

# The E-Supply Chain Reaches Asian Shores

East Asian economies are recovering – at varying speeds – from the 1997 meltdown that did so much to slow their progress. This recovery finds them well suited to take advantage of the changes that have taken place in the Internet economy over the last several years. Despite ongoing problems with infrastructure, Asian companies have changed priorities and are ready to improve their operational excellence. Asian companies are now planning to enter new markets, cut costs, expand production, invest in information technology, and re-engineer their processes; Asia is now poised to take advantage of the rapidly evolving supply chain.

## Beyond the Financial Crisis

The storm has passed and a sense of economic certainty is returning. Conditions are improving although they vary country by country across the region. In sharp contrast to the pessimism that existed over the last few years, particularly among indigenous Asian-owned companies, there is a new air of optimism. Multinational companies in the region, many of which took advantage of the crisis to transform their businesses, are in good shape to grab the opportunities that surely will present as the recovery continues.

Based on forecasts of GDP growth, China and Taiwan look particularly well positioned to take off. The outlook for the Philippines, Singapore, and Japan is less certain, while Thailand, South Korea, Indonesia, and Malaysia very likely have a few rough years ahead. It is interesting to note that the pace of reform in Singapore already outstrips what is required for success, but in countries such as Thailand, Indonesia, and Japan, the pace of reform has fallen well behind. If this trend continues, the disparity in performance at the country level across Asia will increase further.

Based on Andersen Consulting's research, the level of economic development suggests the key areas of supply chain focus in the different markets across Asia will be different for emerging versus more developed countries (see Figure 1.0).

Regional supply chain designs will also be influenced by a number of situational market and external factors. Emerging markets may be challenged by poor infrastructure and a high degree of government involvement while more

developed markets may have modern distribution channels, some of which may be e-commerce-driven, and both intense competition and demanding customers. (See Figure 2.0).

Supply chain evolution may be charted as beginning with functional and process planning. Once achieved, a company may begin integrating its supply and demand planning. The next step is to begin industry-level collaboration using Internet-enabled technology. Finally, advanced companies will be able to develop third-party enterprises (see Figure 3.0). Even as the evolution of Supply Chain Management is changing the way business is conducted in Asia, many leading companies are only somewhere between the process planning and integrated supply and demand planning stage of the evolution curve.

## Top Five Operational Strategies

The top five operational strategies, according to Andersen Consulting's survey of June 1999, indicate that companies in Asia are greatly optimistic about the future. As a consequence, they are pursuing more positive strategies. For instance in 1998, the top five operational strategies of Asian companies were:

- Cut costs
- Postpone investments
- Rationalize infrastructure
- Restructure portfolios
- Restructure debt

By mid-1999, the stated top five operational strategies of Asian companies were:

*John L. Gattorna is the managing partner of the Australia/New Zealand Supply Chain Practice of Andersen Consulting. He has more than 20 years experience in international consulting for multinational corporations in the United States, South America, South Africa, Western and Eastern Europe, the Middle East, and the Asia Pacific. He has an international reputation in the fields of logistics strategy, distribution channels strategy, and business planning in the automotive, consumer products, industrial products, and financial services industries. He has written several books on supply chain including the international best seller "Strategic Supply Chain Alignment: Best Practices in Supply Chain Management."*

- Enter new markets
- Continue to cut costs
- Invest in information technology
- Reengineer processes

So while the overall market growth rate has declined significantly, there has been a relatively sudden shift toward regionalization, and a corresponding increased emphasis on more effective supply chains, underpinned by improved processes and new technology. This trend is likely to continue, thus allowing renewed focus and energy on initiatives that will bring large benefits to top-performing organizations, fast.

### From Supply Chain Theory to Reality

Up until just a few years ago, supply chain management was more theory than fact, even in the more advanced Western countries. Then two things happened to make supply chain thinking a reality. First, the coming of the Internet provided a low-cost medium for all parties in the supply chain to communicate. Then, the emergence of new user-friendly software provided the long-sought integration, both within companies, and more importantly between companies in the supply chain.

