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Feasibility of a Shipper Panel to Measure Transportation Services

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The project examined the value associated with a standing panel of shippers who would contribute carrier evaluation data to a central pool that would be available for wider distribution. The goal would be to improve the quality of evaluation data available to shippers. Both focus groups and surveys of shippers were used as a data gathering methodology. Major findings of the project include the following:

Shippers appear willing to contribute carrier evaluation data to a shared pool of similar data. Larger firms see more value in such an arrangement than do smaller firms—particularly those located in non-metro areas.

The type of metrics used by shippers in evaluating carriers are very consistent suggesting that the individual data could be easily combined into a central data base.

There are no apparent technological barriers to the efficient pooling of carrier evaluation data.

The report concludes that sufficient interest and promise exist to justify a pilot project to address various implementation issues.

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THE FEASIBILITY OF A SHIPPER PANEL TO MEASURE TRANSPORTATION SERVICES

Prepared by

Frederick J. Beier
Professor Emeritus
Department of Marketing and Logistics Management
Carlson School of Management
University of Minnesota

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Minnesota Department of Transportation
Office of Research Services
First Floor
395 John Ireland Boulevard, MS 330
St. Paul, Minnesota 55155

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EXECUTIVE SUMMARY

This project examines the feasibility of establishing a standing panel of shippers who would contribute carrier evaluation data to a central database. The panel would contribute a broader range of experience than any individual shipper and presumably improve the evaluation process. Shippers could use the data as a quality control metric on existing carriers or as a basis of carrier selection. Policy groups could use the aggregated data to measure service or capacity levels in specific areas or lanes.

This project focused on the transportation characteristics of responding firms, their processes for gathering data for carrier evaluations, the metrics used and the evaluation processes itself. It also evaluated the perceived value of a shipper panel, i.e., pooled data, on the part of respondents and their willingness to share their own information with others. The methodology used to collect data was a series of focus groups throughout the state of Minnesota followed by a survey addressed to regional firms. A national survey was used as a control group. Significant findings of the study are as follows:

- A shipper panel appears to add value to the evaluation process and a majority of respondents are willing to share information. The information would have to have some geographic context and certain critical metrics, e.g., on-time performance including equipment placement, accurate billing, loss and damage, and quality of information exchanged with the carrier.

- There appear to be low technological barriers to the implementation of such a panel. The context of the panel would be a web-based system that could be downloaded into a commercially available spreadsheet or database. Only a minority of regional respondents indicate that they use a specifically designed in-house system. The majority of respondents indicate that they use spreadsheet technology or a manual system for carrier service evaluation. Thus, any system that could provide a template for systematic data manipulation, and that could be easily downloaded to a spreadsheet, could improve the carrier evaluation process for many of the respondents.

- There is evidence of a trend toward centralizing the carrier evaluation process. A single office may be responsible for evaluating carrier performance at many facilities. Larger firms are more likely to see value in such a shipper panel than smaller firms. The explanation for this is that such systems could provide efficiencies and are a means of more centralization of control.

- There are some differences among groups of respondents in terms of their ability to see value in such a panel and the respondent's willingness to share. As noted, larger firms are more likely to perceive value, as are those respondents located in metropolitan areas. Firms that enjoy a variety of modal choices are also more likely to see value in a shipper panel. The data from this study suggests that the most favorable Minnesota industry groups, in terms of participation in such a panel, include metal fabrication, retail merchandisers (including consumer electronics), food, and chemical industry firms.

- There remain substantial implementation issues to a shipper panel including design of a format to gather evaluation data and the format for distributing such information. Consequently it is recommended that a pilot project be established to address the implementation issues.

The report also contains supporting information relative to the transportation characteristics of the responding shippers as well as the nature of evaluation processes of respondents.

CHAPTER 1
INTRODUCTION

A CONSUMER PANEL FOR TRANSPORTATION SERVICES

This project deals with the feasibility of establishing an on-going panel of consumers of transportation services, i.e., shippers, who would regularly evaluate the quality of the transportation services they are receiving from carriers. The concept is that shippers would contribute carrier-specific evaluation data to a general pool that would be widely accessible, e.g., over the Internet. Specifically, the service should be web-based and sufficiently user-friendly that data could be downloaded into a commercially available spreadsheet or database. There may or may not be a fee attached to using the pooled data.

While panels are regularly used by consumer product firms to evaluate new products, the literature does not contain any reference to consumer panels in an industrial setting and particularly not transportation. Generally, however, the literature agrees that consumer panels should be used when continuity is desired over a period of time, i.e., longitudinal data. Such panels also provide timely data and may be used to focus on a specific set of issues. The primary disadvantage to consumer panels is that data collection may be expensive (1). Within a transportation context, such a consumer panel would provide a longitudinal perspective on the quality of transportation services experienced by shippers in a particular region of the country, e.g., Minnesota, and could be compared with other regions of the country. The advantages of such a panel would be that it would increase the reliability of data, the data would be consistent

over time and it may systematize the process of evaluating carriers – thereby improving the basic process. The data from such a panel could replace the usual anecdotal evidence used when evaluating transportation alternatives during a policy debate.

There is one Website that provides information on the performance of carriers. It is carrierrankings.com and collects data on a variety of motor carrier services, rail, airfreight and brokers and third party logistics firms (3PLs). Shippers "vote" on carrier performance based on a standard template. The criterion used in the rankings is:

- Operating Personnel
- Administration (including billing accuracy)
- Information Technology
- Equipment
- On-Time Performance
- Cost
- Safety and Compliance

Shippers have the opportunity to rank prospective carriers according to their own weighting scheme and assign a letter grade. There does not appear to be a geographic orientation to the data and there is no cost to find out the top carrier rankings. Of interest is the observation that only one study participant was aware of this service.

RESEARCH OBJECTIVES

The research objectives of the study included the following:

- Develop benchmark information in terms of how firms currently evaluate transportation carriers including who the evaluators are, the metrics used and the methodology for collecting and analyzing data.

- Develop conclusions relative to the perceived value, on the part of shippers, of additional evaluation data from a pooled resource.
- Develop conclusions relative to the ability and willingness of firms to share information as well as participate in such a panel. A corollary question is whether such information can be generalized across firms or industries.
- Develop conclusions relative to how such panels should be organized in terms of geographic scope and definition of affinity groups. That is, is there greater value derived from same industry data or is there general application of the data?

SCOPE OF THE PROJECT AND METHODOLOGY

The basic methodology of the project was a two step process involving focus groups followed by a more comprehensive survey questionnaire. The focus groups were intended to provide critical input to the design of the general questionnaire. As described below, focus group attendees were solicited and qualified from different regions of the state. Based on focus group data, the questionnaire was designed and pre-tested using personal and phone interviews with local shippers. Questionnaires were then mailed to approximately 970 firms from Minnesota and surrounding states as well as 450 national firms. The national firms were designated as a control group with which the data from regional firms were compared. Results from both surveys were analyzed with the appropriate statistical methods (see Chapter 3).

ORGANIZATION OF THIS REPORT

The rest of this report is organized into the following four sections. Chapter 2 discusses the nature of the focus group methodology and results, design of the survey instrument, and the specification of the samples for the general survey. Chapter 3 discusses and analyzes the general survey data including the transportation characteristics of respondents, the methods of carrier evaluation, and the value of pooled evaluation data. Chapter 4 presents conclusions and recommendations.

CHAPTER 2
DATA GATHERING METHODOLOGY

FOCUS GROUP ORGANIZATION

Potential focus group participants were drawn from two databases, i.e., the Twin Cities Roundtable of the Council of Logistics Management (CLM) and HarrisInfoSource (2). Potential participants were selected on the basis of location and qualifications as suggested below;

- Does shipper control carrier selection and routing for traffic originating or terminating in the state?
- Mode(s) used and approximate annual volumes and frequency of shipments
- Regularity of shipments
- Proportion of freight bill relative to revenue

Focus group participants were also classified according to different categories, e.g., primary commodity, mode, or revenue. Participants were given a $50 incentive to participate. In terms of locations around the state, it was decided to use the nine Mn/DOT districts in the state. This ensured geographic diversity and a consistent quality and accessibility of meeting space. Because of its size two focus groups were held in the Metro District, representing the Minneapolis and St. Paul metropolitan area. The number of participants and geographic locations of the focus groups is summarized in Table 2.1.

Table 2.1

Focus Group Location & Number of Participants

Mn/DOT District	*Minnesota Location*	*Expected Number of Participants*	*Actual Number of Participants*
4	Detroit Lakes	12	4
1	Duluth	11	5
7	Mankato	14	8
Metro	Minneapolis	10	7
Metro	Minneapolis	12	5
2	[1]Park Rapids	10	0
6	Rochester	10	8
3	St. Cloud	12	6
8	[2]Willmar	7	3
Expected and Actual Totals		98	46

Notes:
[1]Park Rapids' focus group was cancelled, since participants indicated they were unable or uninterested in attending.
[2]Willmar's focus group was reduced in size due to a snow and ice storm. Three who were unable to attend agreed to complete survey after the meeting.

Prior to the focus group, participants were asked to fill out a short survey dealing with the characteristics of their firms. The detailed characteristics of the focus group respondents are described in Appendix A, and a copy of the focus group survey is contained in Appendix B. However, the following characteristics are useful:

Size of Respondents by Number of Employees

Under 100	10%
100 – 300	35%
Over 300	55%

Primary Product Classification by Percent of Respondents

Agricultural Products and Food	20%
Consumer Goods/Electronics	18%
Industrial Equipment & Metal	33%
Paper	8%
Misc. and no response	20%

The focus group participants appeared to reflect the local economy with representation of smaller firms.

FOCUS GROUP RESULTS

An initial impression was that the data from the focus groups was not very robust. That is, originally it was thought useful to develop a matrix where respondents were classified by industry as well as geography with a sub-classification of modes such as truckload and less-than-truckload. The data suggested that, particularly in the out-state regions of Minnesota, such a classification system would divide the data too finely and it would lose any statistical reliability as well as confidentiality. The responses of focus groups suggested that there was a major difference between metropolitan area responses and those from out-state Minnesota. The geographic classification appeared to have an impact on how the relationship between the shipper and carrier was structured and how the carriers were evaluated. For example, out-state participants were more relationship oriented with their carriers. This seemed to originate from the perception that carrier choices were limited and out-state participants were more concerned about maintaining the relationship to avoid finding other carriers. Consequently, evaluations were more qualitative and relied less on specific metrics. Metro area participants perceived less cost to switching carriers and were much more systematic in terms of the application of metrics and the frequency of reviews. Metro area respondents were much more oriented toward

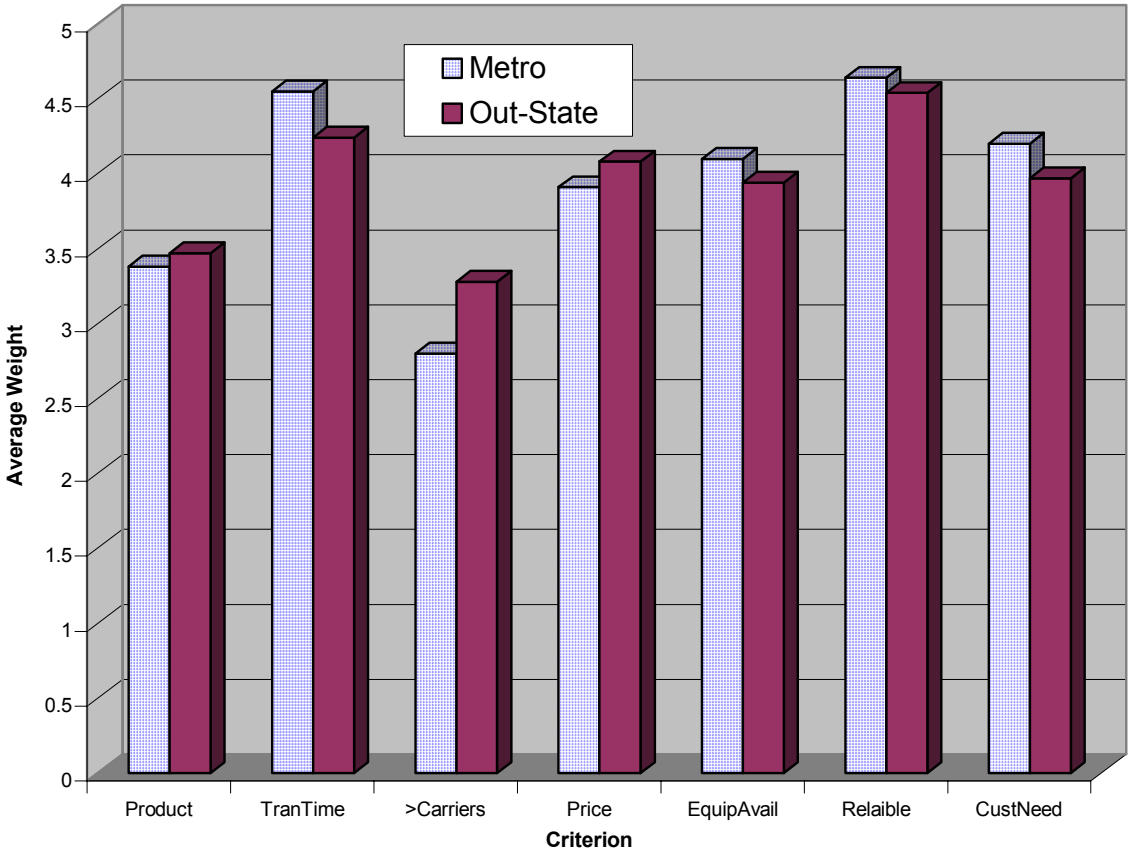
quantitative metrics and carrier scorecards while their out-state counterparts had less formal processes.

