2003 China Logistics User Survey

RESULTS AND FINDINGS

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EXECUTIVE SUMMARY

For more than two decades the world has witnessed an unprecedented economic expansion in China. Fueled by economic reform and large infusions of investments, China has transformed itself from an inefficient command economy to a fierce battleground of market forces. Already, China is the largest manufacturing base and one of the largest markets in the world. With its recent accession into the World Trade Organization (WTO), firms are faced with more pressure to cut costs, to make new and better products, and to improve services. In the midst of an intense battle to survive and thrive, how do firms plan to achieve these goals?

We examine this question from the important angle of logistics and supply chain management. We have already seen a rapid transition in attitude favoring logistics and supply chain management from Chinese firms. Until a decade ago, the majority of Chinese firms relied almost entirely on their own personnel to manage their logistics. They possessed their own trucking fleets and warehouses, and when needs arose, they used the rails. The road conditions were poor, and there were no highways. The logistics industry was dominated by a few state-owned enterprises (SOEs) that provided nothing more than rudimentary transportation and warehouse services. The landscape has changed dramatically in the last decade. As new infrastructures continue to be built and information technologies continue to improve, firms are increasingly looking into logistics and supply chain management to gain a competitive edge. The term "logistics" is now the latest buzzword, and as our *2002 China Logistics Providers Survey* results showed, third-party logistics (3PL) is one of the fastest growing industries in China. Increasingly, firms are outsourcing their logistics operations to 3PL service providers. 3PL providers are generally optimistic about their services and the outlook of the logistics industry, and in the meantime, they are making great efforts to improve and to meet the needs of their clients. But from the users' point of view, how effective has the outsourcing effort been? Do firms indeed gain a competitive edge by outsourcing? Do industry sectors view outsourcing differently? Do foreign 3PL providers provide an edge over domestic 3PLs in service quality and offerings, if not in price?

We aim to answer these questions with the ***2003 China Logistics User Survey,*** a follow-up and complementary study to the *2002 China Logistics Providers Survey.* The survey is jointly conducted by The Logistics Institute-Asia Pacific (TLI-Asia Pacific), a collaboration between the National University of Singapore and the Georgia Institute of Technology; and the Institute of Logistics and Transportation, a unit of China Communications & Transportation Association. Survey forms were distributed and collected between March and July of 2003. A diverse group of 103 firms (57 3PL service users and 46 non-users) responded to our survey.

The 34 questions in the survey targeted important questions concerning users' overall experience in outsourcing logistics operations. In particular, we ask users how satisfied they are on a variety of issues ranging from effectiveness, value, IT and software capabilities, and geographical coverage to quantifiable measures such as cost, asset, inventory, and lead-time reductions. The survey results added comprehensive and complementary first-hand information, including several surprises, to what was gathered in the providers' survey. The

new information will without a doubt greatly enhance our understanding of the Chinese logistics industry.

We find there is a general consensus among firms on the strategic importance of logistics. Users generally agree that their 3PL experience is somewhat a success, but with some guided reservations, as few of the users rate their experience as very successful. Firms in China appear to use 3PL providers predominantly for transportation services and management, much more so than their counterparts in North America and Europe, as all other services such as warehousing, inventory management, and custom clearance received less than half of the responses. Most users rely on internal sources for their IT solutions and are not very satisfied with the IT capabilities of the 3PLs. Most users have good but not strong feelings about the value of their 3PL services, which contrasts sharply with the impressive results 3PL providers can deliver for their clients. In most cases logistics costs, fixed logistics assets, and inventories are greatly reduced and various customer service levels are drastically improved. Contrary to the conventional wisdom, few firms avoid outsourcing solely because they are not able to shed their logistics assets and personnel. Non-users have reported a number of other equally or more important reasons, the most widely cited being their own expertise in logistics and the belief that logistics is too important to outsource. On average, domestic SOEs and foreign firms plan to increase their logistics expenditures, while interestingly some domestic non-SOEs plan to reduce it. One of the biggest surprises is that users of domestic 3PL providers have reported a higher rate of satisfaction than users of foreign and joint venture (JV) 3PL providers. Even more surprisingly, the higher satisfactions are recorded in virtually all areas of services, even in areas such as technology delivery to clients, consultative and knowledge-based skills, and on-time delivery, areas we have least expected. Similarly, foreign and JV users, employing a larger percentage of foreign and JV providers, are least satisfied with their 3PL experience, particularly in terms of value for money.

We limited ourselves in this report to simply presenting our findings and making basic statistical analyses. More detailed studies will come at a later time.

STUDY OBJECTIVES AND METHODOLOGY

Between February 2003 and July 2003, The Logistics Institute-Asia Pacific (TLI-Asia Pacific, a collaboration between the National University of Singapore and the Georgia Institute of Technology) and the Institute of Logistics and Transportation (a unit of China Communications & Transportation Association) jointly conducted a survey on the China logistics market. The survey targeted firms in China that are current or potential users of logistics services provided by a third party logistics provider (3PL) such as COSCO, Sinotrans, St-Anda, and PG Logistics. This study is a follow-up to the *2002 China Logistics Provider Survey* conducted by the same institutions. The 2002 survey report and this report are both available online at www.TLI.gatech.edu

The survey form contains 34 questions. About half of the questions are adopted from the 2002 *Third-Party Logistics Study,* an annual survey of 3PL users conducted by Professor John Langley of Georgia Tech and his collaborators since 1996. (Professor Langley's survey focuses on global markets including North America, Europe, and Asia Pacific. The survey is conducted by a team of researchers from Georgia Tech, FedEx, and Cap Gemini Ernst & Young and the report is available at www.TLI.gatech.edu.) The rest of the questions are specifically tailored to the growing Chinese logistics market. The survey was distributed in both Chinese and English, but the completed surveys were all in Chinese. A total of 215 copies of the survey questionnaire was sent via mail, email, and fax, and 104 of these were filled out and returned to us. One returned questionnaire was discarded as it left out virtually all the questions. Thus, our analysis is based on 103 valid responses.