Suddenly, the basis for competition changed from the single company level to supply chain versus supply chain. Coincidentally, new capabilities became important in addition to those already taken for granted. For example, the new era in supply chain management requires companies to select and manage new alliances;

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#### Weblink

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### ASIA'S ECONOMIC DEVELOPMENT FRAMEWORK

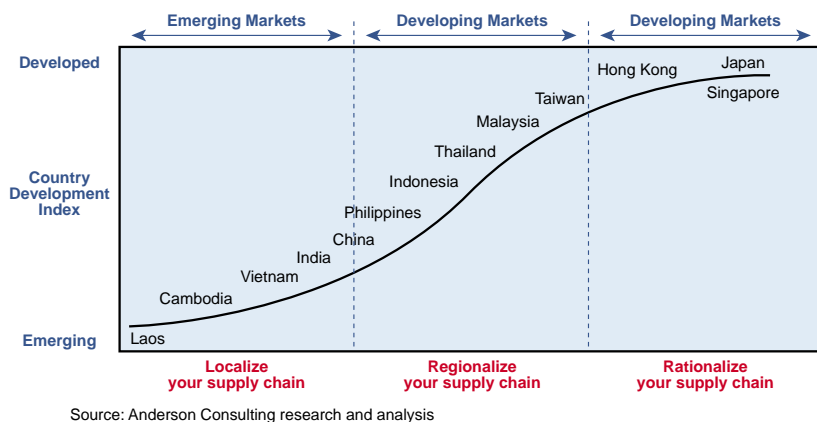


Figure 1.0 Key areas of supply chain in Asian markets

take client relationship management to new levels; and be very familiar with all the enabling technologies required to drive a responsive supply chain, both upstream and downstream from manufacturing

Asian companies have the benefit of being close followers in this rapid evolutionary process – and in some cases already are part of world-class global supply chains like the electronics and high-tech industries. Indeed, the new directions being taken by local and multinational companies highlight the true potential of superior Supply Chain Management. For local companies, these initiatives include:

- Consolidating competitive assets and building local market position
- Adopting a regional mind-set, if not a regional position
- Developing partnerships to acquire new capabilities, particularly in relation to technology adoption and new organizational arrangements
- Strengthening supply chain links with key customers and suppliers

For multinational companies, these initiatives include:

- Expanding market position while competitors stand by
- Developing a flexible regional stance to enable a rapid response to changing

local conditions

- Using superior research and development and technology capabilities to develop new products and markets

Leveraging the position of local players to access new customers and distribution networks

### Impact of E-Commerce on the Supply Chain

Electronic commerce is coming to Asia – ready or not – presenting both problems and opportunities. In terms of readiness, Singapore, with its superior information technology infrastructure, government support, and cultural disposition, is perhaps the most receptive to e-commerce. Led by countries such as Singapore, Asia will be drawn into the global economy at a much faster rate than previously thought possible. Other factors also influence receptiveness, including affordability of access, labor, macroeconomic environment, cultural predisposition, and the degree to which the government acts as a facilitator.

In many ways, e-commerce could be the catalyst that re-ignites the Asian economic miracle by delivering increased customer and shareholder value. Customer value will come in the form of market efficiencies whereby the new technologies available for reaching new customers

## SUPPLY CHAIN COMPLEXITIES

Regional supply chain design will be influenced by a number of situational, market and external factors.

