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CHARACTERISTICS OF THE MARKET FOR INTERNATIONAL AIRFREIGHT IN INTERMODAL LOGISTICS

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Shipper insights and opinions regarding the characteristics of the market for international airfreight in intermodal logistics were explored in this study. The methodology utilized was focus group research. The findings suggest that shippers' intermodal airfreight decisions are driven by weight and time sensitivity; that the strength of an organization's information system, especially in relation to tracking and tracing capabilities, is *the* most important category of service; that shippers respond very positively to personalized service; and that shipper selection of integrators and/or freight forwarders is destination specific. The research confirms the increasing competitiveness of the intermodal logistics market and suggests that personalized customer service can be a major factor in achieving a competitive advantage.

INTRODUCTION

Reviews of the literature of transportation and logistics indicate clearly that efficiency in international intermodal logistics has become increasingly defined by the speed in which components and finished products are moved through the supply, fabrication, and distribution processes. Globalization, increased inventory carrying costs, just-in-time manufacturing, and corporate emphasis on supply chain and channel management have all contributed to a focus on *total* logistics/distribution costs and an to the emergence of air as a preferred mode of shipment for international dutiables. However, the characteristics of the market for international airfreight in intermodal logistics, as perceived by shippers, remain largely undefined in the professional literature. This article reports on the results of exploratory research seeking to define some of these characteristics.

Purpose of the Study

This study was an investigation of shipper insights and opinions regarding the characteristics of the market for international airfreight in intermodal logistics in the Western United States. The following questions were asked of participating shippers:

1. What shipment attributes or characteristics do you use most frequently to classify international shipments for movement by air?

2. What do you think are the most important services provided by integrated carriers and/or freight forwarders.

3. How are integrated carriers and freight forwarders meeting your service expectations?

4. What factors most influence your choice of a specific integrated carrier or freight forwarder?

Methodology

The primary methodology used in this study was the focus group interview. The preliminary interview guide was developed in a series of interviews with shippers, freight forwarders, and integrated carrier managers. The interview guide was pre-tested in San Jose, California in February, 1996. These pre-tests consisted of three one-on-one interviews of approximately 45 minutes each. The three participants in the test interviews met all criteria established for the recruiting of the focus group participants. The results of the test interviews were used in the finalization of the interview guide. The three test interviews were conducted by the author of this paper.

Four focus group sessions were held, two in Seattle (February, 1996) and two in Los Angeles (March, 1996). Five to seven participants were recruited for each session. The author was the focus group moderator for all the sessions. All focus group participants met the following criteria:

1. Were traffic managers or shipping managers that control U.S. outbound freight decision making;

2. Considered themselves "knowledgeable" about international intermodal logistics;

3. Were experienced with a mix of international dutiable shipments of various weights;

4. Had made a minimum of five international dutiable shipments per month of 1-20 pounds, five of 20-100 pounds, and at least five shipments over 100 pounds;

5. Were employed by companies that spent a minimum of $2,000 per month for international dutiable shipments;

6. Had not participated in a shipping related focus group in the past year.

RESULTS, SEATTLE FOCUS GROUPS

Market Classifications

In Seattle, participants were asked how they classify dutiable international air shipments. The categories that emerged in the discussions included weight, size, value, destinations, and time sensitivity. The two variables that shippers utilize most frequently in classifying shipments for international airfreight were identified as: (1) weight and (2) time sensitivity.

Participants quickly classified shipments into small, medium, and large weight categories. For these participants, small shipments were those that weighed less than 16 pounds, medium shipments were those that had an average weight of approximately 70 pounds, and large shipments were considered to be anything over 100 pounds (113 pound average). Almost 46% of all shipments made by the participants were in the small category, 32% were in the medium category, and about 22% were large shipments weighing over 100 pounds.

Emergency shipments were those that reflected intense time sensitivity. These shipments frequently reflected customer emergencies or deadlines imposed by higher management. Words like "fire", "crisis," or "red alert" were used to describe the conditions of these shipments. Non-emergency shipments were the participants' routine air shipments. Here time remained an important factor, but there was more flexibility in delivery deadlines and there was no crisis atmosphere surrounding the shipment.