As a follow-up study to the *2002 China Logistics Provider Survey*, this China 3PL user survey provides us with answers and insight to several fundamental questions with regard to the 3PL market in China. In particular this survey achieved the following objectives:

1. Gain a better understanding of the fast growing 3PL market in China.

2. Understand how users select and use 3PL services.

3. Identify the major factors why non-users do not outsource, as well as why they may plan to outsource.

4. Measure the business impact of 3PL services for users.

5. Find out what do firms need and expect from 3PL services.

6. Find out what works and what does not for current users.

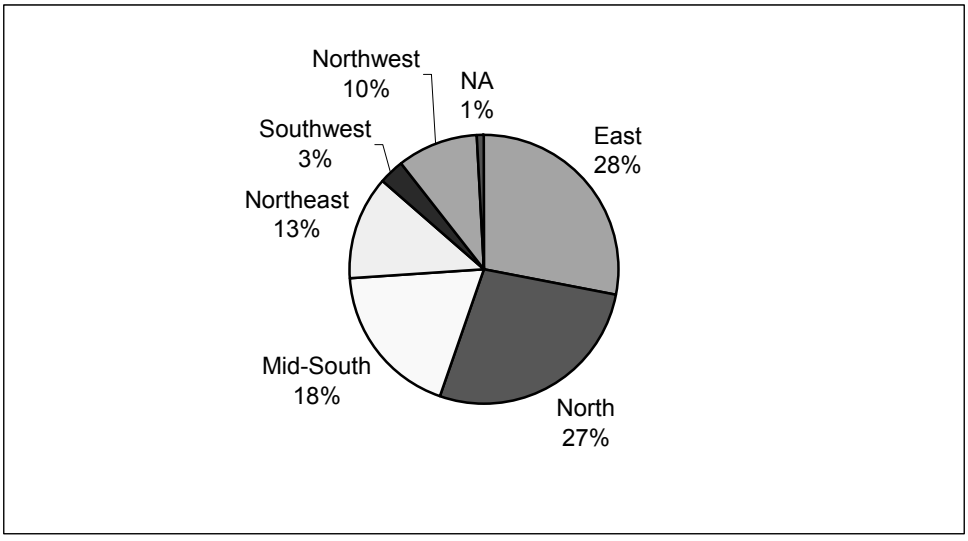
7. Conduct comparative analyses on the impact of such factors as nationality, industry type, and ownership structures in users' 3PL experiences.

PROFILE OF SURVEYED FIRMS

Of the 103 firms who responded to our survey, 57 are current 3PL users (referred to as "users" subsequently). Of the remaining 46 (referred to as "non-users" subsequently), 17 are planning to use 3PL services in the future and 29 are not. Among the 103 firms, 18 are foreign or joint venture (JV) firms, 64 are state-owned-enterprises (SOEs), and 14 are domestic non-SOEs. The latter includes a combination of private firms and firms with mixed ownership. The 3PL market in China is clearly dominated by domestic 3PL service providers at the moment. A large majority (42 out of 57, or 74%) of the 3PL users have opted for the services of a domestic 3PL service provider, with the remaining (15 out of 57, or 26%) users choosing a foreign or joint-venture 3PL service provider.

The 103 valid survey responses come from firms in 17 provinces and regions in China, spanning a diverse range of the country. The geographical breakdown of the firms in the six traditional regions, namely East[1], North[2], Mid-South[3], Northeast[4], Southwest[5], and Northwest[6] is shown in Exhibit 1.

Exhibit 1: Firms by Geographic Regions within China.

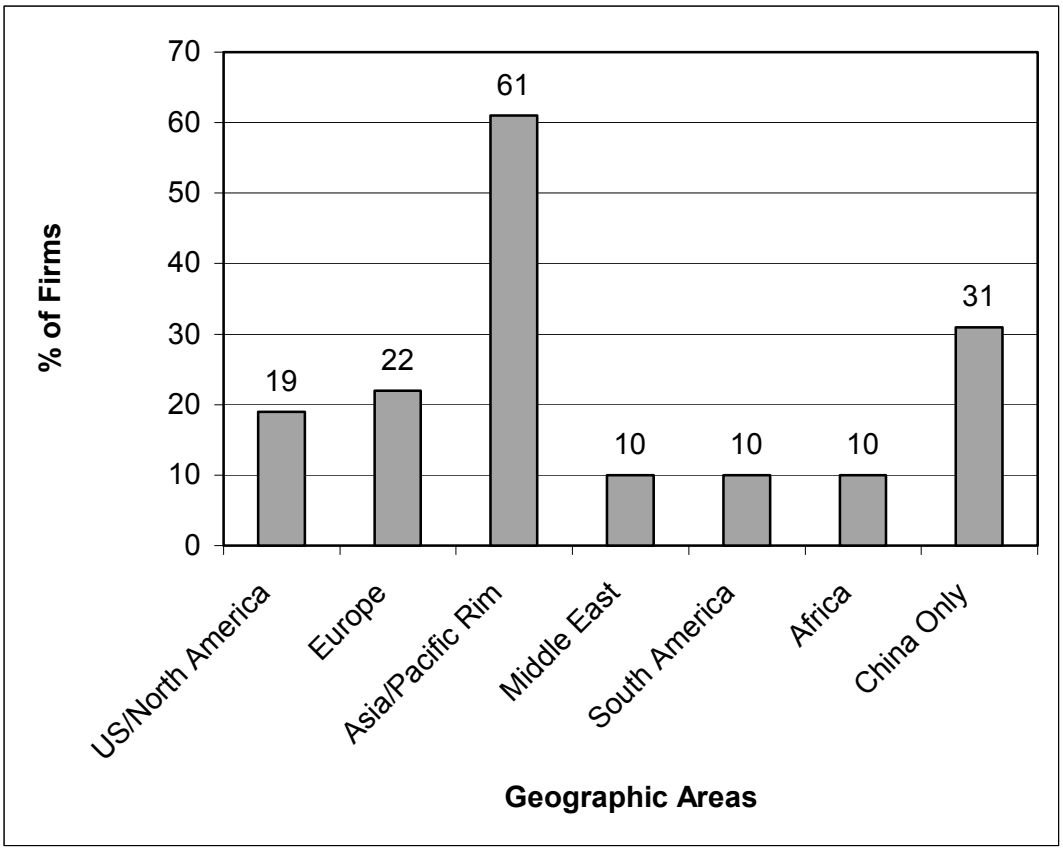


Northern and Eastern China together account for a majority of the responses (more than 50%). The third highest response region is the Mid-South. These are the three most economically developed regions in China. There is one response that did not indicate the location of the firm; this is designated as not applicable (NA) in Figure 1.