The focus groups also revealed the trend for greater central decision making in carrier evaluation. In a period of merger and acquisition, central offices are now consolidating carrier selection and evaluation functions. The reason is simply to consolidate volume in order to leverage buying power for fewer carriers. From a practical side, this means that more decision making relative to carrier selection will be made outside Minnesota. Another out-state/metro difference appeared to be in regard to international shipments. Out-state participants appeared to have much more difficulty in obtaining service for international shipments either in terms of gaining equipment or pick-up service. Consequently, these participants are much more interested in back-haul data in order to find carriers who are in the area.

The focus group data was also compared on the basis of metro versus out-state in terms of current use of modes, criteria for mode selection and criteria for carrier selection. Out-state participants relied more on the rail mode than metro participants while there was little apparent difference in the criteria either group used in selecting modes and specific carriers. Figure 2.1 depicts the differences between the two groups.

Figure 2.1

Criteria for Mode Selection



The individual criterion in Table 2.1 are defined as nature of the product dictating the mode, transit time, multiple carriers, price, available equipment, reliability of the mode and customer needs.

DESIGN OF SURVEY INSTRUMENT

Following analysis of the focus group information a survey instrument was designed over a number of iterations. The survey focused on the following data areas:

- The perspective of the respondent in terms of representing a single local facility or a number of facilities at a centralized location. This includes where various functions are performed, who controls traffic and the use of 3rd parties.
- Demographic information such as number of employees and type of products.
- Location information, i.e., zipcode.
- The modal pattern of inbound and outbound shipments, including international.
- Carrier evaluation data including form of the data and frequency of evaluation.
- The respondents' willingness to share evaluation data and whether they see value in pooled information.

The survey was pre-tested with a number of local firms in the Twin Cities area and can be found in Appendix C. The survey was then distributed in three waves. The first wave was distributed by July 15, 2001 to a sample of members of the Council of Logistics Management (CLM) representing firms at facilities in Minnesota and surrounding states. This was actually a different database than that used to select focus group participants. This was a newly organized list from the national office of CLM rather than the local roundtable. Nevertheless, controls were established to make sure no focus group participants were included in the survey. A total of 215 surveys were distributed and 5 were undeliverable. A total of 50 were returned for a response rate of approximately 24%.

The second wave of surveys was sent by August 15. That wave used the HarrisInfoSource database which identifies all manufacturers operating in the state. It also identifies service firms and these were eliminated from the sample. A total of 764 surveys were delivered and 40 were returned for a 5.23% response rate. It was intended to send a reminder post card after Labor Day

in order to stimulate the response rate. However, after September 11, 2001, such a strategy was thought to be ineffective.

The third wave of surveys was also sent by August 15. These were addressed to names taken from the national directory of CLM. Specifically, a proportional sample was taken from CLM membership according to the location of 80% of the membership. A total of 446 surveys were delivered to 13 states with 44 responses. The response rate was just at 10%. It is hypothesized that the lower response rate for the HarrisInfoSource wave is attributable to the more general nature of that database compared to the CLM database.

A number of checks were made for non-response bias. For example, the question arises whether the non-participating respondents would have answered differently. If so, these results may be biased. Since the overall characteristics of the HarrisInfoSource database are known, the sample drawn could be compared to the population as a whole. No significant differences existed relative to the size of respondents from the population or the sample. However, regarding the metro or out-state location of the respondent, the sample data contained somewhat more non-metro responses than the overall population. Comparisons were also made between early and late respondents. Late respondents tended to be larger, e.g., have a 21% larger employee base and controlled more facilities centrally. The significance of this bias is unclear. For example, while the latter respondents are larger, the smaller, rural respondents are substantially represented in the sample. Further, as consolidation continues in the economy, the larger firms will be more representative of the process of carrier evaluation. It may be necessary to replicate

the study at some future time to determine the impact of this bias. However, the author does not think the results are significantly biased by the response patterns.

CHAPTER 3
SURVEY RESULTS AND ANALYSIS

The following discussion is organized according to the flow of the questionnaire found in Appendix C. That is, the initial discussion focuses on the transportation characteristics of the respondents including how the transportation responsibilities are divided between consignor and consignee. This is followed by a discussion of the methods of carrier evaluation used by the respondents. Next is a discussion of the respondent's perception whether panel data would add value to their own evaluation process and their propensity to share such data. The following discussion combines waves 1 and 2 of the questionnaire, as described in Chapter 2, and refers to these as *local* firms or respondents. Wave 3 represents the responses from national firms and the discussion refers to these respondents as the *control group or national respondents*. Where relevant, the discussions also compare responses from the metropolitan area, i.e., Minneapolis and St. Paul, and out-state.

TRANSPORTATION CHARACTERISTICS

With the exception of water movements, there is a great deal of similarity between the modal split for inbound and outbound shipments for all respondents in the regional sample. See Table 3.1.

Table 3.1

Modal Characteristics of Inbound and Outbound Shipments

	Shipments Received	***Shipments Sent***
Mode	***% of Respondents***	***% of Respondents***
Rail	5%	6%
For-Hire Truckload	29%	32%
For-Hire LTL	29%	31%
Intermodal/Piggyback	9%	7%
Air Freight	20%	24%
Barge or Vessel	9%	negligible

The dimension in the above table is shipments as opposed to volume or tonnage. The data should be interpreted as "of the total responses, where multiple responses are allowed, 29% of the sample indicated *use* of LTL trucking." The results are dominated by motor carriage with a strong showing by airfreight. Note also the symmetrical nature of the responses between inbound and outbound shipments. The only exception is that shipments made by vessel are primarily inbound which are clearly international.

Table 3.1 does not reflect intensity of use. Tables 3.2 and 3.3 represent intensity of inbound and outbound shipments respectively. These tables demonstrate that there is still symmetry between inbound and outbound shipments. However, the dominance of motor carriers is evident.

Table 3.2

Average Percentage of Inbound Shipments by Mode
National vs. Local Sample

Mode	*National*	*Local*
Rail	20%	25%
For-Hire Truckload	39%	47%
For-Hire LTL	30%	46%
Intermodal/Piggyback	13%	18%
Air Freight	26%	11%
Barge or Vessel	12%	11%

Table 3.3

Average Percentage of Shipments Sent by Mode
National vs. Local Sample

Mode	*National*	*Local*
Rail	12%	27%
For-Hire Truckload	43%	48%
For-Hire LTL	33%	44%
Intermodal/Piggyback	9%	12%
Air Freight	29%	11%
Barge or Vessel	6%	7%

Tables 3.2 and 3.3 should be interpreted as "of those who use rail, they ship 25% of their shipments via this mode." Thus, the totals will not sum to 100. Regarding inbound freight, and in regard to a comparison with the national control group, the data suggests a greater dependence

on motor carriage for local respondents and less dependence on airfreight. In regard to outbound shipments, local respondents rely more on rail and less on airfreight than the national group. This may be a sampling bias where the national control group represent firms in major metropolitan areas where the local sample has a greater proportion of out-state representation.

When the data is divided by metro and out-state respondents, there appears to be a geographic bias in terms of access to the different modes. For example, a greater proportion of metro respondents use LTL, Intermodal and airfreight shipments, and they use them for a higher proportion of their total shipments. See Table 3.4. There are no essential differences between

Table 3.4

Percent of Inbound and Outbound Shipments by Mode by Selected Modes, Out-State and Metro Respondents

	Out-State Responses		***Metro Responses***	
Mode	***Inbound***	***Outbound***	***Inbound***	***Outbound***
LTL	43%	35%	50%	52%
Intermodal	5%	9%	28%	17%
Air Freight	5%	7%	15%	15%

metro and out-state areas relative to rail and truckload shipments. Some of the differences shown in Table 3.4 reflect a perceived lack of service available to out-state shippers. They have fewer LTL carriers available and hybrid modes such as intermodal represent twice the complexity of conventional truckload shipments.

In terms of outsourcing transportation functions, 24% of local respondents and 28% of national respondents indicated they had outsourced some transportation operations. This suggests that firms are still interested in maintaining control of their transportation activities rather than allowing it to be managed by another firm. There is a tendency for metro respondents to outsource more than those firms out-state. The reason for this simply may be lack of opportunity, i.e., lack of available 3rd party logistics alternatives.

There were no significant differences between the local and national samples relative to the use of private fleets. Approximately 30% of both groups indicated that they had a private fleet of highway vans and 17% responded that they used special highway equipment in a private fleet. Approximately 11% of the national sample indicated that they used leased rail car equipment where only 4% of the local sample used leased rail cars. Dividing the data between metro and out-state, the former group appears to rely on private motor carriage van fleets to a greater extent than the out-state group. This is somewhat counterintuitive since out-state firms could use private fleets as a hedge against poor service or limited equipment availability. Approximately 24% of out-state respondents indicate they have a private fleet of specialized highway equipment as opposed to 15% for the national group.

In regard to international shipments, Table 3.5 presents the data for both inbound and outbound movements. The data suggest a somewhat greater tendency for the control group to rely on

Table 3.5

International Shipments Shipped/Received
National and Local Respondents

	National	***Local***
Shipped	13%	8%
Received	15%	9%

international movements – both inbound and outbound. Further, an analysis of the data do not reveal any significant differences between metro and out-state responses for the local respondents. Thus, the indication is that the control group respondents are involved more with international shipments than local respondents regardless of location. The reason for this is unclear and is identified as an area of further research.

Respondents were also asked about the extent to which they controlled shipments, both inbound and outbound. Table 3.6 presents the relevant comparisons that demonstrate no differences in the responses. Out-state and metro respondents have similar results relative to control of shipments and show no differences.

Table 3.6

Proportion of Inbound and Outbound Shipments
Controlled by Respondents
National vs. Local Respondents

	Inbound	***Outbound***
Local	68.1%	80.2%
National (Control)	59.6%	84.0%

Recall that most of the respondents to the survey are manufacturers. Since control is normally associated with payment of transportation costs, one implication of Table 3.6 is that respondents are paying both for inbound and outbound shipments. An additional implication is that there may be a substantial amount of shared control between consignor and consignee. That is, there is some collaboration in selecting carriers and evaluating them. This, however, goes beyond the current data and may be a subject for future research.

The survey asked about the number of carriers each firm dealt with and the number of core carriers, i.e., how many different carriers enjoy 80% of the firm's business. The comparison between the national control and local groups are contained in Table 3.7. The data suggest that local respondents rely on a smaller group of core carriers than do their national counterparts. One possible explanation for this was revealed in the focus groups as the out-state participants were very interested in maintaining the relationship with their primary carriers. Some firms are not able to maintain a portfolio of carriers so that substitutes can easily be found. Apparently, even the casual use of a greater number of carriers, for both inbound and outbound, does not mitigate this problem. When the data are divided by metro and out-state respondents, it appears

Table 3.7

Average Number of Carriers and Core Carriers Used by National and Local Respondents for Inbound and Outbound Shipments

	Inbound Shipments		***Outbound Shipments***	
	Total Carriers	***Core Carriers***	***Total Carriers***	***Core Carriers***
Local	31	5	29	6
National	15	9	36	14

that the latter group deals with more total carriers but still uses about 6 core carriers. These responses may be a reflection that out-state shippers are eager to maintain contact with as many carriers as practical.

