealing with logistics problems, personal relationships—what the Chinese call *guanxi*—become very important. This was illustrated to us by a story from a *Fortune* 500 executive: "I was unable to get my product delivered by rail so I asked my secretary to camp out in the office of the Minister of Transportation until I could get a meeting with him. After two days, I got a meeting. I sat down with him and complained that my shipments were being delayed. He picked up the phone and barked out instructions that our railcars were not to be delayed in the future. The problem was solved immediately." (For more on the concept of guanxi, see the sidebar above.)

The capriciousness of China's government agencies can work in other ways too. A project manager building a \$10 million chemical plant was told that the construction steel he was expecting to receive by rail would be delayed for two weeks. Why? The nation's energy shortage at that time meant that railcars were being allocated for coal shipments so that major manufacturing plants could keep running.

It will take years to meet such challenges. One hopeful sign: Provincial officials are starting to see the benefits of not

competing. It may not be full cooperation, but it is a step in the right direction.

Evaluating Potential Suppliers

What our surveys and on-the-ground experiences confirm is the importance of due diligence when evaluating new Chinese suppliers. The best approach is to *always* get references from anyone who has done similar work in the country. Using an agent in China can be a lot more effective for identifying good suppliers than using the Internet or the phone book. The agent can set up a series of appointments with suitable supplier candidates (and is likely to have very close relationships with them all). The subsequent interviews with suppliers should not be rushed; half a day with each may not be excessive. It's crucial to ask for multiple references—who they have done work for and what those customers' names and numbers are—and then to follow up with each reference. Savvy managers won't expect flawless responses; if 90 percent of what they hear turns out to be on track, they consider that satisfactory.

Above all, don't be naïve. A U.S. expert who has worked closely with Chinese business people for years gave us a glimpse of the unexpected difficulties that can crop up when negotiating a contract with a Chinese supplier. "In my experience, the signing of a contract is just the beginning of the real negotiations," he said. "One should also be careful and not underestimate the time and effort required to complete a negotiation in China."

In most negotiations, there will be many more Chinese managers sitting across the table than there will be U.S. participants. The negotiations may last for days and days—often with the intent of wearing down the visitors. Alert Western visitors will avoid making deals after a drink or dinner. They will make sure to let their hosts know that the food and drink are much appreciated but that it is important to do business the way it is done "back home." If necessary, the U.S. negotiators can blame their bosses for forcing them to do things the American way.

One U.S. executive offers a cautionary story: "One of the worst experiences I ever had occurred because I did not follow the guidelines. After 20 days of negotiating, the other party brought in a bunch of people to ask many, many questions. We spent up to 10 hours a day going through specifications and details. We negotiated it to death. I wanted to leave and told them that I really wanted to go home. Finally, we signed the agreement, celebrated, and got a contract for \$1 million. I took the next flight home. When I got back to the office, there was a fax saying that the Chinese supplier's board needed to ratify the contract and that paragraph XX had to be revised—even though we had signed the contract. It cost us a ton of money, with three lawyers from three countries costing \$1,000 an hour!"

These negotiation practices are more easily understood in a historical context. Early in the 20th century, Chinese business people were "burned" by German and Russian compa-

nies that built plants and equipment and squeezed their Chinese customers through binding contracts. But despite the caution and wariness on both sides of the negotiating table, many Western and Chinese companies have developed long-term trusting relationships.

That said, U.S. managers must hold firm on product quality. Many Chinese producers still assume they can do things their way and not necessarily follow drawings or specifications. Sourcing managers should be prepared to hire someone to locally oversee the design and manufacture of the product to ensure that drawings are interpreted correctly. The quality issue is unlikely to come up by itself during negotiations, and Chinese suppliers will typically say “no problem” if U.S. managers express concerns.