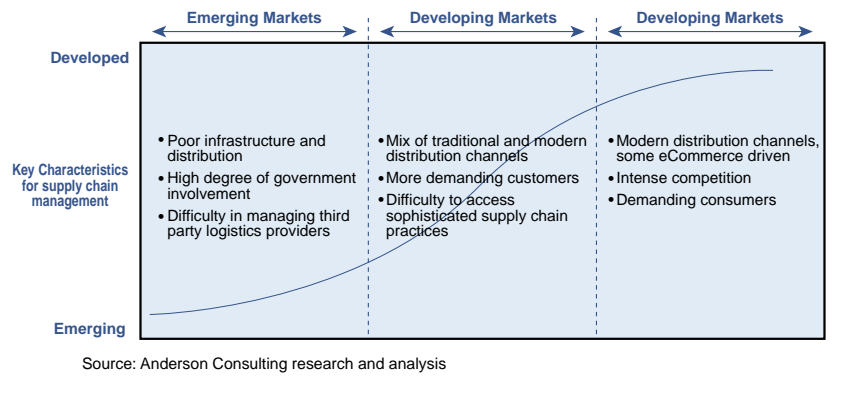


Figure 2.0 Situational market and external factors

through new channels will also increase customers' abilities to compare prices and features. On the other hand, market expansion will come via lower cost and easier accessibility of many goods and services that will increase demand.

It is also true that technology strategies for new business capabilities that contribute to revenue growth often lead to significant cost reduction, although technology strategies for cost reduction will not necessarily lead to new capabilities or revenue growth. One thing is certain: traditional ways of doing business and traditional commercial arrangements with channel intermediaries will disappear over time and will be replaced by arrangements founded on value creation. This will be as much the case in Asia as anywhere else. However, it can be predicted that the uptake of genuine supply chain management in Asian companies will be accelerated as a direct result of e-commerce, and the collaborative planning enabled via the Internet.

### From E-Commerce to E-Fulfillment

While e-commerce provides a way of accelerating the interaction with customers at the front end, the same cannot be said for the physical fulfillment processes that generally have failed to keep pace with the electronic component of the order cycle. As such, the challenges facing companies in

meeting customers' expectations in the new world are immense, and in parts of Asia where infrastructure is poor, the task is nearly impossible in the short to medium term.

The magnitude of the e-fulfillment challenge in Asia is evident when one compares what is going on in more accessible operating environments such as the United States. A late 1999 Andersen Consulting study of e-commerce Web site performance in the United States produced some shocking findings. In the study, 25 Andersen Consulting employees bought 480 gifts from 100 different Web sites to test "e-tailer" (electronic retailer) preparedness. They found that one-quarter of the sites accessed either crashed or were inaccessible, with successful order submission taking nearly twice as long in the morning as in the evening after business hours – a possible sign of mass on-the-job online shopping. The study compared the Web sites of traditional brick-and-mortar companies with those of pure e-tailers, and tested customer service, length of tenure to complete an order, and inventory tracking.

However, the good news is that because the discrepancies between the virtual and physical realities in the supply chain are so great, innovation will be a necessity rather than an option. There is no single right way to do e-fulfillment. Instead, companies will have to develop a

model that suits them best. Andersen Consulting sees four direct-to-consumer and two store-based models emerging:

#### Direct-to-consumer models

- Integrated fulfillment – building e-fulfillment capability into an existing bulk distribution center.
- Dedicated fulfillment – via a purposely-built "green field" operation.
- Outsourced fulfillment – is often faster to set up so is attractive to e-tailers. Many small package carriers and some mail order companies offer some e-fulfillment service capability.
- Drop-ship fulfillment – delegates fulfillment of customer orders to suppliers.

#### Store-based models

- Store fulfillment – typically by supermarkets, involves fulfilling an electronic order by picking from regular retail shelves for separate, dedicated delivery and provides an opportunity to trial e-commerce.
- Flow-through fulfillment – involves shipping product either to an affiliated store for local delivery or to a designated location for subsequent customer pick-up.

Going beyond the above models, it is likely to see innovative organizational arrangements involving joint ventures between several parties, each bringing unique capabilities to the new organization. For example, the various forms of Fourth Party Logistics™ organization designs defined by Andersen Consulting have the objective of increasing scale, reducing the unit cost of final distribution, and undergoing continuous improvement to the point that a quantum increase in corporate performance is achieved. These various organization forms are especially relevant in an e-fulfillment world, and are already being considered by leading companies in Asia.