Finally, respondents were asked concerning their use of transportation contracts for both inbound and outbound shipments. In general, national respondents used contracts to a greater extent than local respondents for both inbound and outbound shipments. Approximately 66% of inbound shipments and 83% of outbound were under contract according to national respondents. Local respondents reported 49% and 63% respectively. The average contract, for both the national and local respondents was 2 years. The use of contracting appears to be a normal means of doing business rather than a special condition for establishing a relationship between carrier and shipper.

To summarize the discussion on the transportation characteristics of both local and national respondents:

- Motor carriage is the dominant mode for both inbound and outbound shipments.
- The national control group appears to rely on airfreight to a greater extent than do the local respondents. The preference for airfreight comes at the expense of for-hire LTL service.
- Approximately 25% of all respondents outsource some portion of their transportation operations. There is not difference between local and control groups.
- Approximately 30% of all respondents rely on a private fleet of highway van equipment. Metro area locations tend to rely on such private fleets more than out-state locations.

- Out-state respondents tend to maintain fleets of specialized highway equipment more than metro respondents, e.g., 24% versus 15% respectively.
- Control group respondents tend to have more international shipments than local respondents.
- Respondents indicate significant control of both inbound and outbound shipments suggesting collaboration between consignor and consignee. There are no significant differences between the local and control groups.
- While respondents deal with many carriers for both inbound and outbound traffic, they rely on a small number of core carriers, e.g., 5-6, to carry 80% of their shipments.
- Outbound shipments are more likely to be made under contract with the carrier. Also, control group firms have a tendency to use contracts more than local respondents.

METHOD OF CARRIER EVALUATION

The following discussion is structured as follows: how the responding firm is organized regarding carrier evaluation, the evaluation criteria, frequency of evaluation, the methodology of evaluating carriers and the nature of the system(s) used in carrying-out the evaluation.

In regard to how firms are organized for carrier evaluation, the general trend is for greater consolidation at a central facility. This is probably the result of increased merger and acquisition activity as well as improvement in enterprise-wide information systems. At any rate, more firms indicate that carriers are evaluated at a central facility rather than on-site. Table 3.8 has the breakdown between the local sample and the control group.

Table 3.8

Control of Single vs. Multiple Facilities

	Single Facility	***Multiple Facilities***	***Average # of Facilities***
Local Respondents	34	56	11
Control Group	6	37	28

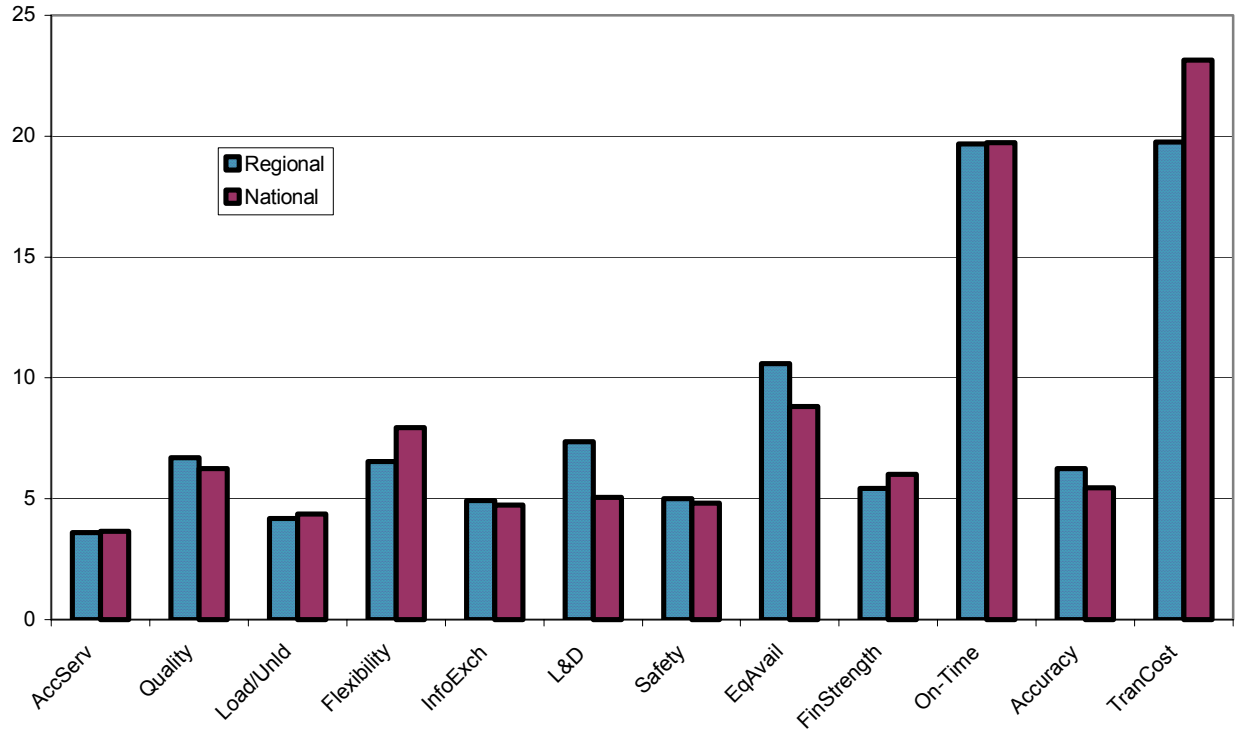
The "Average # of Facilities" column represents the average number of facilities where the respondent conducts carrier evaluation when the activity is centralized. One implication of these results is that such evaluation systems must be systematic and standardized in order for one individual to evaluate 28 facilities. Another implication is that such centralization is possible as long as respondents deal with a small number of core carriers. Finally there is probably some overlap of carriers serving multiple facilities.

Table 3.8 raises the question of which evaluation activities are performed at a central location and which are performed locally. The primary activity occurring at the on-site facility is ordering equipment. Other activities appear to be easily centralized including freight payment and processing claims. Rate negotiation is also centralized because the shipper wants to accumulate as much volume as possible to justify the lowest rates. Carrier selection and evaluation appear to be somewhat in transition. That is, these activities are balanced between a centralized office and on-site locations. The data contain a substantial number of cases where the responsibility is shared. While this data is only a snapshot in time, from the anecdotal evidence of the focus groups the trend appears to be in the direction of more centralization.

Respondents were asked to allocate 100 points among a menu of evaluation criteria. The results were then normalized and are presented in Figure 3.1. Note that the dominant criteria are

Figure 3.1

Normalized Ranking of Evaluation Criteria



transportation costs and on-time service. Note further, that there is strong agreement between both groups of respondents. Secondary criteria include equipment availability, loss & damage and flexibility on the part of the carrier. However, the implication from this finding is that there is strong agreement on the nature of the metrics to be used in carrier evaluation.

The conclusion is reinforced when respondents' current metrics are examined. On-time delivery dominates the scale. There is also little difference between the local and control group. See Table 3.9.

Table 3.9

Metrics Currently Used to Evaluate Transportation Carriers
National vs. Local Respondents

	National	***Local***
On-time Delivery	89%	82%
On-time Equipment Pick-up/Drop-off	53%	49%
Accurate Billing	49%	54%
Shipments with Loss and Damage Claim	64%	53%
Evaluation of Carrier's Responsiveness	56%	43%
Evaluation of Carrier Feedback and Information Exchange	38%	37%
Other	9%	8%

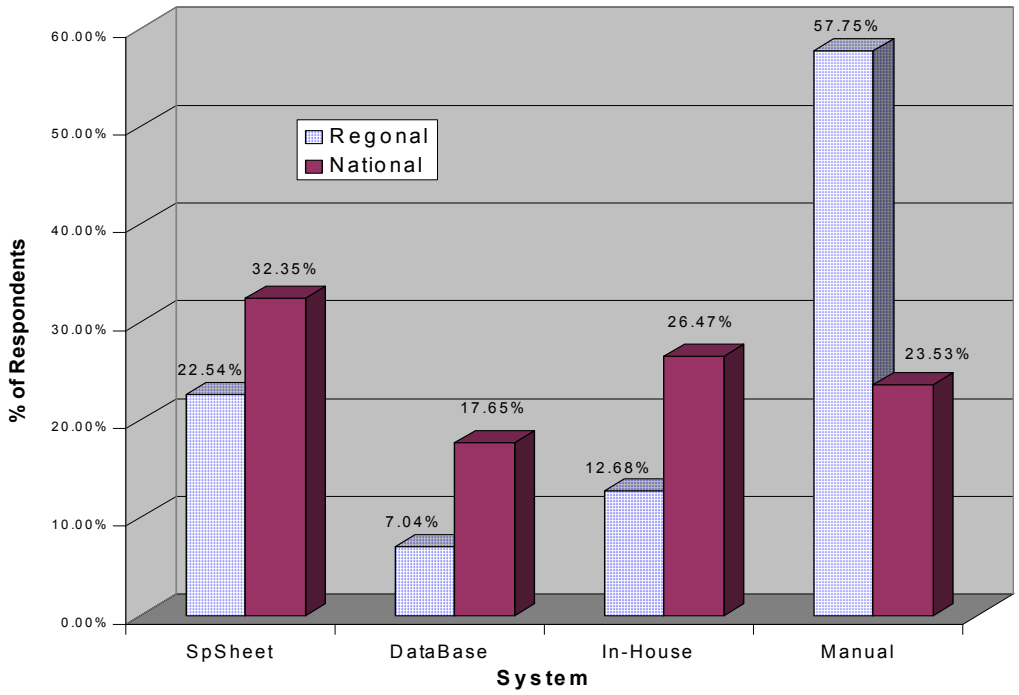
One explanation as to why other criteria are not weighted more heavily in the evaluation process is the observation that firms have not adopted specific metrics for the purpose of evaluating carriers. The survey asked about the metrics currently in use for carrier evaluation and those that respondents would like to use. There were not significant differences between the local and control group samples. That is, the same proportion of both samples indicated use of similar metrics, e.g., approximately 80% measure on-time delivery. However, looking at the data in Table 3.9 another way, approximately 50% of total respondents do not measure on-time equipment pickup and delivery or the accuracy billing. Over 60% of respondents do not measure the quality of information supplied by the carrier. Thus, one reason that two individual evaluation criteria , on-time performance and cost, dominate the rest is that they are the easiest to measure.

Respondents were asked to define on-time performance within a forced choice menu. Assuming that firms responding to "day promised" as a 12-hour window, on-time performance provides a 3.3 hour window for control group firms and a 5.0 hour window for local firms. This is across all modes although respondents who rely primarily on truck dominate the data. In terms of frequency of evaluation, local respondents have a tendency to rely more on semi-annual evaluations while control group respondents tend to evaluate quarterly. However, the overall average is approximately 7 months. It is noteworthy that there is no difference in the frequency of evaluations for contract versus non-contract carriers. Metro and urban respondents do not differ in their definitions of on-time or in their frequency of evaluating carriers.

The survey asked about the type of system used for the evaluation process. The objective was to determine the existence of any type of technological barrier that would prevent the adoption of a web-based system that could be easily downloaded into a spreadsheet or database. Figure 3.2 contains a comparison of the responses for both local and national firms.

Figure 3.2

Type of System Used In Evaluation of Carriers
Percent of Respondents



The data suggest that control group firms are more systematic toward adopting systems for carrier evaluation than local firms. Further, a significant number of local respondents maintain manual systems for this purpose. The fact that "In-House" systems represent 26% of control group responses and 12% of local responses, suggests that there is not a significant technological barrier to pooling information about carrier evaluation. Further, of the electronic means, spread sheets appear the most popular. A further implication of this data is that a program of systematically evaluating carriers could produce a halo effect and upgrade the manual systems currently being used.

Data reinforcing the observation that national firms are more systematic in evaluating carriers relates to the use of weighted criteria. Respondents were asked if they use a system for weighting criteria as opposed to using individual criterion with no weights attached. Only 24% of regional respondents indicated use of a weighted criterion where 49% of the control group used such a system. When the local data is broken down between out-state and metro, there are no significant differences. While metro responses tend to use a weighted criteria somewhat more, there is absolutely no difference between them in terms of using manual versus electronic systems.