[1] Anhui, Fujian, Jiansu, Jiangxi, Shandong, Shanghai, Zhejiang
[2] Beijing, Hebei, Neimeng, Shangxi, Tianjin
[3] Guangdong, Henan, Hubei, Hunan, Guangxi, Hainan
[4] Heilongjiang, Jilin, Liaoning
[5] Gansu, Ningxia, Shan'xi, Xinjiang
[6] Chongqing, Guizhou, Qinghai, Sichuan, Xizang, Yunnan

Sixty-nine percent of the respondents have logistics needs outside of China. Exhibit 2 shows the region-by-region breakdown of logistics needs of the respondents.

Exhibit 2: Geographic Scope of Logistics Needs.



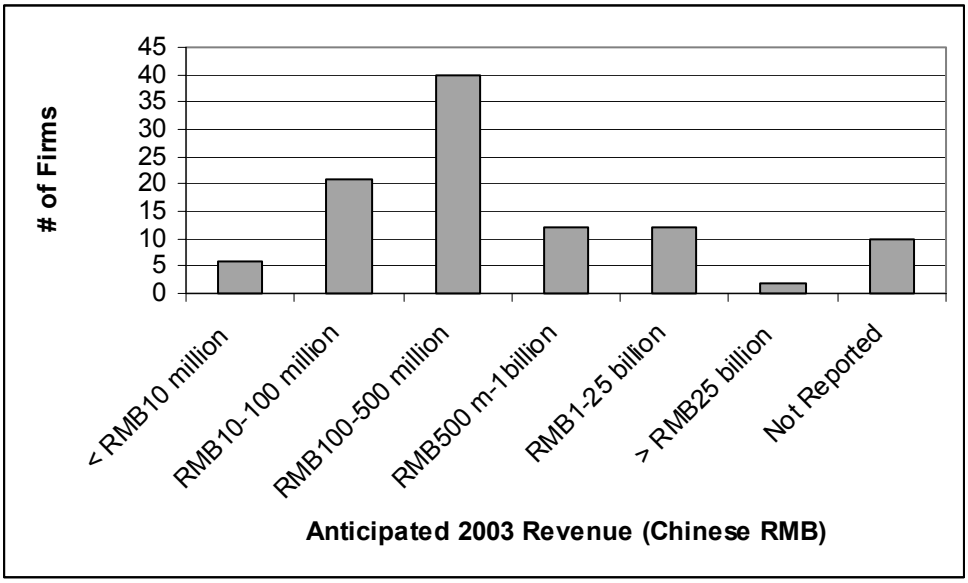
The majority of these 103 firms are manufacturers (59 finished product manufacturers and 8 component manufacturers). The rest are raw material suppliers (10), wholesalers (10), retailers (3), and others, including tobacco producers and trading firms. They represent the industries shown in Exhibit 3.

The respondents also range in size. In terms of anticipated 2003 revenue, five firms reported in US dollars: two between $10 and $100 million, one between $100 million and $500 million, and two between $500 million and $1 billion. Ninety-three firms reported in Chinese RMB (Ren Min Bi) and are broken down in Exhibit 4.

Exhibit 3: Industry Distribution.

Industry Type	*Number*
Machinery	20
Medical supplies	16
Heavy industry	10
Light industry	10
Chemical	9
Tobacco	9
Food	6
Electronics	5
Wholesale/distribution	8
Telecommunication	3
Retail	3
Transportation/logistics	3

Exhibit 4: Breakdown of Anticipated 2003 Revenue in Chinese RMB.



SUMMARY OF KEY FINDINGS

More than three quarters (76%) of the users feel their 3PL experience is successful. But only 6% feel that the experience is "very successful." Similarly, while most users feel they get a fair value for their 3PL services, less than one third feel that they get a very good value.

Most users (89%) feel that their 3PL providers fulfill their needs in geographical coverage. A majority (61%) sees improvement in their supply chain performance, but only 28% believe their 3PL providers have delivered on e-Commerce solutions.

Users give 3PL providers the highest mark for their ability to form meaningful and trusting relationships; this is followed by the savings on time and effort in logistics. But they give low marks to the 3PLs' global capability, and their ability to deliver technology to the clients.

Despite the general reservation users have about overrating their 3PL providers, results reported by users have been impressive.

Evidence suggests that firms in China use 3PL providers primarily for transportation services and management. Other services, such as warehousing and inventory management, are listed by less than half of the responders.

Users give high marks to the importance of IT. Ninety-six percent of the users adopted one or more IT services listed in the survey. There is a general reservation about the IT capability of 3PL providers. More than half (56%) of the users rely on internal sources for at least part of their IT solutions.

Users rank IT capability, global supply chain integration, and a comprehensive set of service offerings as the most important attributes in a 3PL provider.

The most frequently cited reasons for not outsourcing by non-users are "core competence" and "too important to outsource" (40% and 39% respectively). Conventional wisdom says most avoid outsourcing because they are unable to dispose of their own logistics assets and personnel. We found this is not the most important reason, even for SOEs.

Even non-users have very high expectations for 3PL providers. Once they outsource, they expect dramatically improved results in all aspects of their supply chains.

One of the biggest surprises is that domestic 3PL providers received higher marks for their services than foreign or JV providers. The high marks are across the board, and often in areas we least expected.

Similarly, foreign and JV users tend to give lower marks to their 3PL providers, and are more likely to feel they are not getting a good value for the price they pay.

On average, users' logistics needs span a larger geographical area than non-users'.

Manufacturers in China face more pressure to cut costs and improve customer service than non-manufacturers. Non-manufacturing non-users are less likely to see the upside of 3PLs. But interestingly, they are more likely to be approached by 3PL providers than their manufacturing counterparts.