Participants noted that approximately 30% of their shipments moved under an emergency status and 70% were non-emergency shipments. The percentage of emergency shipments ranged from a low of 5% to a high of almost 70%

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Six shipment segments were identified and a preliminary market share estimate was computed by multiplying the percentage of total shipments in corresponding weight and time sensitivity classifications. Table 1 (below) presents the results of these conclusions.

TABLE 1
Mid-Share Estimates by Weight and Time
Seattle

	Market Classification	Pct. of Total by Weight	Pct. of Total by Time	Estimated Market Share
#1	Small Emergency Shipments	46%	30%	.138*
#2	Small Non-Emergency Shipments		70%	.322**
#3	Medium Emergency Shipments	32%	30%	.096
#4	Medium Non-Emergency Shipments		70%	.224
#5	Large Emergency Shipments	22%	30%	.066
#6	Large Non-Emergency Shipments		70%	.154

* 0.46 x 0.30 = 0.138
** 0.46 x 0.70 = 0.322

Most Important Services

Participants were asked to consider the six market classifications and to list the three carrier/logistics services most important to them in each of the segments. To these participants, shipment information/tracking was the most important service that is offered by an integrated carrier or freight forwarder. Its was among the top three services identified in every one of the six segments.

Door to door transit time was also a very important service characteristic, included in all but the large non-emergency segment category. Assistance in customs clearance at destination was identified as a very important service category for all emergency shipments.

The importance of individualized customer service was interwoven throughout the discussions of most important services. Shippers stated that they wanted a person who is "competent", "concerned", "accessible", and "knowledgeable about their business" assigned to their account on a "permanent" basis to provide support and assistance.

Service quality, especially service with a "personal touch", tended to be more important than price in decisions regarding the selection of a carrier or freight forwarder. However, price was seen as defining the "value" element in competitor evaluations.

RESULTS, LOS ANGELES FOCUS GROUPS

Market Classifications

In the Los Angeles focus groups, weight and time sensitivity were also identified as the two most important classifications of shipments. Discussions with participants in Los Angeles, however, suggested that the two time sensitivity divisions of "emergency" and "non-emergency" could, perhaps, be more precisely classified into *three* categories: emergency, express, and deferred.

Almost 25% of all shipments made by the participants were in the small category, 41% were in the medium category, and about 34% were large shipments weighing over 100 pounds. Participants stated that about 18% of their international air shipments were emergencies. Approximately 50% of their shipments moved under an express status and 32% were moved under a less time sensitive deferred status. Emergencies were defined as "red flag", high pressure, "we need it yesterday" shipments. Express shipments constituted normal airfreight movements.

Deferred were described as shipments that required movement by air but that had considerable delivery time flexibility.

Nine shipment segments were identified and a preliminary market share estimate was computed by multiplying the percentage of total shipments in corresponding weight and time sensitivity classifications. The results of these calculations are presented in Table 2.

TABLE 2
Market Share Estimates by Weight and Time
Los Angeles

	Market Classification	Pct. of Total by Weight	Pct. of Total by Time	Estimated Market Share
#1	Small Emergency Shipments	25%	18%	.045
#2	Small Express Shipments		50%	.125
#3	Small Deferred Shipments		32%	.080
#4	Medium Emergency Shipments	41%	18%	.074
#5	Medium Express Shipments		50%	.205
#6	Medium Deferred Shipments		32%	.131
#7	Large Emergency Shipments	34%	18%	.061
#8	Large Express Shipments		50%	.170
#9	Large Deferred Shipments		32%	.109

Most Important Services

Participants were asked to consider the nine market classifications and to list the three carrier/logistics services most important to them in each of the segments. Consistent on-time delivery was listed among the top three carrier services in every one of the nine segments. Shippers, however, *expected* consistent on-time delivery from an integrated carrier or freight forwarder. Failure to perform in this category would cause these shippers to shift their business to a competitor.

In both the Seattle and the Los Angeles focus groups, the strength of an organization's information system, especially in relation to tracking and tracing capabilities, was identified as *the* most important category of service that is offered (beyond the expected consistent on-time delivery). Tracking/tracing was among the top three carrier services identified by participants in every one of the market segments identified in this research.

Assistance in customs clearance was important in all emergency shipments and for small express packages. The critical importance of individualized customer service, expressed by shippers in Seattle, was confirmed by the Los Angeles participants.