There appears to be somewhat of a relationship between the trend toward centralization of the carrier evaluation function and the use of more sophisticated methodology. As the evaluation process remains more regional the emphasis appears to be more on the maintenance of relationships.

VALUE OF POOLED EVALUATION DATA

Respondents were asked to make two assumptions when evaluating the value of shared carrier-specific evaluation data. The first was that it would be within a relevant geographic area and the second was that it would be supplied in a compatible electronic format. The nature of the evaluation data was that it would include the following:

- % on-time delivery
- % on-time equipment pick up and drop off
- % accurate billing
- % of shipments with loss and damage claims
- Evaluation of carrier's responsiveness
- Evaluation of carrier feedback and information exchange

Table 3.10 contains the summary of responses for both the regional and control group samples. The control group shows strong recognition that such data would be valued where the regional

Table 3.10

Value Perceived of Shared Evaluation Data
National vs. Regional Respondents

	Regional Respondents		***Control Group***	
	n	% of n	n	% of n
Yes	68	76%	41	91%
No	22	24%	4	9%
Total	90	100%	45	100%

group is only slightly less responsive. One of the concerns of regional respondents, especially those in non-metro areas, is that sharing such information may damage their relationship with affected carriers. A greater proportion of out-state respondents, 29% versus 20% for metro firms, did not see value in such pooled information.

Respondents were also asked if the value of such information would be enhanced or diminished if it came from sources within their own or similar industries. Table 3.11 reflects that the control group feels more strongly about the value gained from similar industry data. Regional carriers are more evenly split on the issue while neither group believes that the value of the information is diminished by similar industry data. The conclusion is that respondents do see value in such evaluation data if it contained some geographic context. The value of the data would be substantially enhanced if it drew from firms in the same or similar industries as the respondent.

Table 3.11

Is Evaluation Data Enhanced by Same or Similar Industry Data?
Regional vs. National Respondents

	Regional Respondents		***Control Group***	
Value of Information	***n***	***%***	***n***	***%***
More	52	58%	32	71%
Less	7	8%	2	4%
Same	31	34%	7	16%
Total	90	100%	45	100%

This may, in fact, be a limitation of the shipper panel concept in that certain geographic areas may not contain sufficient respondents to provide both statistical reliability and confidentiality of data source.

Finally, respondents were asked about their willingness to share some of their evaluation data under the condition that all contributors would be held anonymous. Table 3.12 presents the comparison.

Table 3.12

Willingness to Share Evaluation Data

	Regional Respondents		Control Group	
	N	%	n	%
Yes	54	62%	36	82%
No	33	38%	8	18%
Total	87	100%	44	100%

For both regional and control group respondents, somewhat fewer firms indicated a willingness to share their data compared to those that see value in such information. Similar to Table 3.10, regional respondents are substantially less inclined to share as are the control group. Nevertheless, over 60% of regional respondents are willing to share such information. Specifically 56% of out-state respondents, and 67% of metro firms, indicated a willingness to share such information.

To summarize the discussion relative to the evaluation process and the ability of firms to see value in pooled information;

- The trend is for greater consolidation of the evaluation process. Carrier evaluation and carrier selection are shared between on-site facilities and central offices. Ordering equipment remains a local responsibility.
- Evaluation criteria are dominated by on-time performance and transport costs.
- There are no significant differences between regional and control group respondents in regard to most important criteria.
- One reason supporting criteria are not weighted more heavily may be that firms have not developed the metrics to effectively measure them. For example, over 50% of all respondents would like to, but do not currently use metrics for pick up and delivery of equipment and accurate billing.
- The average on-time performance window for control group and regional respondents is 3.3 and 5.0 hours respectively.
- A majority of regional respondents use manual evaluation systems where only 23% of the control group rely on manual systems.

- Approximately 26% of control group, and 13% of regional respondents use custom made in-house systems. The implication is that there is not a significant technology barrier to the collection of evaluation data from multiple sources.
- Both regional and control group respondents value shared evaluation data with a geographic context. Both groups also agree that such information would be more valuable if it came from firms in the same or similar industries. The perception of value is somewhat stronger from the control group.
- Both groups are willing to share such information. The control group is somewhat stronger in its willingness to share.

ADDITIONAL ANALYSIS

All respondents were asked to provide information relative to their major products received and shipped from their facilities. Both groups were combined and respondents were classified into different business or industry categories. The categories listed in table 3.13 represent those groups that have a critical mass of responses. While the data are not sufficiently robust, they do provide insights on how certain industries responded to the survey and may view the value of pooled evaluation data.

Table 3.13

Industry Groups for Further Analysis

	Machine & Elec. Parts	***Food***	***Chemical Paint***	***Retail/ Cons. Elec***	***Metal Fabrication***
Number	20	15	10	20	13

Other groups represented in the industrial classification were Grain/Fertilizer (8 responses), Lumber and Cabinet Making (8), Computer Parts (3) and Paper (3). General observations are that the categories of "machine and electrical parts" and "metal fabrication" are smaller firms than "food" and "retail and consumer electrics." Generally, the industry groups respond similarly to most of the questions. For example, there are similar results in terms of importance of evaluation criteria and evaluation processes including use of a weighted criteria. However, retail respondents have a significantly higher proportion of international shipments than do other groups.

There are differences in the perception of value by industry groups. For example, one of eight respondents in the grain and fertilizer category saw value in such information and *none* of them were willing to share such information. Lumber respondents also are skeptical in terms of the value of a shipper panel. Such responses could be a reflection of the fact that the options for such shippers are limited to one or a few carriers and they already have all of the evaluation information they need.

Further, while some industry groups recognize value in pooled evaluation data, they may not be willing to share their own information. Table 3.14 contains the industry breakdown.

Table 3.14

Perceived Value and Willingness to Share
Pooled Evaluation Data by Industry Group

	Perceived Value, % of Responses		***Willing to Share, % Responses***	
	Yes	No	Yes	No
Metal Fabrication	100%	0	90%	10%
Mach & Elec. Parts	71%	16%	50%	50%
Retail/Consumer Electrics	85%	15%	77%	23%
Food	80%	20%	60%	40%
Chemicals	80%	20%	80%	20%

While there is general consistency, it cannot be assumed that all members of an industry grouping will be willing to share information. Food is an example where 80% of respondents recognize the value but only 60% are willing to share. Machine and electrical part producers have a similar slippage in terms of willingness to participate with retailers also seeing some slippage. Thus, while the responses are positive in terms of the value of such a panel and the willingness of the overall sample to share data, there are industry groupings who see little value here and probably would not participate.

CHAPTER 4
CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

FINDINGS RELATIVE TO TRANSPORTATION CHARACTERISTICS

- In comparison with respondents in the national control group, there is greater reliance on the truck mode at the local level for both inbound and outbound shipments. Control group responses appear to have a more balanced use of modes perhaps reflecting the fact that these respondents typically are more centralized, in terms of carrier evaluation, and provide oversight for more facilities. Control group respondents also use air freight significantly more than local respondents. This reflects a clear geographic bias from out-state firms. That is, the air freight option is less accessible to out-state firms than it is for metro respondents.

- Outsourcing transportation functions, e.g., to a 3rd party logistics firm (3PL) is practiced by approximately 25% of all respondents. There is no difference between the local and control group respondents. Metro firms have a tendency to outsource to a greater degree than out-state respondents: 30% of metro firms outsource compared to 17% of out-state respondents. This reflects the more limited outsourcing options available to non-metropolitan area firms.

- Local and control group respondents utilize private fleets to the same extent. However, metro respondents tend to use private fleets to a greater degree than their out-state counterparts. An initial hypothesis was that out-state respondents would rely on private transportation as a hedge against limited or poor service by for-hire carriers. This does not appear to be the case. Unfortunately, the explanation behind this observation is beyond the available data of this study.

- Local respondent's involvement in international shipments, either inbound or outbound from their facility, is substantially below that of control group firms. At the same time there is no significant difference between the metro and out-state responses of the local firms. In general only 7-8% of shipments by local firms are international. Approximately 10% of inbound shipments to metro firms are international while 7% of shipments to out-state firms are international. There are some differences between industry groups, e.g., retail firms rely on international shipments to a much greater extent than other groups. However, the overall level of international shipments appears low. Future research should be directed toward an explanation of international flows through the region and its implications.

- All respondents indicate a high level of control for both inbound and outbound shipments. Control group firms have a tendency to rely more on the use of contracts than local firms. There are no differences between metro and out-state firms. The implication of this finding, in the context of the current research project, is that firms demonstrate an interest in controlling transportation services and therefore carrier evaluation.

- There are some differences between local and control group firms in terms of number of carriers and carrier status. Control group respondents rely on fewer total carriers for inbound shipments and more for outbound shipments. They also rely on a larger set of core carriers, i.e., that group of carriers that enjoy 80% of the firm's traffic, than local respondents. The explanation for this, however, is that control group respondents are in control of a larger number of facilities. That is, the larger number of core carriers by control group firms represent a system-wide perspective rather than the regional perspective of local respondents. The overall conclusion is that facilities will use a set of 5-10 core carriers that would carry at least 80% of the freight. The implication is that shippers would need to evaluate a relatively small number of carriers on a regular basis.

FINDINGS RELATIVE TO EVALUATION PROCESSES

- Focus group participants identified a trend toward consolidation of the carrier evaluation process to a central office. This apparently is being driven by increased consolidation among firms, merger and acquisition activity and the deployment of enterprise information systems on the firm's part as well as the carriers'. The survey data provide at least one point of verification where control group respondents are clearly more centralized than local firms in regard to carrier evaluation. Approximately 38% of local respondents indicated that carrier evaluation was performed at the local level compared to 14% of control group firms. Simply put, larger, national firms, are more likely to have a centralized carrier evaluation process. This follows centralization of such activities as

rate negotiation and processing claims. Under a centralized evaluation scenario the primary local activities include carrier selection and ordering equipment.

- There is evidence of economies of scale by centralizing the evaluation process. The average number of facilities being evaluated is significantly higher for control group firms (28), versus local respondents (11). This suggests a number of factors affecting the evaluation process. First, highly centralized firms need a systematic approach to carrier evaluation — one that can be applied to all facilities and includes metrics and evaluation criteria. That is, there may not be an opportunity for individual differences. Secondly, it is quite likely that there is overlap in the carriers being evaluated. For example, it is quite likely that a number of carriers, especially core carriers, provide service system-wide to the client firm. Further, such carriers are likely providing a great deal of cooperation in terms of the exchange of information. Out-state firms are still concerned about establishing individual relationships with carriers for fear of losing service. This concern allows for individual differences and may be a barrier to a standardized carrier evaluation process.

- Evaluation criteria used by all respondents are dominated by on-time performance and transportation cost. The observation is universal across all samples, and there are no differences between metro and out-state responses. The only substantial difference is that the on-time window for control group shippers is narrower than local respondents, i.e., 3.3 versus 5 hours. This is not to say that these are the only metrics shippers are interested in. Approximately 40% of all respondents indicate that they would like to use

accurate billing, a measure of carrier responsiveness, and evaluation of carrier feedback as metrics. Approximately 30% of the respondents indicate a desire to measure percent shipments with loss and damage and accurate billing but are unable to do so. This suggests that firms have not found the means to create all of the metrics necessary. Within the context of the current study, the implication is that the value of an evaluation system of pooled data should be able to provide benchmark metrics beyond on time delivery and cost.

- One of the initial questions, prior to gathering data, was the existence of a technological barrier to the adoption and use of pooled data for carrier evaluation. The data suggest that there is not a barrier to the use of a web-based system that could be downloaded into a simple spreadsheet or database. There are a number of factors that support this conclusion. One is that only a minority of control group firms, 26.5%, and fewer local respondents, 12%, have custom-made evaluation systems that may require special preparation of data. Looking at local respondents, approximately 22% use commercially available spreadsheets, 7 % use a commercial database product and over 57% have manual systems. The control group respondents are somewhat more systematized in that 32% use spreadsheets, 18% use a database and 23% use manual systems. The implication here is that existing "in-house" systems do not represent a significant technological barrier to the adoption of a new evaluation system. Expressed differently, the requirements for an evaluation system include compatibility with commercial spread sheets or database products and ease of implementation by those using manual systems.