DETAILED ANALYSES

Usage Experience

Most users have a positive view of their 3PL services. Of the 54 responses from the users, 3 (6%) rate their 3PL services as "very successful" and 38 (70%) rate the services as "somewhat successful." Twelve users are neutral and only one user rates it as "somewhat unsuccessful."

But when it comes to more specific areas, the 3PL service providers receive mixed reviews. Most users feel that the 3PL service providers have fulfilled their needs in geographical coverage (89%) and have improved their supply chains (61%). On the other hand, most users feel that the 3PL service providers have not delivered in some other areas, most notably in the area of e-Commerce solutions (28%), as demonstrated in Exhibit 5.

Exhibit 5: Service Deliveries by 3PL Providers.

Service Area	Yes (%)	No (%)	No Need (%)
Providing geographical coverage	*89*	*11*	*0*
Facilitating supply chain improvement	*61*	*34*	*5*
Providing international supply chain solutions	*42*	*46*	*12*
Providing supply chain integration solutions	*42*	*51*	*7*
Providing e-Commerce solutions	*28*	*59*	*13*

When asked to rate the level of services by their 3PL providers, the users are also reserved. On a scale of 1 to 7 (1=highly dissatisfied and 7= highly satisfied), users tend to feel neutral about the level of services. More than half of the users answered either neutral or not satisfied on each of the items in the survey. Overall, the users are most satisfied with the level of meaningful and trusting relationships that they have with their 3PL providers, giving it an average of 5.1. But only 48% of the users rate it above neutral (5 or higher). Also scoring high (average 4.9) is the amount of savings in time and effort spent on logistics. Once again, only 43% of the users rate it above neutral. Areas that could use some improvements include 3PL providers' ability to provide global capabilities (3.7 average), to deliver technology capabilities to clients (3.8 average), and to provide strategic management skills (3.9 average). Complete results are listed in Exhibit 6.

Exhibit 6: 3PL Performance Ratings by Area.

Areas	*Mean Satisfaction Rating**	*% Rating 5 or Higher*	*% Rating 3 or Lower*
Meaningful and trusting relationships	*5.1*	*48*	*12*
Savings on time and effort	*4.9*	*43*	*19*
Cost reductions	*4.6*	*34*	*22*
Continuous, ongoing improvements	*4.6*	*38*	*19*
Service level commitments	*4.6*	*33*	*22*
Consultative/knowledge-based skills	*4.2*	*28*	*30*
Keeping up to date with advances in IT	*4.1*	*24*	*31*
Strategic management skills	*3.9*	*25*	*38*
Delivery of technology capabilities	*3.8*	*23*	*31*
Global capabilities	*3.7*	*14*	*31*

** A continuous scale with "1 = highly dissatisfied and 7 = highly satisfied" is used.*

Measures of 3PL Success

Despite the 3PL providers' delivery of very impressive results, the users are only mildly enthusiastic about the level of services from their 3PL providers, as shown in Exhibit 7. As a result of outsourcing, firms are able to make reductions in logistics cost, fix logistics assets, order cycle length, inventory, and cash-to-cash cycle. Some of these reductions are even rather dramatic. For example, on average 3PL providers have reduced the order cycle length by 6 days and the cash-to-cash cycle by 8.5 days. Users have reduced their fixed logistics asset holdings by 5% to100%, logistics cost by 6% to 50%, and overall inventory by 3% to 90%.

Exhibit 7: Measures of 3PL Success.

	*Average Improvement Rating**	*Quantifiable Measures*
Logistics Cost Reduction	*4.8*	*16%*
Fixed Logistics Asset Reduction	*5.2*	*35%*
Average Order Cycle Length Changed	*4.8*	*6 days*
Overall Inventory Reduced by	*4.7*	*33%*
Cash-to-Cash Cycle Reduced	*4.8*	*8.5 days*
Service Improvement	*5.4*	*NA*

** A continuous scale with "1 = highly dissatisfied and 7 = highly satisfied" is used.*

Types of Services

Most firms use 3PL service providers for outbound (86%) and inbound (63%) transportation, with warehousing (46%), freight forwarding (38%), and cross-docking (36%) as the next three most frequently used services. Other logistics services with usage rates higher than 20% are customs clearance (29%), inventory management (27%), carrier selection (21%), and fleet management (21%). Please see Exhibit 8 for a complete listing of used logistics services.

Exhibit 8: Outsourced Logistics Services.

Logistics Services	*Usage Rate (%)*
Outbound Transportation	*86*
Inbound Transportation	*63*
Warehousing	*46*
Freight Forwarding	*38*
Cross-docking	*36*
Customs Clearance	*29*
Inventory Management	*27*
Carrier Selection	*21*
Fleet Management	*21*
Product Marking/Labeling, Packaging	*18*
Customer Service	*16*
Order Fulfillment	*14*
Distribution Control	*13*
Shipment Consolidation/Distribution	*13*
Information Technology	*11*
Product Assembly/Installation	*9*
Order Entry/Processing	*7*
Supply Chain Manager	*7*
Freight Bill Auditing/Payment	*7*
Rate Negotiation	*7*
Consulting Services	*7*
Factoring (Trade Financing)	*5*
Products Returns and Repair	*5*

A cross continent comparison seems to suggest that Chinese users employ 3PL services primarily for transportation, while users in Europe and North America use 3PL services for a variety of services, as shown in Exhibit 9. This is seen from the sharp drop in percentages of firms in China that use 3PL providers for services other than transportation.

Exhibit 9: Cross Continent Comparison of Logistics Service Usage.