Service quality , especially service with a "personal touch", was generally seen to be more important than price in decisions regarding the selection of a carrier or freight forwarder. However, price emerged as being important for larger express shipments and the determining factor for deferred shipments.

MEETING SHIPPER EXPECTATIONS: INTEGRATED CARRIERS VS. FREIGHT FORWARDERS

Even though the participants in both the Seattle and the Los Angeles focus group sessions agreed that integrators are their overwhelming choice for small shipments, they praised the individualized service provided by freight forwarders. Freight forwarders are a major competitive force for all but small shipments segments because of the perceived value (high quality and low prices) of their services.

Freight forwarders dominate the large shipment market. The participants perceived that the integrators are not equipped to handle heavier loads. They were especially concerned about shipment pickup. Their image of an integrator was a company operating single driver vans designed for document or small package pickup and delivery.

The participants thought that about 75 pounds is the upper limit of a shipment that can be handled by an integrated carrier. They were worried that a single driver could not handle even 75 pound shipments either at pickup or delivery. Shippers assumed that outside trucking firms would have to be sub-contracted on larger shipments and this would negate one of the major competitive advantages that integrators have over freight forwarders.

Value was another major reason freight forwarders were preferred for larger shipments. As the shipment becomes larger, participants believed the price advantage of the forwarders increases. Price was a key factor in the movement of larger express shipments and for all shipments in the deferred classification.

In addition to price, participants believed that freight forwarders offer superior customer service. Forwarder service quality has its roots in the *personalized* service that shippers perceived that they can get from forwarders but not from integrators.

The shippers in both the Seattle and Los Angeles focus groups repeatedly noted that they know their freight forwarder, that they are important to their freight forwarder, and that their freight forwarder understands their business. A majority of the participants agreed that freight forwarders tend to see their customers' problems as their problems too.

When participants discussed problem shipments they tended to praise the performance of their freight forwarders. These forwarders generally have provided pro-active notification, they have furnished thorough explanations of the cause of problems, and (very importantly) they have suggested solutions. Rapport with shippers and industry and/or geographic expertise seemed to be the primary reasons for the perceived superiority of freight forwarders in providing personalized customer service.

All of the integrators were seen as being too large to offer the personal "touch" these shippers expect for complex international movements. They used the expression "lost in the maize" to describe their interface with large integrators. The impersonal "telephone only" customer service of the integrators was compared unfavorably to the individualized service received from freight forwarders.

Participants particularly complained about the lack of expertise and the lack of concern of the integrator customer service personnel they reach by telephone. Turnover, lack of training, and indifference were all cited as problems they had encountered with integrator customer service personnel. Only rarely was one individual assigned to their account on a "permanent" basis to provide support and assistance. All of the integrators seemed to lack the "personal touch". None of the integrated carriers was seen as being competitive with freight forwarders in the area of individualized customer service.

In addition to price and personal service advantages, freight forwarders were also seen as frequently offering quicker delivery of international shipments than the integrators. The participating shippers believed that forwarders either know or will search for the most direct routing of a shipment. Integrators, on the other hand, are expected to consolidate shipments in a hub location that may require extra miles and will require extra time.

Since freight forwarders consolidate primarily at the point of origin while integrators consolidate in-route, the participants tended to believe that the chance for loss or damage was greater when integrators were used. They cited specific concerns about the loss of one or more pieces from a multi-piece shipment.

Participants also felt that the forwarders gave them better control over their shipments and access to these shipments in-route. They thought that integrated carriers generally do not palletize shipments, which they believe increases the probability of loss or damage. Their experience has been that if pallets are required, shippers must make advance arrangements with integrators but this is not necessary when they use freight forwarders.

The fundamental issue that underlies the differences in shipper perceptions of forwarders and integrators seemed to be that forwarders are seen as *specialists* while integrators are seen as *generalists*. Integrators were seen as mass merchandisers that specialize in the movement of large quantities of undifferentiated shipments that do not require any special attention.

As specialists, freight forwarders were believed to have substantially more industry and geographic specific expertise than integrators. Further, forwarders are seen as being set up to handle shipments "out of the norm" while integrators are not. Finally, freight forwarders were seen as being able to handle special documentation requirements in a manner superior to integrators.