- Control group firms have a tendency to use a weighted criteria more than their local counterparts. A weighted criteria allows evaluators to emphasize different criterion to reflect either different circumstances or specific objectives or needs. Local respondents (76%) do not weight individual criterion in their evaluation process. One implication is that the use of pooled data in a user friendly format could allow for more sophisticated evaluation processes. The adoption of an information database as contemplated here could serve to improve the carrier evaluation process overall.

- The majority of all respondents see value in the availability of pooled evaluation data. Approximately 90% of control group firms and 75% of local firms respond that they would find such information of value. There are no significant differences between metro and out-state respondents except that metro firms are slightly more positive.

- Any system of pooling evaluation data depends on a willingness of firms to share information. Under the assumption that the source of data would be held anonymous, firms demonstrate a general willingness to share. In general control group firms are more willing to share than local firms, 81% versus 63%, and metro area respondents are somewhat more willing than their out-state counterparts.

- There are some differences regarding the willingness to share along industry groupings. Industry groupings that appear willing to share such information include metal fabrication, retail and consumer electronics, food and chemicals. Those industry

groupings showing some reluctance for sharing include metal machine parts, grain and fertilizer manufacturers and lumber shippers.

GENERAL CONCLUSIONS

The objective of this research project was to test the feasibility of the value of a shipper panel of pooled carrier evaluation data. The concept of this system would be a web-based source of evaluation data that would conform to common metrics. Further, data could be easily downloaded to shipper systems. The conclusion is that such a panel appears feasible. The following factors support the conclusion:

- While there are some individual differences by industry groupings, firms see value in pooled carrier evaluation information and are willing to share it. Larger firms, and those controlling multiple facilities, are more likely to see value in such a system. A majority of all firms responded favorably.
- Such a system will add value from the standpoint of adding to the reliability of evaluation data as well as an opportunity to systematize and upgrade existing evaluation processes. This is especially true since many of the existing processes are manual.
- There is no technological barrier for such a system. In general, existing systems would not prevent the use of a web-based, user friendly system that could be downloaded into a spreadsheet or database. The only complication may be for those applications involving in-house systems that may not be compatible with spread sheet technology. Responses indicate that these are a minority of cases.

- The application of such a system as contemplated here need involve only six or fewer metrics. Currently on-time delivery is the dominant non-cost measure in use.

The following implementation issues need to be considered:

- Any system needs to be user friendly in the context of being web-accessible and where the data can be easily downloaded into existing systems.

- The information needs to have a geographic orientation. While the data will be carrier-specific, it must be in a geographic context to provide value for the user. The specific geographic reference depends on the user's perceptions and should be a subject for future research. For example, a lane orientation may not be practical but a region or state by state reference could be of value.

- Metrics contained in the data should go beyond on-time delivery. Additional metrics that appear important are loss and damage, accurate billing and quality of carrier information and feedback. Users should have the ability to weight the various metrics for importance.

- Larger firms, and those who have consolidated their evaluation processes, are quicker to see the value in such a system. The roll out of a shipper panel should be tested on specific industries represented by interested firms. Candidates include retailers and mass merchandisers of consumer goods including electronics, metal fabrication, food and

chemicals. The panel should also be positioned so that it appeals to facilities in urban locations.

A general conclusion of this research is that there are substantial differences in the treatment of carriers by shippers operating in metropolitan areas as opposed to out-state locations. Accessibility to transportation alternatives for more rural locations appears to be a strong enough concern as to affect the process of evaluating carriers. Metro area firms are, in general, more systematic and quantitative. Out-state shippers are more relationship based and concerned about preserving service. Further, there is evidence here that out-state shippers have less accessibility for a full range of modes. The evidence is strongest in the areas of intermodal shipments and air freight. Although this study verified its existence, the implication of this difference is beyond this study.

SUGGESTIONS FOR FURTHER RESEARCH

The feasibility of a shipper panel obviously needs to be tested in a pilot project across a number of industry segments. A prototype system needs to be designed and established on the internet, including the design of forms and/or screens used to input data. The process of gathering data appears to be a critical element in the success of such an enterprise. The process needs to be seamless for the shipper. Industry groups and trade associations should be used to promote the availability of the pilot. The test should run for at least a year with an evaluation process for users on a regular basis. Relevant variables to be tested include the necessary geographic orientation and the value of specific metric options. Possible organizations to develop such a pilot could include shipper organizations, e.g., either commodity specific groups or perhaps the National Industrial Traffic League (NITL). Alternatively, there appears to be some opportunity

for an entrepreneur to develop such a program since there is value perceived by the user. Carrier organizations appear less likely to have credibility in providing such a service. Finally, users have a natural skepticism about the role of government when such information is available.

An additional suggestion for future research is to examine the degree of collaboration between consignor and consignee when controlling shipments. Individual respondents to this study indicated a significant amount of control for both inbound and outbound shipments. Such bi-lateral control suggests a departure from normal operating practice where control follows the money. A new paradigm of carrier control could impact on the evaluation process as well as carrier selection.

Finally, a study of international flows of products through the region appears warranted. Data in the instant study suggest that international shipments represent only a small fraction of total shipments. If this is an accurate measurement, then the question arises as to why more international shipments are not flowing into and out of the region. Are the causes related to the location and type of resident industries, the nature of the region's infrastructure or simply a reflection of the normal flow of commerce?

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2. Harris InfoSource, 2057 East Aurora Road, Twinsburg, Ohio 44087-1999, HarrisInfo.com. The database used was for Minnesota Manufacturers.
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APPENDIX A

FOCUS GROUP RESULTS

Prepared by C J Petersen & Associates
1450 Stanford Avenue
St. Paul, MN 55105-2415 USA

Feasibility of a Shipper Panel to Measure Transportation Services

Analysis of Focus Group Outcomes

Chapter

1 Methodology

The basic methodology of the entire project is to conduct a series of focus groups followed by a questionnaire sent to representatives in firms who ship and receive products inside their firm. The subject of this report analyzed with the appropriate statistical methods.

DATABASE AS A TOOL

Obtain Databases

Prospective participants were identified from two databases. The first was a membership database, which was the Twin Cities Roundtable Council of Logistics Management (CLM) Membership Roster. The second was the Harris InfoSource Directory.

Each database has its own particular features and limitations. For example, the CLM Roster is a membership database whose participating companies is a subset of the overall shipping community. The benefit of using the roster is its identification of contacts within larger, well-known firms that are active in shipping and receiving goods in Minnesota. In addition, it lists logistics and transportation contact names, titles and telephone numbers. Harris InfoSource compiled the second database, a state manufacturer's directory updated annually. Harris InfoSource surveys American firms annually and develops the directory from those responses. It includes company name, address, telephone numbers, SIC Codes, number of employees, annual revenue, type of business, the names of executives in the firm. The benefit of using the database is its all-encompassing profile of businesses by type and size. Its limitation is its reliance on responding firms to provide accurate data in response to a survey in a timely fashion.

Using these two databases together, we were able to counter the weaknesses of one with the strengths of the other.

Qualify Database

The two databases were screened separately because data points were not the same. One of the findings from previous studies conducted by the research team was that smaller firms generally do not have a logistics or transportation specialist. In this case, a small firm definition was one with less than 100 employees. In addition, this study was focusing on manufacturers and other shippers, not on carriers or service providers. The Harris InfoSource database was screened:

- To eliminate firms with less than 100 employees,
- To eliminate firms that are freight haulers, service or retail,
- To segment by Mn/DOT District.

The CLM Roster was screened:

To eliminate firms who were represented on the Minnesota Freight Advisory Task Force, since they directed Mn/DOT to conduct the study,
To eliminate firms that provide consulting services or are freight haulers,
To segment by Mn/DOT District.

At the point that the two databases had been screened, they were merged together.

A third database was used to assure representation from the agricultural shipping community, which was the Minnesota Grain and Feed Association Roster. The Executive Director provided the names, addresses, and telephone numbers of members designated as larger shippers of grain and other products. The agri-business firms' contact information was merged into the larger database.

Locations

The next step was to analyze the database to determine where to hold the Focus Group within each Mn/DOT District around the state. The exception was the Metro District where two focus groups were held. The specific city chosen for each focus group was chosen based on the highest concentration of likely participants within a 75-mile radius of the location, and is indicated in the table below. The facilities selected were located in easy to access public locations.

TABLE 1:1
FOCUS GROUP LOCATIONS & NUMBER OF PARTICIPANTS

Mn/DOT District	Minnesota Location	Expected Number of Participants	Actual Number of Participants
4	Detroit Lakes	12	4
1	Duluth	11	5
7	Mankato	14	8
Metro	Minneapolis	10	7
Metro	Minneapolis	12	5
2	[1]Park Rapids	10	0
6	Rochester	10	8
3	St. Cloud	12	6
8	[2]Willmar	7	3
Expected and Actual Totals		98	46

Notes:
[1] Park Rapids' focus group was cancelled, since participants indicated they were unable or uninterested in attending.
[2] Willmar's focus group was reduced in size due to a snow and ice storm. Three who were unable to attend agreed to complete survey after the meeting.

Focus groups were conducted in various locations throughout the state and, in the name of efficiency, contained a mixture of shippers using various modes. The alternate locations allowed us to test for possible geographical differences.

There were 98 participants recruited, but approximately half attended the focus group meetings. Some of those who did not participate indicated at the time that they were called to remind them of the meeting that they would not attend for a variety of reasons. These included:

- End of the month, end of the quarter for shipping, unable to come.
- Weather related, unable to travel roads.
- Staffing shortage for that particular day, and they were required to remain to get the work done.
- Upon receipt of the confirmation letter explaining in more detail the topic matter, they realized that they did not have a strong interest in the topic.

Select Potential Focus Group Members

The tasks of the selection process included:

- Developing a Screener to Recruit Participants (See Appendix)
- Recruiting Participants
- Confirming Participation with a Letter (See Appendix)
- Completing a Follow up Phone Call within 3 Days of the Focus Group

A professional focus group recruiter contacted and qualified potential representatives by telephone three to five weeks before each focus group. Each qualified representative was offered an incentive of $50 to participate. Potential focus group participants were selected and qualified according to a profile, which included:

1. Does the individual have responsibility for logistics, transportation or traffic in the firm?
2. Does the firm control the selection of carriers and routing for traffic originating or terminating in the state?
3. A firm's number and volume of shipments, determined by mode.
4. The regularity of shipments per week based on the modes that they use.

Once the recruiter had recruited between 10 and 15 firm representatives to each focus group, she created a full list of the participants with their updated titles, addresses, telephone and fax numbers. Upon receipt of this information, a confirmation letter was sent to each participant by fax along with directions to each meeting site. Two to three days before each focus group a telephone call was made to the participants to confirm their participation.

Finalize Discussion Guide

The Discussion Guide for these focus groups was developed collaboratively by the Mn/DOT Office of Freight, Rail & Waterways, Dr. Frederick Beier, lead researcher and C J Petersen & Associates. The same discussion guide was used to generate discussion and thoughts from focus group participants at all of the focus group meetings.

The intent is to have consistency in the questions, resulting in our ability to discern differences and similarities in the focus groups held throughout Minnesota. The purpose of using the same discussion guide was to:

1. Elicit responses from participants on their perspectives and experiences as shippers in urban and rural Minnesota within a short period, 1-1.5 hours.
2. Uncover differing perspectives regarding carrier selection and evaluation.
3. Test the idea of a Shipper Panel with logistics and transportation managers from around the state and the Twin Cities Metro Area.
4. Generate ideas on the role of a Shipper Panel and its usefulness to them as shippers.
5. Provide information that guided development of a quantitative survey during spring 2001.

Meeting Logistics

At each meeting, the participants were welcomed and offered refreshments after signing the guest registration. During the course of the focus group meeting, all of the participants and the observers introduced themselves. Subsequently, a tape recorder was used to record the discussion, supplemented at the larger focus group meetings by an assistant who took notes using a laptop computer.

After each focus group, each attendee received the $50 cash "thank you".

Chapter

2 Analysis of Focus Group Outcomes

Profile of Attendees

Overall, the focus groups were balanced in their representation of firms who were smaller businesses and larger businesses by employee count. Forty-five percent of the participating firms had less than 300 employees and 53 percent of the participating firms had greater than 300 employees.