Logistics Services	*Usage Rate % (China)*	*Usage Rate %*[7] *(North America)*	*Usage Rate %*[8] *(Europe)*
Outbound Transportation	*86*	*71*	*95*
Inbound Transportation	*63*	*62*	*71*
Warehousing	*46*	*73*	*91*
Freight Forwarding	*38*	*57*	*67*
Customs Clearance	*29*	*62*	*67*
Shipment Consolidation/Distribution	*13*	*37*	*62*
Freight Bill Auditing/Payment	*7*	*54*	*24*
Consulting Services	*7*	*29*	*14*

[7] Results reported in *2003 Third-Party Logistics Study* published by TLI.
[8] *Ibid*

Applications of Information Technologies

On the scale of 1 to 7 with 7 being the strongest, the 3PL users as a whole strongly agree (mean 6.1) with the assessment that "IT capabilities are a necessary element of overall third party expertise." Not surprisingly, all but 2 surveyed users have adopted at least one of the IT services we have listed. For 2003, the top IT services adopted by users is transportation management (71%), followed by export/import/freight forwarding/customs clearance (43%). Some IT services that see only sparse adoptions now, however, may see a big jump in future adoption. The two biggest increases are in supply chain planning and the transportation/logistics market. Currently adopted by only 7% and 9% of users respectively, 30% of the users plan to adopt them in the future.

Exhibit 10: Summary of Current Availability and Future Requirements of IT-based Services.

Service Category	***Currently Available (%)***	***Future Requirement (%)***
Transportation Management	*71*	*26*
Export/Import/Freight Forwarding/Customs Clearance	*43*	*21*
Warehouse/Distribution Center Management	*36*	*26*
Shipment Tracking/Tracing/Event Management	*29*	*19*
Web-Enabled Communications	*16*	*28*
Supplier Management Systems	*13*	*19*
Customer Order Management	*9*	*16*
Transportation/Logistics Markets	*9*	*30*
Supply Chain Planning	*7*	*30*
Product Vertical Electronic Markets	*5*	*21*

More than half of the current users (56%) rely on internal sources for at least part of their IT solutions. Only a quarter of the users (26%) depend on their 3PL suppliers and another 13% look to technology vendors to deliver the IT solutions that they need.

Customer Attitudes Toward 3PL Providers

We asked users to rate a number of statements to gauge their attitudes toward logistics services and the 3PL service providers. On a scale of 1 to 7 (1 = strongly disagree, 7 = strongly agree), users consider IT capabilities to be the most important attribute of a 3PL provider (6.1 average), followed by keeping pace with the challenges of global supply chain integration (6.0 average) and providing a broad, comprehensive set of service offerings (6.0 average). Yet users are least satisfied with IT capabilities. IT capabilities received the lowest rating in firms' satisfaction with their 3PL providers (4.0 average, with only 27% rating of 5 or higher). Exhibit 11 lists the results of customer attitudes.

Exhibit 11: Attitudes Towards Logistics Services and 3PL Providers.

Items	***Mean Rating****	***% Rating 5 or Higher***	***% Rating 3 or Lower***
IT capabilities are a necessary element of overall third party expertise	*6.1*	*74*	*6*
3PLs will keep pace with the challenges of global supply chain integration	*6.0*	*75*	*6*
3PLs should provide a broad, comprehensive set of service offerings	*6.0*	*69*	*4*
Our customers are placing greater emphasis on logistics customer service	*5.6*	*57*	*10*
3PLs provide us with new and innovative ways to improve logistics effectiveness	*5.5*	*52*	*8*
Using 3PL is a key to satisfying our company's customers	*5.5*	*51*	*12*
Having the "right software" is a major competitive advantage for a 3PL	*5.3*	*51*	*13*
Logistics represent a strategic, competitive advantage for our company	*5.3*	*63*	*21*
Our customers are more interested in price than service	*4.9*	*37*	*18*
Our company is moving to rationalize or reduce the number of third parties we use	*4.6*	*46*	*25*
We are able to measure the return on investment (ROI) from using a 3PL	*4.4*	*31*	*33*
We rely on our 3PLs for leadership in information technology	*4.2*	*28*	*37*
We are satisfied with our 3PL's IT capabilities	*4.0*	*27*	*45*

** A continuous scale with "1 = strongly disagree and 7 = strongly agree" is used.*

Logistics Service Quality

We asked firms to rate their 3PL service providers on four dimensions of service quality: (1) accuracy of shipment items and quantities; (2) competence and service performance of 3PL personnel; (3) integrity of shipped items and management of discrepancies; (4) timeliness of service. Users are generally satisfied with the 3PL services in all service dimensions. On the 1 to 7 scale with 7 being the best, virtually all service dimensions received average ratings of more than 5. The lone exception is in product knowledge and experience, which receives a 4.6 average with a significant 32% dissatisfaction rate. On the other hand, only 9% of the users are dissatisfied with their 3PL contact persons, and even less (4%) feel their contacts do not solve their problems.

Meanwhile, for the price they pay most users feel they get a fair to good value from their 3PL services (average about 5.0). But most do not feel they get a steal. Only 31% of them think

that they are getting very good value for the prices they pay for logistics services, and less than a quarter (23%) feel that for the effort involved in shopping for prices, their 3PLs' prices are very worthwhile. These perceptions are consistent with their ratings for future intentions: 46% intend to do most of their future business with the same 3PL providers, 30% would recommend their 3PL providers to others, and 26% would spend more than 50% of their logistics budget with their current 3PL providers.

Logistics and Strategic Advantage

In general, firms choose to outsource their logistics activities in an effort to gain strategic advantage or supply chain flexibility. Firms rate improving their response time (6.2), improving level of service/support (6.2), and improving reliability and delivery (6.3) as the most important reasons for the use of 3PL services. Competition is another important factor for outsourcing, as firms cite other reasons such as rate cost reduction (6.0), pressure from customers (5.6), peer pressure (5.5), threat from competitors (5.2), and access to markets as less critical in the decision to outsource.

There are also discernable differences between manufacturers and non-manufacturers in their motivations to outsource. Manufacturers rate cost reduction, access to the Asian market, response to peer pressure, and supplier pressure significantly higher than non-manufacturers. This could be a reflection of the fact that a majority of these firms compete in the export markets, where these are important competitive factors.

Non-users

The Chinese domestic firms comprise 87% of the non-users, as opposed to 79% of the users. Of the 46 non-users, 39 have cited one or more strong reasons (6 or 7 on a scale of 1 to 7) for not outsourcing their logistics operations, shown in Exhibit 12. But contrary to the notion that Chinese firms, especially state owned enterprises (SOEs), do not outsource mainly because they are handicapped by not being able to shed their own logistics assets and personnel, our survey finds a wide spectrum of reasons. Although their own logistics assets and personnel are problems for about 30% of the non-users, more firms cite "core competence" and "too important to outsource" as their strongest reasons not to outsource. Another strong reason is the price. The majority of the non-users (68%) currently have no plans to use 3PL services in the future.