CONCLUSIONS

1. The participants in this focus group research tend to classify their international intermodal logistics markets by two variables: time sensitivity and shipment weight. In the Seattle focus groups, six distinct market segments emerged (ranked here by estimated market share):

TABLE 3
Ranked Market share Estimates
Seattle

Ranked Segments	Estimated Market Share
Segment #2: Small Non-Emergency Shipments	.322
Segment #4: Medium Non-Emergency Shipments	.224
Segment #6: Large Non-Emergency Shipments	.154
Segment #1: Small Emergency Shipments	.138
Segment #3: Medium Emergency Shipments	.096
Segment #5: Large Emergency Shipments	.066

In the Los Angeles focus groups, nine market segments were identified by the focus group participants:

TABLE 4
Ranked Market Share Estimate
Los Angeles

Ranked Segments	Estimated Market Share
Segment #5: Medium Express Shipments	.205
Segment #8: Large Express Shipments	.170
Segment #6: Medium Deferred Shipments	.131
Segment #2: Small Express Shipments	.125
Segment #9: Large Deferred Shipments	.109
Segment #3: Small Deferred Shipments	.080
Segment #5: Medium Emergency Shipments	.074
Segment #7: Large Emergency Shipments	.061
Segment #1: Small Emergency Shipments	.045

2. The strength of an organization's information system, especially in relation to tracking/tracing capabilities was identified as *the* most important service category that is offered by a carrier (beyond the expected consistent on-time delivery). Tracking and tracing was among the top three carrier services in every one of the market segments identified in this study.

3. Door to door transit time was also a very important service characteristic, included in all but the large non-emergency segment category. Assistance in customs clearance at destination was identified as a very important service category for all emergency shipments.

4. The importance of individualized customer service was interwoven throughout the discussions of most important services. Shippers stated that they wanted a person who is "competent", "concerned", "accessible", and "knowledgeable about their business" assigned to their account on a "permanent" basis to provide support and assistance. Service quality , especially service with a "personal touch", was seen to be more important than price in decisions regarding the selection of a carrier or freight forwarder. However, price was seen as defining the "value" element in competitor evaluations.

5. Participants reported that integrators dominate the small shipment market. Integrators compete with freight forwarders for medium shipments. Freight forwarders dominate the large shipment market.

6. Freight forwarders were seen by the participants as *specialists* while integrators were seen as *generalists*. Integrators were perceived as mass merchandisers that can effectively move large quantities of undifferentiated shipments. As specialists, freight forwarders were believed to have substantially more industry and geographic specific expertise than integrators. Further, forwarders are seen as being set up to handle shipments "out of the norm" while integrators are not. Finally, freight forwarders were seen as being able to handle special documentation requirements in a manner superior to integrators.

7. In general, all of the major integrators were seen by the participants as providing satisfactory service in the movement of undifferentiated small shipments. No integrator was perceived as having a distinct competitive advantage over the others. The difference in performance was between integrators and freight forwarders. In the medium and large shipment categories, freight forwarders were perceived as having a competitive advantage over integrators in both price and service.

8. In an era characterized by "high tech" automated customer service, the "high touch" of individualized service has become dramatically more important to the participants in this focus group research. The personalized customer service offered by typically smaller freight forwarders has given them a distinct competitive advantage over the major integrated carriers in all but the small shipment categories.

MANAGERIAL IMPLICATIONS

Competition and preferences for specific integrators or forwarders were discussed by the participants in these focus group sessions. The factors that participants stated influenced their decisions in the purchase of intermodal services would seem to have important implications for carrier and forwarder management.

Competition among integrators is especially intense in the small shipment market. Participants expected integrators to compete among themselves *and* with freight forwarders for their medium sized shipments. Most participants did not consider integrators when making decisions regarding the movement of large shipments. The competition for large shipments is among freight forwarders.

Although no integrated carrier seemed to have a distinct *service* advantage over the others, perceived geographic specialization or expertise did emerge as an important criteria influencing preferences for specific integrators and/or freight forwarders. Destination emerged as an important shipment classification, surpassed only by time sensitivity and weight. Several participants noted that "destination expertise drives their decisions" when selecting an integrator or a forwarder.