TABLE 2:1

Size of Participating Firms by Location
Feasibility of a Shipper Panel to measure Transportation Services
February-April 2001

Focus Group Location	Less than 100	100-300	>300	No Response	Total by Focus Group
Detroit Lakes	0	4	0	0	4
Duluth	1	2	2	0	5
Mankato	1	4	3	0	8
3-15-01 Metro	0	1	6	0	7
3-16-01 Metro	0	1	3	1	5
Park Rapids	0	0	0	0	0
Rochester	0	0	8	0	8
[1]Willmar	1	2	3	0	6
St. Cloud	2	3	1	0	6
Actual Total	5	17	26	1	49
Percentage of Total Participants	10%	35%	53%	2%	100%

Note:

[1]Willmar: three individuals recruited agreed to respond to the "Pre-Focus Group Survey" although they did not attend the focus group meeting due to weather thus increasing the total number of reponses to 6.

There was a diversity of products represented across the state for the focus groups, however at certain focus groups; there was higher representation of firms for agriculturally related products. Those products included harvested, unprocessed grains as well as finished food products for retail use.

TABLE 2:2

Products Shipped by Focus Group Firms
Feasibility of a Shipper Panel to measure Transportation Services
February-April 2001

Focus Group Location	Ag Product	Consumer Goods	Electronics	Food	Machinery / Equipment	Metals	Miscellaneous	Paper	No Answer	Total by Focus Group
Detroit Lakes	0	1	0	0	2	1	0	0	0	4
Duluth	0	0	0	0	0	0	0	3	2	0
Mankato	0	0	0	4	1	1	0	1	1	6
3-16-01Metro	0	0	1	0	0	1	1	0	2	3
3-15-01Metro	0	2	0	2	2	0	1	0	0	7
Park Rapids	0	0	0	0	0	0	0	0	0	0
St. Cloud	0	1	0	0	3	0	2	0	0	6
Rochester	0	2	1	1	4	0	0	0	0	8
Willmar	2	1	0	1	1	0	0	0	1	5
Total Count	2	7	2	8	13	3	4	4	6	39
Percentage of Total	5%	18%	5%	21%	33%	8%	10%	10%	15%	100%

Note:
[1]Willmar: three individuals recruited agreed to respond to the "Pre-Focus Group Survey" although they did not attend the focus group meeting due to weather thus increasing the total number of reponses to 6.

Attendee Responses

Focus group outcomes are an indicator of the overall trend in the marketplace, since the number of respondents is small with 46 participants from across the state. However, there were some variances between those from urban and rural firms or divisions, which are "highlighted" below.

Common Metrics

Key Metro Minneapolis and St. Paul Responses

The following is an unranked list of observations made by the majority of the participants in the urban groups:

- Firms are likely to have negotiated favorable freight rates and reduced the number of carriers they use by design and intent during the past few years.
- Firms are interested in attaching a cost to carrier or system failures, but they have not been able to do so at this point. For others, they have customers who penalize them financially for late or missed deliveries by making deductions from their invoices. Some firms respond by proactive responses by asking the carrier to notify them when the delivery will be late.
- These firms talk about "Managing their Freight by Exception".
- They select and evaluate carriers and apply more weight to service at 60 percent than cost, weighted at 40 percent.
- They would like to have customer comments, but the data collection system does not currently accommodate them.
- They are interested in using technology as much as possible to manage the data on carrier, logistics and supply chain management. This includes using either carrier or 3PL web sites from which the carrier(s) will update the data on tracking, tracing, and delivery details on the shipments.
- These firms see themselves as having several options when it comes to carrier selection. If one is unable to meet their stated criteria or meet the metrics established then they will find another carrier who is able and will meet the established metrics.

- The motor carrier industry is the mode most likely to be subject to a wide range of metrics. The firms who still use rail service bemoan their inability to deliver equipment and shipments when promised, lost equipment, and significant damage to products. One shipper said, "Rail is economic, but not reliable," this statement seems to summarize (politely) what the other shipper representatives were thinking.

Specific Examples of Metrics' for Metro Respondents
The majority use a report card based on selected criteria to assure that continuous improvements are occurring. They data summarize into a report card for monthly, quarterly or semi-annual meetings with individual carriers.

Specific examples used by these shippers include:

- On-time receipt, pick-up and delivery are measured to within one hour of the scheduled times for appointments for some, for others it is measured to the minute. The range of time allowed seems to be industry driven.
- Carrier must make equipment available to them and take all loads that the shipper gives them, if the carrier refuses then they will shift the cargo to another carrier.
- Some firms are transit time oriented; however, this factor is not important for all firms. It is important to certain industries, such as construction, processed foods, frozen foods, and medical technology.
- Competitive pricing.
- Agreement to terms and conditions specified by shipper regarding liability, insurance and safety ratings provided by DOT at their web site.

Key Rural Responses
The primary mode of transportation for freight in rural Minnesota for the representatives of firms participating in these focus groups is motor carriage. There were few firms who rely on railroads for transportation services; however, it was not the shipper who measured the carrier. Instead, the railroad measures the shipper's ability to turn the equipment within the specified time limits allowed in their contract. The firms who use rail service have a rail spur on-site and ship bulk raw materials or semi-processed products to and from their locations.

For those firms who are subsidiaries, branches or satellite facilities of larger firms, the review process occurs at corporate headquarters. In the event that the branch has a unique situation, then there is local autonomy at the branch if they are able to obtain service at an economical rate level.

In every focus group, participants mentioned how important their relationship was with their carriers. These participants see the carrier as a partner who they talk to daily to resolve problems and issues, some the carrier creates, some the shipper creates. The carrier is important in developing a good relationship with their customers. They mentioned that there are a limited number of motor carriers to choose from in some geographic areas.

There were relatively few formal measurement programs in place, instead it was the day-to-day interaction and the carrier's response to problems that counted for more rather than less of the carrier review process. If a carrier review process is in place, the essential factors are driver and equipment reliability and cargo delivered as expected, and competitive pricing.

Specific Examples of Metrics' for Rural Respondents
The following is an unranked list of observations made by the majority of the participants in the groups:

- Trucks need to be on time and deliver as promised rather than have the freight held over.
- Equipment availability, trailers dropped off for later loading.
- Meet just in time delivery schedules specified for the carrier.
- Pricing needs to be reasonable based on the product that they are shipping, in addition they would like the freight rates to make up for their distance from the market. However, reliability is equally important.
- Carrier and equipment safety.
- Driver caliber, including cleanliness and politeness.
- Carrier available for year-round service.
- Transit times as promised
- Meet USDOT Safety ratings and insurance coverage.
- Carrier is financially sound.

Detroit Lakes, MN

These firms work with regional trucking firms who are usually family owned firms. They seek out quality firms who have clean cut drivers. They look for image of the carrier and the driver, the truckers and the drivers represent them to the customer. These firms do not conduct a formal carrier review, although one did request monthly reports from the carriers.

Pricing is not the first measurement of the carriers, if they give good service and they are dependable as a firm. One firm mentioned that it provides them with a competitive edge and helps them increase sales to their customers with competitive pricing. However, some firms have more difficulty than others negotiating rates with carriers. This is due to either their location or the products that they ship.

In the Detroit Lakes area, there are agri-business and farm shipments that occur in the early and later fall harvest season, and again at Christmas time due to harvests, specifically potatoes in this area. Thus, there were comments regarding availability of carriers year-round.

Duluth, MN

Representatives from firms with multiple shipping locations advised that they had local input into central decision-making on carrier selection, routing, metrics, and general decision-making. The satellite collects data then sends it to a corporate logistics or transportation office, not always in Minnesota. Within the past few years, three major shippers in the Duluth area were bought out, consolidated or restructured and their transportation functions moved to Kansas City, Minneapolis, or another city.

All of the participating firms do annual reviews with their carriers to review the metrics established for their carriers with the exception of one who does informal reviews. This firm appeared to be much more price conscious than service conscious.

Mankato, MN

One of the shippers indicated that there is not a perfect carrier, instead it is important how the carrier responds to the problems they encounter. It is about developing a relationship with the carrier over time, however their corporate offices used metrics to evaluate the carriers. These focus group representatives collected the data to report to the division or office that analyzed the data.

Rochester, MN

This group of participants was very interested in responding to the questions and exchanging views and information amongst themselves during and after the focus group about transportation and metrics. They were engaged in a discussion on how they use the report cards generated from carrier evaluations.

Two firm representatives mentioned that from the formal report cards, they analyzed and measured:

- Supplier performance, quality and productivity, a threshold of expectations from the carriers.
- Zero tolerance for other than on time and accuracy of shipments.
- Establishes service criteria in writing and provides "evaluative points" based on factors such as service, reliability, damage claims, and paves the way for recognition on a regular basis.

Six firms' representatives mentioned they have an informal carrier measurement program in place. The carriers are:

- Graded against each other and compared on services.
- Formally reviewed on price on a regularly scheduled basis.
- There is a graph depicting the service status of the carriers, but problems are resolved through daily contact.

St. Cloud, MN

This group emphasized the increasing need to meet JIT delivery for a growing mix of customers including foreign customers (i.e. at the US ocean port of loading to meet sailing schedules), lumber yards and distribution centers, and wholesale distribution. However, the participants do not have a data collection system in place, customer satisfaction is based on hands-on operating experiences with their carriers and private fleets. If the customer is unhappy, the carrier or driver gets a call.

Willmar, MN

The shipper representatives in this group were agri-business, harvested crops, processed food or equipment. This group is very active in international shipping. Two of the three use specialized equipment including flat bed trailers, drop trailers, and refrigerated trailers or containers.

One shipper discussed the details of the penalties of $11,000 per incident, plus $1,000 per hour lump sum fee they incur from the carrier if they:

- Do not load a minimum of 110 rail cars, and
- Meet the maximum load time of 15 hours.

Data: Easily captured and reported?

Key Metro Minneapolis and St. Paul Responses
Although there are common elements to each respondent's carrier measurement program, there is not one evaluation or measurement system common to the participating respondents. Each firm has their own unique measurement scale and period of time for which data is collected.

The metro respondents were optimistic about their ability to report the data that they had collected. However, there is little consistency in the data collection procedures and the types of software programs used; they indicated concern about the usefulness of the data once it was reported to Mn/DOT for sorting and analysis. One person made a comment that summarizes the sentiment of most of the participants: "the information (we collect) can be skewed." Another stated that "Benchmarking is beneficial but may not be worth the expense for creating the database."

Specific comments made related to shipper data collection efforts were:

- The data collection programs mentioned included proprietary Microsoft Access systems, generic Excel spreadsheets, proprietary systems designed specifically for some of the firms, and a manual file system.
- These firms will not share data related to sales volumes, any data that might be used by their competitors, and carrier loss or claims ratio information.
- In some cases, these firms indicated that they could provide on-time performance data.

Key Rural Responses
The following is an unranked list of observations made by the majority of the participants in the rural groups. Those that do maintain a formal system record retain information on:

- On-time arrivals and departures of the trucks.
- On-time deliveries to the customer.
- Equipment safety.
- Accurate freight bills.
- Damage and late delivery claims.
- Pricing by carrier.

Detroit Lakes, MN
There is limited data collection among many of the rural shippers participating in the focus groups. Although these rural shippers have "metrics" that they use to evaluate their carriers, they use an informal system rather than formal evaluation procedures rather than report cards or formal evaluations. They will also ask their core carriers to provide monthly reports related to their on-time performance.

Duluth, MN
Two of six participants have a data record for their formal evaluations with carriers. The others admitted they could improve in record keeping. The two who do collect data use Excel and Lotus Notes.

Mankato, MN
This group of shippers has carrier pricing, capacity and lanes, but limited access to the results of the measurements and metrics. This information is provided directly to the corporate office for review or they rely on the carrier to report the information about on-time pick-ups and deliveries. The shippers use hard copy reports from carriers, and Excel spreadsheets to develop databases on the carriers

Rochester, MN
Unranked points made by this group include:

- Reporting is confidential between the carrier and shipper; they generally did not feel comfortable sharing any data unless it is "generics".
- Seven of the eight participants use "steel case" data storage, they do not use any software programs to analyze and review the data and the data is shared in the company with controllers, sales, operations or financial managers. One firm uses an Excel spreadsheet and moving the data to Manugistics with EDI and Internet where their carriers will update it.