Exhibit 12: Reasons Not to Outsource Logistics Operations.

Reason	***% Strongly Agree***
Existing logistics assets difficult to dispose	*25*
Internal logistics personnel difficult to dismiss	*30*
Cheaper to keep the current personnel and assets	*32*
Control over logistics would diminish	*25*
Service level commitments would not be realized	*26*
Customer complaints would increase	*24*
No cost reductions	*26*
Global capabilities insufficient	*30*
Logistics too important to outsource	*39*
Corporate philosophy excludes outsourcing	*29*
Security of shipments a concern	*36*
Own logistics expertise is better	*34*
Inability to form meaningful and trusting relationships	*21*
Not approached by 3PL	*36*
Logistics a core competency of firm	*40*

There is also a pronounced discrepancy in attitudes toward outsourcing logistics operations between manufacturers and non-manufacturers. The latter tend to be far more skeptical of the cost and service benefits of 3PL services, and more likely to view logistics as their core competence. But interestingly, 3PL suppliers are more likely to approach non-manufacturers than manufacturers. We shall have more details on this later.

Should there be plans for outsourcing their logistics operations in the future, 74% of the firms will outsource transportation. In contrast, less than 40% of the firms say they will outsource any of the other services listed in the survey, including warehousing, IT, inventory management, supply chain manager, and integrator services. This is consistent with what we have found in users.

Surprisingly, the non-users have very high expectations for the services by 3PL providers (Exhibit 13). They expect 3PL providers to deliver dramatic improvements over their own current performance benchmarks, particularly in the area of on time delivery and response lead-time. For example, they expect the 3PL providers to improve their on time delivery rate from an average of 93% to 98%, and improve virtually all lead time performances by 50% or more. In the extreme case, they expect their inventory setup/change over time to be cut from an average of 17 hours to an average of 4.5 hours. These expectations are not completely unreasonable or out of line with the leading industrial benchmarks, which indicate that firms are well aware of the general performances of 3PL providers.

Exhibit 13: Big Expectations from Would-Be Users.

Performance Dimension	***Mean Current Performance Level***	***Mean Improvements Expected through 3PL***
On time delivery of customer orders (%)	*93*	*98*
Perfect procurement rate (%)	*89*	*97*
Procurement management lead time (hours)	*11*	*6*
Damage and loss rate (%)	*4.1*	*3.2*
Accurate inventory records (%)	*98*	*100*
Response time to customer complaints (hours)	*10*	*6*
Response time in compensation for damage/loss (days)	*14.7*	*5.3*
Response time to changing needs (hours)	*6.8*	*3.8*
Inventory setup/changeover time (hours)	*18.3*	*5.8*
Daily updates of system information (including EDI exchanges) (number of times)	*1.3*	*1.9*

Since many of the non-users view logistics as their core competence, it is consistent that those who plan to use 3PL services intend to maintain their inventory systems by themselves rather than outsource. The most popular choices for maintaining inventory systems by 3PLs are updating via EDI (45%) and e-mail (32%).

When it comes to damages/losses, the prospective users overwhelmingly (97%) indicate that they do not insure their goods. They expect the 3PL providers to be responsible for any damage or loss. Among them only 25% say that their fees to the 3PL providers include the damage/loss insurance, while the other 75% seem to think it should be the sole responsibility of the providers. Judging from the results in our 2002 3PL providers survey, this represents an unrealistic expectation.

COMPARATIVE ANALYSES

The diversity of the surveyed firms has led us to conduct comparative analyses in order to explore potential differences among groups. While these comparisons confirmed some of the conventional wisdoms about the logistics industry in China, they have, more importantly, yielded quite a few surprises. In this section we focus on the following comparisons: Domestic 3PL providers vs. foreign and JV providers, domestic users vs. foreign and JV users, users vs. non-users, and manufacturers vs. non-manufacturers.

Domestic 3PL Providers vs. Foreign and JV Providers

After spending many hours interviewing 3PL providers and users for the 2002 Providers Survey, we came to expect that foreign and JV 3PL providers have an edge over domestic 3PL providers in many important aspects of logistics services. The results of this survey, however, yield some big surprises. We found that users of domestic 3PL providers tend to be more satisfied with the services than users of foreign or JV 3PL providers. The differences are often quite substantial, but even more surprising, in areas that we least expected.

For example, the biggest discrepancy comes from the area of delivery of technology capabilities to clients. On a 1 to 7 satisfaction scale, users of domestic providers give an average rating of 4.2 vs. 2.8 by users of foreign and JV providers. Another big discrepancy is in the area of consultative/knowledge-based skills, where users of domestic providers give an average rating of 4.5 vs. 3.2 by users of foreign and JV providers. What is so surprising is that users rate domestic 3PL providers higher than foreign and JV 3PL providers across the board, even in areas such as IT and global capabilities, which are generally viewed as their advantages. Complete results are shown in Exhibit 14.

Exhibit 14: Satisfaction with 3PL Providers*.

Service Areas	***Domestic 3PLs***	***Foreign/JV 3PLs***
Service level commitments	*4.7*	*4.3*
Savings on time and effort spent on logistics	*5.2*	*4.4*
Cost reductions	*4.9*	*3.9*
Strategic management skills	*4.1*	*3.4*
Global capabilities	*3.8*	*3.6*
Keeping up with advances in information technology	*4.3*	*3.4*
Delivery of technology capabilities to client	*4.2*	*2.8*
Consultative/knowledge-based skills	*4.5*	*3.2*
Ability to form meaningful and trusting relationships	*5.2*	*5.0*
Continuous, ongoing improvements and achievements in offerings.	*4.6*	*4.7*

** A continuous scale with "1 = highly dissatisfied and 7 = highly satisfied" is used.*

As with service capabilities, domestic 3PL providers again received higher ratings than foreign and JV providers across the board from the users (Exhibit 15).