To help navigate through these cultural differences, one of the most useful tools is a popular glossary of business contract terms, found in most Chinese bookstores. This glossary contains Chinese words with English translation. It is also valuable to consult a good book that outlines the important elements of Chinese contracts from a historical perspective. One example is *Contract, Guanxi, and Dispute Resolution in China (Chinese Law: Social, Political, Historical, and Economic Perspectives)*, edited by Tahirih Lee. Specific words in Chinese may have several different English translations, and vice versa. Warranty, guarantee, and terms of payment, for instance, all mean very different things. The language question is particularly acute when it comes to intellectual property. Although China has legal frameworks to protect intellectual property, they are notoriously porous and poorly enforced.

With cultural issues made clearer and business practices more explicit, a shortlist of qualified suppliers can be developed. The first characteristics to evaluate are the potential suppliers’ engineering and technical capabilities, which are especially important for manufacture of a new product with critical market timing. In the case of a new product, the Western team should hire a top-notch translator so that agreement can be reached on progress payments—a common source of contract disputes with Chinese suppliers. The contract must have specific milestones and payments associated with each milestone. It is important to stand firm with the manufacturer early in the negotiation for these milestones, and then carefully approve each milestone one by one.

When evaluating Chinese suppliers, U.S. managers also need to be aware of U.S. government sanctions against countries and individual companies. These sanctions can fall under the Trading with the Enemy Act, export administration regulations, or the Defense Product Act, for instance. The U.S. has imposed sanctions on five Chinese companies (and one North Korean company) that it alleges have assisted with Iran’s weapons program.¹⁰ (Information on sanctions can be found on the U.S. State Department Web site.)

Don’t Wait Too Long

By the time this article is published, at least some of this information will be obsolete. China’s economy and culture are changing so quickly that it is impossible to stay current. However, we hope that our research and observations provide some pointers on how to source more effectively from China.

As our experience shows, Chinese suppliers are different from their U.S. counterparts in how they are structured and organized, how they interact with local and national government officials, and how they look at relationships and interactions outside of their company boundaries. Viewing their capabilities through the SCOR model, elements that are within their “four walls,” such as in-house make and deliver processes, are relatively strong. But the plan, source, and design processes that involve external collaboration may not be up to Western expectations.

So with all of the risks and barriers associated with sourcing from China, is it worth the effort? Long term, the risks of not doing so are likely to be far greater than the risks of doing so. The core enablers for sustaining a Chinese supply chain are little different than those for global supply chains anywhere: There must be executive management support and the appropriate organizational structure. Companies have to have coordination mechanisms such as cross-functional teams, periodic review meetings, global sourcing contracts, language translators, and supplier performance evaluation procedures.

What is different about China, though, is the sheer pace, the scale, and the energy of its economic transformation. Western managers can view it as intimidating or exciting. Either way, they are likely to have to embrace it soon. ☺☺

Endnotes

- ¹ “A World of Work: A Survey of Outsourcing,” *The Economist*, Nov. 13, 2004: p. 4.
- ² Executive comment from roundtable forum discussion, “Current Issues in Global Sourcing,” Supply Chain Resource Consortium, April 29-30, 2005, Raleigh, NC.
- ³ Tom Stundza, “Pump Maker Lowers Cost Sourcing in China,” *Purchasing*, Dec. 12, 2002: pp. 16-19.
- ⁴ Joseph Kahn, “Making Trinkets in China, and a Deadly Dust,” *The New York Times*, June 18, 2003.
- ⁵ Ibid.
- ⁶ Leslie Chang, “The Chinese Dream,” *Wall Street Journal*, Nov. 8, 2004: p. A1.
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- ⁸ “String of Pearls,” *The Economist*, Nov. 20, 2004: p. 43.
- ⁹ Francis Fukuyama, *Trust: The Social Virtues and the Creation of Prosperity*, New York: The Free Press, 1995.
- ¹⁰ David E. Sanger, “U.S. Penalizes 6 Asian Firms for Helping Iran Arm Itself,” *The New York Times*, July 4, 2003.