St. Cloud, MN

None of the shippers in this group maintains a database on the carriers that they use electronically, with the exception of one firm that maintains an extensive pricing database.

Willmar, MN

These three firms use a manual system to collect carrier data. One said that the data collection is much more ad hoc and that the principal method of corrective action comes from the traffic manager. He indicated that it was the "wrath of Larry" by means of a telephone call to the carrier to correct the problem.

They will also use the internet to collect data from the carriers' web sites including transit times, delivery dates, claims, etc. Once they download the data, they will customize it.

Conclusions on Usefulness of Data

Key Metro Minneapolis and St. Paul Responses
Most of these shippers consolidate data from other locations around the state, region and nation into a database in their offices. They then share the information amongst a wide range of personnel inside their firms, which might include logistics, purchasing, scheduling, marketing, vendors, and distribution. So if there were a database, they would likely use it to supplement the information they are already collecting.

Specific data that these shippers indicated would be useful to them in a database:

- Identification of the carriers who have a physical presence in Minnesota and serve Minnesota to and from the region and the nation, what is there "real" service area?
- Types of equipment carriers have available for shippers to use.
- Listing of carriers' customers.
- City pairs that motor carriers serve.
- Make sure the database is user friendly.

Key Rural Responses
In all of the focus groups, there was a general concern that the carriers would not be evaluated fairly and that the data would not be consistent from firm to firm. In addition, there is concern that the database will be weak because there is not a consistent shipper database to draw from. Each shipper develops a unique carrier measurement and the shippers' operations are so diverse that they would have difficulty in making evaluations between modes and carriers.

If they do provide data, they stated that they need to be able to clearly articulate "what's in it for me" to their firm when the data has been aggregated. Some data elements mentioned in the groups that these rural representatives want to see in the database:

- Rail carriers' equipment, transit time records, and equipment safety ratings.
- Information about "DOT COM" services.
- Individual driver database on their safety records.
- Percentage of on-time deliveries.
- Territory and lanes of the carriers.
- Carrier equipment availability.
- Specialty carriers and their niche operations.
- State evaluation of carrier safety.
- Average freight rates for their products.
- Transit times incurred by lane.
- Percentage of rates that include deadhead.
- Pricing benchmarked especially for special surcharges such as fuel, deadhead, equipment related surcharges.

The statements recorded for each of the focus groups provides detailed insights into their thinking on sharing data and aggregating it into a larger database.

<u>Detroit Lakes, MN</u>
According to one shipper, "it comes down to you and your firm's evaluation of service and price." In general, these firms do not have data that they will be able to report consistently. The level of reporting is generally ad hoc, for example it might mean reporting changes with the carrier and the awards they receive to management. Alternatively, it might mean dealing directly with carrier when the customer reports a problem on the delivery.

There was generally a level of reluctance amongst this group to participate in data sharing either because they do not have the data to share or because they are not computer users. If they were to participate, they would want an email sent to them with a survey asking them to fill in the blanks on particular carrier data that they would complete and return.

Duluth, MN

There is general skepticism about their shipping colleagues ability to grade carriers consistently. They fear that "the people who have a chip on their shoulders will grade the carriers; the carriers won't receive accolades." One stated that the best resources for information about carriers are the transportation periodicals.

Another concern mentioned by this group is that in order to have a common database the shippers need a common measurement system with common data elements. This statement was supplemented by another when a shipper said, "What works for one product won't work for another." These firms agreed it might be useful to have a carrier list with the names of firms who actually have service in Minnesota.

Mankato, MN

This group echoed the same concerns as the other focus groups when the implementation of a database came up about inconsistencies between the data collection methods of shippers. However, there was strong interest in this focus group in a database. They stated they would use the database and suggested components for it:

- On-time delivery data.
- Territory and lanes of the carriers.
- Carrier equipment availability.
- Specialty carriers and their niche operations.

This group also suggested that the database be a place where shippers could discuss load sharing. This group is very concerned about the additional costs associated with carrier "deadhead" miles when they come to Mankato. This could result in data sharing for companies who have partial loads.

Another idea that surfaced was to have an electronic routing guide for carriers that they could use rather than an off-the-shelf variety.

Rochester, MN

There was general agreement in this focus group on several points. In general, one participant would make a statement and the other participants would agree, those statements are recorded here:

- "It would be nice to know how the state evaluates the carriers' safety." This includes the frequency of safety checks and evaluations of driver performance.
- "I'd like to know what other shippers think of carriers," perhaps through a survey that would provide data and rank the carriers. However, they are interested only if the sample size is large enough to provide a reliable analysis.

St. Cloud, MN

This group was especially concerned that the carrier be fairly profiled in a database. This group already uses the Mn/DOT and USDOT web sites to check carrier safety and insurance records. They are unsure of the benefits an additional database on carriers would be to them; they were very skeptical about its accuracy and consistency. If there were a database, they would like to see information on:

- Carrier availability in their area and the cities that they serve.
- Rail carriers' equipment, transit time records, and equipment safety ratings.
- Information about "DOT COM" services.
- Individual driver database on their safety records.

Willmar, MN

One firm mentioned that there are rules governing the flow of data in the food processing industries. He said, "there is not a way for us to share in our industry except through a third-party who can collect and negotiate on our behalf."

All three firms indicated that they are willing to share data if they could justify "what's in it for me" to the company. Information that this group would find useful includes:

- Average freight rates for their products.
- Traffic lanes by carrier.

- Transit times incurred by lane.
- Percentage of rates that include deadhead.
- Pricing benchmarked especially for special surcharges such as fuel, deadhead, equipment related surcharges.

Consumer Panel Organized

Key Metro Minneapolis and St. Paul Responses
There was a positive response to the suggestion of forming a shipper panel at the state level in Minnesota. One person summarized their thoughts and others by saying that the "DOT role should be on the need for infrastructure, impact on economy, and costs involved." In addition, a few mentioned direct benefits of a panel such as a way to collaborate and share information and put efficiency back in the process.

There were several comments that they made to make it interesting for them to participate in such a panel including:

- Have flexibility for participation by conference call.
- Consider dividing the panel by type of industry. Have potential for specific modal concentrations, such as airfreight, rail or refrigerated haulage.
- Need for a specific agenda that lets participants know when a topic will be of interest to them.
- Clear direction for the panel that will have influence, one person stated "NO TO JUST SITTING AROUND AND TALKING; do not want to spin my wheels. Too much to do."
- There is a need to educate the public on needs and importance of transportation.
- Address what we consider specific issues, such as setting up better rest areas for motor carriers and better intermodal facilities.
- Use the web or Internet for meeting agendas and minutes.

Key Rural Responses
The following is an unranked list of observations made by the majority of the participants in the rural groups.

- Hold the meetings in locations easy for shippers to reach around the state.
- Focus on regulatory issues and changes.
- Carrier performance is best left to the shipper and the carrier.
- Representation by both shippers and carriers on the panel.
- Work with area transportation clubs, such as the Mid Central Minnesota Traffic Club, St. Cloud - kick-off meeting 9/27/01 or the Mankato club.
- Clearly articulate the answer to "what's in it for me the shipper?"

Detroit Lakes, MN
There was not a strong interest in a shipper panel amongst this group, one person said, "it would be all right" to have a meeting of shippers. If the meeting was to occur then it should be in a city relatively close to where they are located, such as Fargo-Moorhead.

Duluth, MN
This group was interested in a panel if the focus would be on regulatory changes and issues; two examples cited were the Hours of Service restrictions for drivers and the other was the loading-bracing regulatory change. According to one participant (others agreed), carrier performance is best left to the shipper and the carrier.

Mankato, MN
This group was more interested in a panel that included shippers and carriers. One participant stated that "one without the other is not comprehensive," and the others agreed. Once that was on the table, then the group indicated that the panel should focus on the infrastructure, bypasses and safety of highways serving their area.

For some shippers, they would likely not participate because maintaining their business in an economy that is slow is more of a concern than the highway system.

Rochester, MN
This group expressed a strong interest in meeting, at the very least, in their region to discuss transportation issues and concerns. It was the first opportunity for some firm representatives to meet and discuss transportation with industry colleagues; they said they were interested and hungry for information. They felt that this was an exciting opportunity for them to meet and discuss something topical to them.

As a group, it seemed unlikely for them to be able to leave their offices for a meeting further away than Rochester. It may be an option to teleconference in the future.

St. Cloud, MN

This group would rather have the Mid Central Minnesota Traffic Club, St. Cloud be the focus for a discussion on carriers than a statewide panel. Their kick-off meeting is 9/27/01.

Willmar, MN

This group wants to Mn/DOT to state clearly the purposes and goals of a shipper panel before they will participate. They are not interested in just another meeting.

Additional Comments

Key Metro Minneapolis and St. Paul Responses
The following is an unranked list of observations made by the majority of the participants in the urban groups:

- DOT database is not easy to filter for essential information.
- These firms are developing what is called "Strategic Warehousing" to be close to their customers or for better service for their customers. For example, one firm has opened a warehouse in Reno, NV to be closer to their West Coast customers, another has expanded its operations in KY instead of MN. The firm who expanded to KY said that they had a hard time getting to the airport due to congestion and saw the expansion as a way to give themselves options.
- These firms focus on keeping their inventories low or "down".
- Encourage Mn/DOT to do whatever possible to offset the geographical negative of being in Minnesota compared to Memphis or some other more central location.

Key Rural Responses
The comments that follow here were made in all of the focus groups held in the rural locations.

- The majority of rural shippers mentioned cell phones as the way that they monitor their shipment status with carriers, both private and contract fleets.
- Rural firms mentioned that they have concerns about being competitive, especially for freight costs, and closer to their customers. The group agreed with the comment of one person, "When you're competing against Freight Dollars to the end product, it's very serious." This motivates the firms to examine their transportation cost structure and the possibility of expansion at or near their customers or in major transportation hubs. Locations that they cited included the Tulsa, OK, Gulf of Mexico, Kansas City, KS, Chicago, IL and McAllen, TX. Another firm said that proximity to airfreight services would be a factor for expansion of their manufacturing firm. On the other hand, there is loyalty. For one firm who was faced with the choice about rebuilding after a fire in the same location or moving to another state, they decided that they would stay. In part, it was because the carrier does provide competitive rates.
- The carrier is asked to be increasingly flexible while reducing transit times. One participant provided an example; they asked their carrier to reduce transit time from 3 to 2 days. In addition, carriers are asked to drop equipment, without charging extra fees, instead of a live load, since the shipper needs more flexibility in planning its loading and the "glut" at the end of the month. There is a general concern about the carriers and their ability to meet the needs of manufacturers in their quest for reduced inventories, and management systems such as ERP that do not function as expected prior to installation.
- There is limited use of 3PLs in the rural shipping community according to the participants in the focus groups. 3PL activities range from auditing freight bills to carrier selection and evaluation based on mutually understood criteria that may or may not be stated explicitly.

International Markets: The Rochester, St. Cloud and Willmar focus groups discussed the importance of international suppliers and customers to them. They believe that expansion in shipping will be to international markets. Shipping internationally heightened their concern for timely equipment delivery and price competitive freight rates. They commented on how the shipment must meet the vessel or plane for which it is scheduled. Shippers in all three focus groups mentioned that the motor carriers who delivered the international equipment for loading did not seem to be concerned about meeting the shipper's scheduling needs. They found themselves calling the drayage company repeatedly to have them show up according to the booked schedule unless the firm was large and could negotiate with the carrier(s) for service and rates.

<u>Detroit Lakes, MN</u>

- One shipper said and others agreed "Larger companies will never say no, they always come and get what you got, but they may not deliver on time." Another reinforced this statement by saying, "Once the driver signs for the goods and leaves the facility, the shipper doesn't have control."
- These firms are using "core" carriers, because they have found that there is higher service from dedicated carriers with regional operations and have offices in or around their firms' facilities. They have found that

some national motor carriers will pick up the loads at their facilities then park them until they have a full load to deliver to a particular destination, adding days to the promised transit time.

- These individuals are interested in viewing a web site or newsletter that would allow them to easily identify if the carrier is in compliance with DOT standards, verify their insurance, Minnesota carrier registration.
- Some rural shippers avoid carriers who use intermodal rail service for deliveries, since intermodal involves additional handling and increases potential damage to the cargo.
- These firms mentioned the importance of international trade to their organizations, from both an import and an export viewpoint. One Detroit Lakes firm has a small operation in China who ships product to other countries.
- These firms recognized that the manufacturer has a large role in assuring that the carrier can load and ship product on a timely basis. If the firm cannot do that, then the carrier is under pressure to help the shipper meet deadlines.