Exhibit 15: User Experience Ratings*.

Service Experience	*Domestic 3PLs*	*Foreign/JV 3PLs*
ROI from 3PL	*4.7*	*3.6*
Logistics cost reduction	*5.0*	*4.3*
Average cycle length	*4.9*	*4.4*
Service improvement	*5.6*	*4.9*
Good contact person	*5.8*	*5.0*
Product knowledge	*4.9*	*4.0*
On time delivery	*5.7*	*4.8*
Good value	*5.3*	*4.3*
Price reasonable	*5.2*	*4.4*
Future business	*5.1*	*4.6*
Recommend to others	*4.6*	*4.3*

** A continuous scale with "1 = highly dissatisfied and 7 = highly satisfied" is used.*

We do not have all the explanations for the results. One possibility is that our sample size is not big enough. Another possibility, suggested by the survey results, is that foreign and JV 3PL providers charge more, although this does not explain the across the board discrepancy. Regardless of the reasons, it is clear that domestic 3PL providers have closed the perceived gaps with foreign and JV providers in service quality and capabilities.

Domestic 3PL Users vs. Foreign and JV Users

Similar to the generally higher satisfaction rate experienced by users of domestic 3PL providers, domestic users also experienced a higher satisfaction rate with their 3PL services than foreign users and JV users on services across the board.

The biggest discrepancy occurs in the area of value as shown in Exhibit 16. Foreign and JV users do not feel as good about the value their 3PL services as domestic users. Less than 10% of them rate their 3PL services as a very good value (6 or 7 in a scale of 1 to 7), while 41% of SOEs and 25% of domestic non-SOEs think their 3PLs are a good value. As a result, only 8% of the foreign and JV users intend to conduct future business with their current 3PL providers, as opposed to 63% of the SOE and 50% of the non-SOE users. But the discrepancies are not just limited to the area of value. Domestic users are also more satisfied with the services. For example, while only 33% of the foreign users agree strongly (6 or 7 out of 7) that the use of a 3PL has resulted in service improvement, 67% of the SOEs and domestic non-SOEs do.

Exhibit 16: Comparisons of Domestic, Foreign, and SOE User Ratings.

Customer Value & Future Intentions	***Foreign*** ***% Strongly Agree***	***SOE*** ***% Strongly Agree***	***Domestic Non-SOE*** ***% Strongly Agree***
Good value	*8*	*41*	*25*
Price reasonable	*11*	*38*	*50*
Price worthwhile	*8*	*29*	*25*
Do most future business	*8*	*63*	*50*
Recommend to others	*22*	*33*	*25*
Spend >50% of logistics budget	*8*	*32*	*50*

We can only speculate that this discrepancy might be attributed to the type of 3PL suppliers used. For example, foreign firms have an equal split between foreign and domestic 3PL providers (7 foreign to 7 domestic) whereas SOEs' split is 15% to 85% (5 foreign to 28 domestic) and non-SOEs' split is 33% to 67% (2 foreign to 4 domestic). Perhaps foreign 3PL providers charge a higher rate for service than their domestic counterparts. As a result, many users feel that the service is not sufficient to compensate for the higher prices.

Manufacturers vs. Non-manufacturers

Manufacturer and non-manufacturer users rate the results of their 3PL services similarly in several key areas such as fixed logistics asset reduction (5.2 vs. 5.3 in the 1 to 7 scale), inventory reduction (4.6 vs. 4.9), cash cycle reduction (4.8 vs. 4.7), and order cycle length reduction (4.9 vs. 4.8). What they differ significantly on are cost reduction (5.3 vs. 4.4) and service improvement (5.2 vs. 5.7).

There are strong indications that external factors affect manufacturers and non-manufacturers differently. Overall, manufacturers are faced with more pressure from competition and are more fearful of new and better products from competitors. As a result they have pressure to cut costs and to improve logistics services. In comparison, non-manufacturers tend to be more confident in their business, feeling that over the past three years their financial performances have exceeded those of their competitors.

These external factors may explain the sharp differences we discerned in their attitudes toward outsourcing logistics among non-users. Non-manufacturers are far more skeptical of the upside of outsourcing. They are much more inclined to believe that logistics is too important to outsource (5.3 vs. 4.2), and that logistics is their own expertise (5.1 vs. 4.1). Oddly enough, in spite of such skepticism, non-manufacturers are more likely to be approached by 3PL providers (Exhibit 17).

Exhibit 17: Reasons Not to Outsource Logistics Operations.

Reason	*Manufacturers**	*% Strongly Agree*	*Non-manufacturers**	*% Strongly Agree*
Existing logistics assets difficult to dispose	*3.8*	*21*	*4.3*	*40*
Internal logistics personnel difficult to dismiss	*4.1*	*32*	*3.4*	*22*
Cheaper to keep the current personnel and assets	*4.1*	*24*	*4.9*	*50*
Control over logistics would diminish.	*4.0*	*20*	*4.9*	*33*
Service level commitments would not be realized	*4.2*	*27*	*4.8*	*22*
Customer complaints would increase.	*3.9*	*25*	*5.0*	*22*
No cost reductions	*4.0*	*27*	*5.0*	*22*
Global capabilities insufficient	*4.6*	*33*	*3.8*	*11*
Logistics too important to outsource	*4.2*	*32*	*5.3*	*70*
Corporate philosophy excludes outsourcing	*3.9*	*27*	*4.5*	*36*
Security of shipments a concern	*4.2*	*33*	*5.0*	*40*
Own logistics expertise is better	*4.1*	*31*	*5.1*	*55*
Inability to form meaningful and trusting relationships.	*3.4*	*16*	*4.2*	*33*
Have not been approached by 3PL	*4.3*	*41*	*2.2*	*11*
Logistics a core competency of firm	*4.6*	*39*	*5.2*	*46*

** A continuous scale with "1 = strongly disagree and 7 = strongly agree" is used.*

Users vs. Non-users

An examination of the organizational profile of users and non-users shows that users are more likely to be raw materials suppliers and wholesalers (14% and 18% respectively) as compared to non-users (4% and 2% respectively). The majority of both users and non-users are finished product manufacturers (53% and 63% respectively).