### The Challenge of True Transformation

In many businesses in Asia, a fundamental shift is necessary, away from the operating models that have served their purpose. It is

## SUPPLY CHAIN EVOLUTION

### Drivers of Supply Chain Evolution

- Shorter product life-cycles
- Product proliferation and mass customization
- Reduced product costs
- Competition
- Increased customer demands
- Need to survive in the age of the virtual enterprise

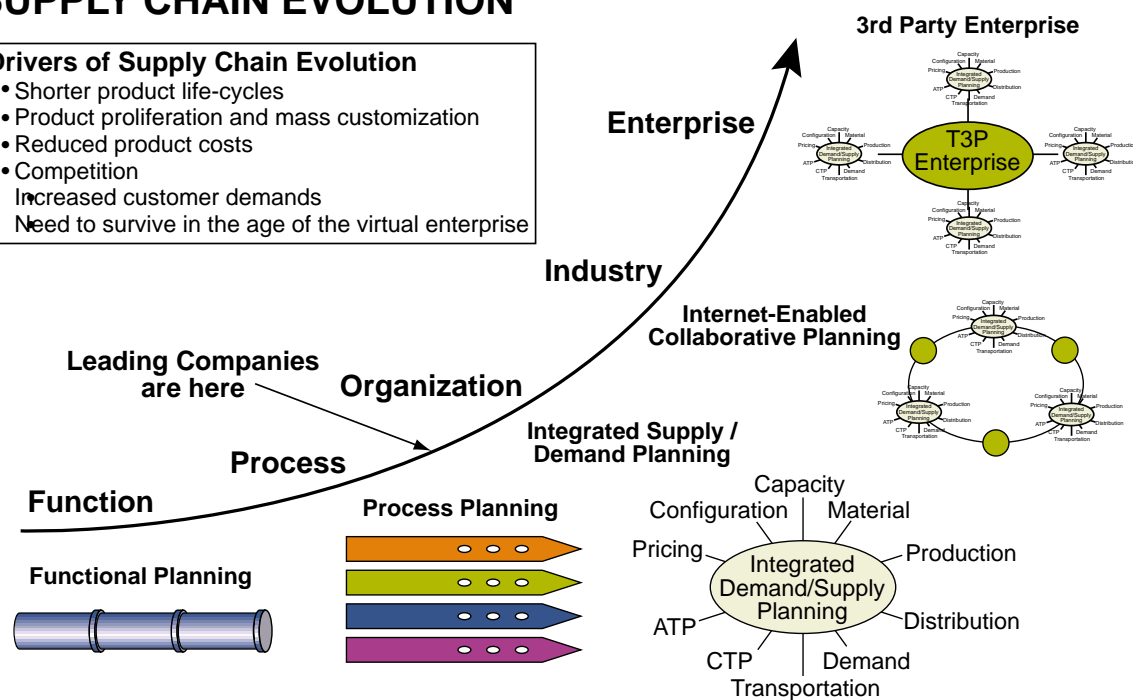


Figure 3.0 Supply chain evolution

to be hoped that Asian management, faced with some real choices as the region emerges from crisis, will opt for innovation and creativity rather than convention and risk aversion. A window of opportunity exists for the first few years of the new millennium to use technology to drive change and transform organizations that take this approach. This means discarding thoughts of simply replacing legacy systems with new systems with similar functionality and only minimal process re-engineering. It means embracing a model that requires fundamental reengineering of the organization's processes, aligned to the chosen strategy. If this approach is adopted, benefits, such as a revenue uplift in the range of five to 10% may be expected, as well as a reduction in cost of goods sold of three to five percent, overhead reduction of three to five percent and inventory reduction of 25 to 50%. This level of improvement will have a dramatic positive value

creation impact on the business that will flow through to shareholders.