Integrator and freight forwarder reputations for a given country or geographic region were based on the participating shippers' personal perceptions of delivery speed and consistency, tracking and tracing capabilities, customs clearance performance, knowledge and familiarity with a given country or region, and perceptions of lift capacity to a given location. Participants seemed quite knowledgeable in their discussions of country-by-country reputations of major integrators and freight forwarders in their geographic regions.

The salesforces of airfreight and logistics organizations, especially the integrated carriers, would seem to have potential as a major strategic but underutilized marketing resource. Because shippers see salesreps as a source ofpersonalized customer service, sales people have the
potential of becoming important advisors or consultants to their clients. To do so, however, shippers will insist that salesreps become familiar with the shipping needs of their companies and that they develop expertise as global logistics problem solvers.

In all, this focus group research suggests to management that shippers intermodal airfreight decisions are driven by weight and time sensitivity; that the strength of an organization's information system, especially in relation to tracking and tracing capabilities, is *the* most important category of service; that the shippers respond very positively to personalized service; and that shipper selection of integrators and/or freight forwarders is destination specific. This research would seem to confirm the increasing competitiveness of the intermodal logistics market and it suggests that personalized customer service can be a major factor in achieving a competitive advantage.

The shippers participating in these focus groups were very service and information sensitive. Their advice to integrated carriers and freight forwarders was that the future of those providing airfreight services in international intermodal logistics will be influenced by the depth of their global expertise, by their ability to deliver personalized customer service, and by the strength of their information systems.

REFERENCES

Bonny, Joseph (1994), "Logistics Barometer: Survey Indicates Less Interest in Physical Distribution, More in International Logistics, Intermodal, and EDI," *American Shipper*, 36(1):50.

Blanchard, Benjamin S.(1991), *Logistic Engineering and Management*, 4th ed., Upper Saddle River, NJ: Prentice-Hall, Inc.

Bradley, Peter (1993), "Transportation Joins the Strategic Arsenal, *Purchasing,* 115(2):65-68.

Brown, Peter (1996) "Forwarder or Integrator?," Air Cargo World, 86(9):20-21.

Cook, James A. (1995), "Agility Counts," *Traffic Management*, 34(8): 27-30.

Fields, George (1996), "Cargo Flies First Class," *Inbound Logistics*, 16(4):20-24.

Gooley, Toby B. (1996), "How Logistics Drives Customer Service," *Traffic Management*, 35(1):45-49.

Gooley, Toby B.(1993), "Six Ways to Save on Export/Import Costs, *Traffic Management*, 32(10):89-92.

Hise, Richard, T. (1995), "The Implications of Time-Based Competition on International Logistics Strategies, *Business Horizons*, 38(5):39-46.

La Howchic, Nick (1994), "Thinking Globally," *Traffic Management*, 33(4):81-87.

Murphy, Paul R. And James M. Daley, "Logistics Issues in International Sourcing: An Exploratory Study," *International Journal of Purchasing and Materials*, 30(3), 22-28.

Nelms, Douglas W. (1997), Cargo at the Crossroads," Air Transportation World, 34(1):57-63.

Page, Paul (1997), "Are the World's Airlines in the Logistics Business?" *Air Cargo World*, 87(2)21-27.

Richardson, Helen and Perry A. Trunick (1995), "Breakthrough Thinking in Logistics," *Transportation and Distribution*, 36(12):34-40.

Richardson, Helen L. (1994), "Planning for the Year 2000: Gearing Up for Substantial Improvements in Logistics," *Transportation and Distribution*, 35(11):73-76.

Sneaker, Robert F., Waller, Mathew A., and Steven C. Dunn (1993), "A Note on Research Methodology in Business Logistics," *The Logistics and Transportation Review*, 29(4):383-388.

Spear, Bruce (1997), "Logistics: Key to Corporate Strategy," *Transportation and Distribution*, 38(5):69-72.

Terry, Michael (1995), "Beat the Clock and the Competition," *EuroBusiness*, 3(2):49-52.

Tompkins, James A. (1996), Logistics: A Challenge for Today," *U.S. Distribution Journal*, 223(12):12-14.

Wong, Henry (1994), "Intermodal Growth and Logistics Management, *Industrial Engineering*, 26(6):20-23.

Wood, Donald, F., Barone Anthony, Murphy Paul, and Daniel L. Ward (1994) *International Logistics*, New York, Chapman and Hall.

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