There seems to be a strong correlation between geographical scope of logistics needs and outsourcing logistics operations. As expected, users' business operations cover a much wider geographic scope than non-users' business operations in every geographic region. It is likely

those non-users' primary business operations are largely domestic in nature; hence there is less need to outsource their logistics activities. The same phenomenon is also observed among firms in North America and Europe (Exhibit 18).[9]

Exhibit 18: Geographical Scope of Users versus Non-Users.

Types of Organization	**Users (%)**	**Non-Users (%)**
US/North America	*30*	*7*
Europe	*32*	*11*
Asia/Pacific Rim	*68*	*52*
Middle East	*14*	*4*
South America	*16*	*2*
Africa	*16*	*2*

A comparison of non-users by ownership structure[10] (Exhibit 19) shows that for the foreign and JV firms, the main reasons for not outsourcing logistics are: (1) no cost reductions; (2) cheaper not to use; (3) too important to outsource. For the SOEs: (1) core competence; (2) existing personnel; (3) existing assets. For the domestic non-SOEs: (1) global capabilities need improvement; (2) control would diminish; (3) security. It appears that each type of non-users has completely different reasons for choosing not to outsource. Depending on which type of customers the 3PL providers are planning to target, they need to address the different concerns of these non-users.

Exhibit 19: Users versus Non-Users by Ownership Type.

	Users %	***Non-Users %***
Foreign and JV	*78*	*22*
SOE	*50*	*50*
Domestic Non-SOE	*43*	*57*

Finally, non-users also differ in their future plans toward outsourcing, shown in Exhibit 20. Forty percent of foreign firms indicate that they plan to outsource within the next year, whereas only 9% of SOE and 18% of domestic non-SOE intend to do the same. This is consistent with the strong reasons not to outsource cited by each type of non-users give above, and the obstacles faced by SOEs and domestic non-SOEs would take longer to overcome. Surprisingly, a large percentage of non-users has no intentions to outsource at all: foreign firms (60%); SOE (70%); and domestic non-SOE (55%).

Exhibit 20: Time to Use 3PL by Ownership Structure.

Time to use 3PL	***Foreign (%)***	***SOE (%)***	***Domestic Non-SOE (%)***
Within 6 months	*20*	*3*	*--*
Between 6 to 12 months	*20*	*6*	*18*
After more than 1 year	*--*	*21*	*27*
No plans	*60*	*70*	*55*

[9] 2002 *Third-Party Logistics Study*

[10] We define ownership structure as: foreign (multinationals and joint-venture companies); SOE (state-owned enterprises); domestic non-SOE (domestic firms with no majority government share holdings)

Non-users are also more likely to be in industries such as machinery and tobacco, while users are more involved in medical and heavy industry (Exhibit 21). Both users and non-users are similar in terms of sales revenue. Interestingly, logistics expenditures as a percentage of total sales and selling costs are lower for users (6% and 19% respectively) than non-users (7% and 24% respectively). It is not clear whether the lower logistics expenditure (as a percentage of sales or selling cost) has led to a greater willingness for firms to outsource their logistics activities, or whether outsourcing leads to greater cost savings in terms of logistics expenditure.

Exhibit 21: Percentage Distribution by Users versus Non-Users.

Types of Organization	***Users (%)***	***Non-Users (%)***
Raw materials supplier	*14*	*4*
Finished product manufacturer	*53*	*63*
Component manufacturer	*4*	*15*
Wholesaler	*18*	*2*
Retailer	*2*	*4*
Industry		
Telecommunications	*4*	*2*
Electronics	*7*	*2*
Machinery	*12*	*27*
Food	*7*	*5*
Chemical	*9*	*9*
Medical	*19*	*9*
Tobacco	*5*	*14*
Wholesale	*4*	*5*
Heavy Industry	*11*	*5*
Retail	*2*	*5*
Light Industry	*9*	*9*
Other	*12*	*9*
Anticipated 2003 Sales (RMB)		
< $10 million	*6*	*7*
$11-$100 million	*24*	*21*
$101-500 million	*37*	*50*
$501 million-$1 billion	*16*	*10*
$1-25 billion	*16*	*10*
> $25 billion	*2*	*2*
Logistics expenditure as % of anticipated total sales for 2003	*6.6*	*7.4*
Logistics expenditure as % of anticipated sales cost for 2003	*19.4*	*24.2*

ABOUT THE INSTITUTES/ORGANIZATIONS

The Logistics Institute – Asia Pacific (TLI-Asia Pacific)

The Logistics Institute-Asia Pacific (TLI-Asia Pacific) (http://www.tliap.nus.edu.sg) is a collaboration between the National University of Singapore and the Georgia Institute of Technology for research and educational programs in global logistics. TLI-Asia Pacific is modeled after The Logistics Institute (TLI) at Georgia Tech (http://www.tli.gatech.edu), which has received widespread industry recognition as one of the premier institutes for education and research in logistics. Supported by five leading government agencies in Singapore, TLI-Asia Pacific was founded in November 1998. Since its establishment, TLI-Asia Pacific has worked to provide logistics expertise that meets the needs of industries across the world, focusing on global logistics, information technology, industrial engineering, and supply chain management. The Institute will continue to play its vital role in the Asia Pacific region to nurture logistics excellence in industry, research, and education.

China Communications and Transportation Association (CCTA) and The Institute of Logistics and Transportation (ILT-Beijing)

China Communications and Transportation Association (CCTA) is a social and economic organization approved by the State Development & Planning Commission and jointly established by various departments from ministries of railway, transportation, posts and telecommunications, civil aviation, petroleum pipeline, and others.

The Institute of Logistics and Transportation, Beijing (ILT-Beijing) (http://www.iltchina.com) was founded in June 2001 as a research institute of CCTA. It is supported by a number of departments including State Development & Planning Commission and State Economic and Trade Commission. The main activities of ILT-Beijing include conducting research in developing strategies, policies, regulations, standardizations, layouts, and information systems for logistics and transportation in China; providing consultations for logistics and transportation enterprises; and offering professional logistics training and education. The Institute has a committee of leading experts in economics, logistics, and transportation.

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