However, to achieve this type of transformation companies will need to work on a number of vital areas as follows:

- Segment customers based on the service needs of distinct groups, and adapt the supply chain to serve these segments profitably. At the most sophisticated end, conjoint analysis can be used to segment customers based on "buying behaviors," and network models can be used to calculate the cost-to-serve of each segment under varying scenarios.
- Strategic sourcing analyses should be undertaken, followed by the installation of e-procurement software to sustain the savings identified, on an ongoing basis.
- Supply chain planning technology should be implemented – it is the critical link between supply chain strategy and supply chain operations. Software is

now available in modular form, covering supply planning, demand planning, and forecasting, finite capacity planning (in the case of manufacturing), production scheduling, distribution planning, and delivery scheduling.

To help in this evolution, third-party logistics providers are working hard to better meet the expectations of the market through the development and provision of new innovative logistics services that go well beyond the traditional transport and warehousing services of the past. Indeed, in some cases third party logistics providers are transforming themselves into Fourth-Party Logistics Providers™ in order to ensure the appropriate capabilities are brought to bear. It could be said that the first decade of the new millennium is the "decade of capabilities," in Asia and across the world, wherever supply chain performance is taken seriously.

### Electronics and High-Tech Industries – The Benchmark of Superior Supply Chain Practices

A decade ago – even five years ago – if one were to ask which industry set the benchmark for performance in logistics and supply chain practice, the answer would invariably have been the fast-moving consumer goods industry. This is no longer the case. Many consumer goods companies seemed to lose their way in recent years, seemingly distracted by Y2K issues and correspondingly long periods of systems replacement effort.

High-tech companies such as Nokia, Ericsson, Compaq, Texas Instruments, Gateway, Acer, and Samsung, typically with significant Asian operations, worked to fundamentally re-engineer the way they go to market, and succeeded. So Asian companies looking for role models need look no further than the high-tech companies operating in their own region.

Elsewhere in the world, chemicals companies also have been successful in adopting e-commerce practices to drive their supply chains, but this trend is not yet evident in Asia.

Finally, based on Andersen Consulting's work in the region, several third party logistics providers (all modes) also have been working hard to upgrade their market offer-

ings. In particular, express logistics companies are poised to play an increasing role in delivering e-commerce solutions. Indeed, they are likely to erode the business of more traditional surface transportation companies quite significantly. The demand for definite, reliable movement of goods is increasing rapidly.

Reverse logistics is also a new and growing section of logistics, as customers seek the option of returning goods for repair or exchange. The e-commerce way of doing business online will only accelerate this trend. Since so much merchandise is sourced from Asia in the first place, reverse logistics activity is likely to be very substantial in the region.

The trend of outsourcing logistics solutions in Asia is being led by companies such as Netcell360, the first Pan-Asian provider of total Internet based e-commerce outsourcing solutions. They have formed an alliance with United Parcel Service (and UPS has taken an equity position in Netcell 360), which will provide the logistics capability and global coverage. More of these types of alliance agreements are expected to develop in Asia over the next few years.

So, e-commerce already is substantially influencing business in Asia. However, poor infrastructure and the need for more

encouragement remain the two biggest challenges to growing the Internet phenomenon in Asia.

Governments across Asia have committed to promote e-business, but little has been done to ensure that Pan-Asian bandwidth can grow accordingly when e-business becomes mainstream within the next few years.

### A Final Word

Asian companies are very much in the first wave of development, seeking operational excellence through improvement in individual elements of the supply chain. The challenge for the more advanced companies is to ratchet up to a whole new level of performance – the second wave – on the back of e-commerce and new organizational combinations, such as e-procurement, e-fulfillment, and shared services that ultimately will lead to the much sought-after Internet-enabled supply chain.

In this regard, the lessons learned – both positive and negative – from experiences elsewhere in the world should be invaluable in accelerating Asian companies toward new levels of competitiveness in the global marketplace.

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