Duluth, MN

- Carrier safety data has been "hidden"; they would like to have it more visible for both rail and motor carriers.
- They want reliable data available from government sponsored web sites. Some have found that the USDOT web site has incorrect "ratings" on carriers they were evaluating.
- These firms use the Internet to search for information regarding carrier size, equipment, financial status, and safety record.
- These firms indicated that they are often subject to financial penalties for late or missed delivery times.
- The transportation or logistics manager is not always in charge of conducting carrier selection. That is true, but in some firms, it is senior management or the owners who select the carriers and evaluate them.
- *International shipping*: There is concern about the limited number of American flag carriers, which may be specified, in international contracts for ocean carriage.
- Rail is not as reliable as truck for moving products due to unpredictable transit times and increased probability for damage. In addition, the rail system has limited flexibility.

Mankato, MN

- *Service failures*: This group discussed the cost of service failures at some length. Costs are tracked when they are tangible, such as penalties or crane charges, and damage/loss claims. In some cases, they are deducted from the carrier's bill if it was their fault. In other cases, it is a deduction from the bottom line. As a group, they responded that they did not track "opportunity costs."
- *Expansion and Transportation Costs*: Two firms' representatives indicated that they have moved part of their production due to the cost of transportation to ship finished products to their customers. The others indicated that the costs had not affected them, but that they are concerned about their carriers continuing ability to serve them at a reasonable cost. The access to Mankato is by 2-lane highways, that are slower than a 4-lane, and drivers are paid "by the mile" not the time to pick-up and load.

Rochester, MN

International shipping is critical to these focus group participants, for example, one firm said that the volume of shipping will increase in the next year by 20 to 40 containers per week.

St. Cloud, MN

This group was more interested in a database about Mn/DOT and its activities, including:

- Road construction: where it occurs, when it will occur, and any detours established, duration in "real time" for their area.
- Road restrictions: first on detours, then the winter road restrictions-when they apply and duration.
- A weather database: snow, sleet, ice or other conditions affecting the roads, especially important for private fleet management.
- Permitting for overweight and size: currently the internet is useful for requesting permits for MN, however, they would also like to have access to on-line permitting with other states.

Willmar, MN

- One shipper indicated that they do not maintain a large inventory, which places pressure on the carrier to perform and gives the shipper little room for maneuverability.
- One of the three firms indicated that would move their production to another location to have better access to international markets. In other words to be closer to reliable partner carriers who can get their goods to the international port or airport. The other two firms are tied to the locale because of access to raw materials for shipping and processing.

Chapter

3 Summarizing Next Steps

CHALLENGES

Rural and Urban

The rural and urban respondents have different needs and wants in their day to day operations. Those needs and wants are as much dictated by the products shipped and the modes used as by where they are located.

There appear to be inequalities in rural and urban access to information, education and networking opportunities. They must make additional efforts to participate in discussions on transportation and information sharing than their urban counterparts. In addition, it appears that the rural participants do not have access to a wide range of carrier services at economical prices in comparisons to their urban counterparts.

Freight Database

The question becomes, how can a database serve the diversity of needs across the state and would a shipper panel be useful?

- These urban shippers support the formation of both a shipper panel and development of a database, which they would generally support by populating it with data elements that they have collected.
- These rural shippers do not have the data with which to populate a database, and see Mn/DOT as a regulatory and educational entity. Rural shippers generally would prefer Mn/DOT involvement when it had to do with safety, insurance and equipment integrity; not management of a carrier database that would potentially rank them on their service. They have developed relationships with their carriers to assure long-term service that satisfies the needs of their company and their customers.

Shipper's Panel

The next challenge will be maintaining an up to date contact at firms, both rural and urban, of the transportation decision-makers. This is an even greater challenge when firms consolidate their transportation decision-making into one office in Minnesota or in another state. This is critical to creating and recruiting an effective shipper's panel.

It will be optimal to have participation from urban and rural shipping representatives, however a traditional meeting at a central location may not meet the needs of the shipping community. It will be critical to identify clear goals and purposes of the shipping panel and the appropriate role that Mn/DOT will play as the initiator and probable facilitator of the group. This may mean that there will be a need for shipper participation in designing the panel, and recruiting replacements as shipper representatives change positions or responsibilities.

It will be important to consider whether the panel should have carrier and shipper participation. There was some discussion that a panel without carriers will only be able to address a portion of the shipping equation along with other industry representation.

OPPORTUNITIES

There was not a difference between urban and rural reactions to the focus groups. The overwhelming majority of the participants were pleased to have been brought together to have this discussion and the opportunity to express their views. For some, it was the first opportunity they had ever had to sit down with their shipping colleagues to discuss carriers and evaluating carriers. They enjoyed the detailed discussions about carriers and carrier evaluation methods. It

was a way for these participants to conduct an informal benchmarking session, exchange information and ideas.

APPENDIX B

FOCUS GROUP SURVEY

PRE-FOCUS GROUP SURVEY
DATE OF FOCUS GROUP: _____ LOCATION: _____

WELCOME TO A DISCUSSION ON TRANSPORTATION. PLEASE TAKE A MOMENT TO COMPLETE THIS SURVEY BEFORE THE FOCUS GROUPS BEGIN. All information provided will be considered confidential and not associated with a particular firm or individual.

1. How many full time employees does your company have at the present time? Please check the one applicable to your firm.
   a. ___ under 100
   b. ___ 100-300
   c. ___ OVER 300

2. What types of products do you ship? Please list:

_____

The following questions related to you decisions regarding your selection of the mode and the carrier for shipments to and from your facilities that you control (i.e. you pay the freight bill).

3. How do you move your products? **Check all those that apply.**
   a. ____Express package service
   b. ____Less than truckload motor carrier
   c. ____Full trailer/container motor carrier
   d. ____Intermodal (i.e. trailer/container)
   e. ____Rail (carload)
   f. ____Air freight
   g. ____Barge or Vessel

4. How do you decide which mode to use?

Criteria		**Circle A Number To Rank Importance**				
		1=least		**3=average**		**5=most**
a.	Type of product being shipped, i.e. raw materials, finished product or hazardous materials.	1	2	3	4	5
b.	Transit time	1	2	3	4	5
c.	Multiple Carrier Availability	1	2	3	4	5
d.	Price	1	2	3	4	5
e.	Equipment availability	1	2	3	4	5
f.	Reliability	1	2	3	4	5
g.	Needs of Ship to or Consignee	1	2	3	4	5
h.	Other, please list:	1	2	3	4	5

Please continue to next page, thank you.

How do you decide which carrier to use?

Decision-Making Criteria		Circle A Number To Rank Importance				
		1=least		3=average		5=most
a.	Price	1	2	3	4	5
b.	Carrier Safety Ranking	1	2	3	4	5
c.	Transit Time Promised	1	2	3	4	5
d.	Carrier Reliability for Pick-up/Delivery	1	2	3	4	5
e.	Customer Service	1	2	3	4	5
f.	Equipment Availability	1	2	3	4	5
g.	Carrier Flexibility	1	2	3	4	5
h.	Tracing Information Provided	1	2	3	4	5
i.	Other:	1	2	3	4	5

6. Does your company have a core carrier program in place?
   ____Yes ____No

7. Does your company have a formal carrier evaluation program?
   ____Yes, if yes please answer 7.a.
   ____No, if no please proceed to 8.

7.a. **Evaluation Criteria**		Circle A Number To Rank Importance				
		1=least		3=average		5=most
a.	On-time carrier performance	1	2	3	4	5
b.	Transportation (freight) cost	1	2	3	4	5
c.	Inventory Cost	1	2	3	4	5
d.	Customer Satisfaction	1	2	3	4	5
e.	Other:	1	2	3	4	5

8. Does your company use a third party logistics service?
   ____Yes
   ____ No (Go to question 10.)

9. What types of duties does this service do for your company? **(Check all those that apply.)**
   a. ____Audit freight bills
   b. ____Route cargo
   c. ____Negotiate freight rates
   d. ____Arrange pick-ups and deliveries of your product
   e. ____Select the mode of shipment
   f. ____Select the carrier
   g. ____Other:_____

10. Please provide an estimated ratio of freight paid each year to estimated revenue by your firm? _____

THANK YOU FOR TAKING TIME TO COMPLETE THIS SURVEY. PLEASE RETURN IT TO CATHY PETERSEN WHEN YOU HAVE COMPLETED IT.

APPENDIX C

GENERAL SURVEY INSTRUMENT

SHIPPER PANEL QUESTIONNAIRE

Instructions: This questionnaire is designed to be answered by people responsible for evaluating transportation carriers. If your responsibilities do not include carrier evaluation, please pass it along to someone in your organization who does

Perspective of the Respondent: **If you are responsible for evaluating carriers serving a number of your firm's facilities,** ***then please respond to questions from the perspective of that number of facilities for which you have responsibility*****. Please check box A and indicate the number of facilities in B: A. _____ Responsible for carrier evaluation at a number of facilities. B. _____ Number of Facilities for Which I am Responsible** Or, **If you have responsibility for evaluating carriers at a specific facility,** ***then please respond to questions from the perspective of that facility*** **and place a check here: _____**

Characteristics of Responding Firm

1. Approximate Number of Employees for the Firm (Domestically nation-wide)
   _____ Less than 50 _____ 101-300
   _____ 51-100 _____ Over 300

2. What is the zip code of this location? _____ (zip code)

3. Indicate below where the following evaluation activities are conducted within the firm; (check both if the activity is shared in some way)

Carrier Evaluation	_____ local facility	_____ central office
Carrier Selection	_____ local facility	_____ central office
Rate Negotiations	_____ local facility	_____ central office
Freight Allocation Among Carriers	_____ local facility	_____ central office
Ordering Equipment	_____ local facility	_____ central office
Freight Payment	_____ local facility	_____ central office
Processing Claims	_____ local facility	_____ central office

4. From your perspective, defined in the instruction section, please estimate the approximate percentage of shipments received and shipped to and from your facilities by the modes listed below. (Give an approximation and first thinking is generally best)

Mode	*% Shipments Received*	*% Shipments Sent*
Rail	_____	_____
For-Hire Truckload	_____	_____
For-HireLTL	_____	_____
Intermodal/Piggyback	_____	_____
Air Freight	_____	_____
Barge or Vessel	_____	_____
Total	**100%**	**100%**

5. Has this firm outsourced some of its transportation operations, including carrier selection and evaluation, to a 3rd. Party Logistics Provider? _____ Yes _____ No

6. Please indicate if this firm uses private transportation equipment;

_____ Private Fleet of Truck Vans
_____ Private Fleet of Truck Special Equipment, e.g., flat-bed, refrigerated, etc.
_____ Private Rail Cars
_____ Barge or Maritime Equipment
_____ Other (specify) _____

Regarding Inbound Shipments

7. Generally describe the type of product(s) *received* by this firm or this facility.

_____

_____

8. What is the approximate proportion of international shipments received *either by this firm or at this facility*? (Estimate an approximate number) _____%. Also, indicate the dominant mode for international shipments _____

9a. From your perspective, what % of inbound shipments are controlled by this firm, i.e., what proportion of shipments will this firm select the inbound mode and carrier? _____%

9b. How many different carriers do you deal with relative to the inbound freight that you control? _____ Number of Inbound Carriers

9c. Regarding the inbound freight controlled by this firm, approximately how many carriers will carry 80% of the shipments? _____ # of carriers = 80% of shipments

9d. What % of inbound shipments use carriers under contract to this firm? _____ %

Regarding Outbound Shipments

10. Generally describe the type of product(s) shipped *by this firm or from this facility*:

_____

11. What is the approximate proportion of international shipments shipped *by this firm or this facility?* _____%

12a. From your perspective, what % of outbound shipments are controlled by this firm, i.e., what proportion of shipments will this firm select the outbound mode and carrier? _____%

12b. How many different carriers do you deal with relative to the outbound freight that you control? _____ Number of Outbound Carriers

12c. Regarding the outbound freight controlled by this firm, approximately how many carriers will carry 80% of the shipments? _____ # of carriers = 80% of shipments

12d. What % of outbound shipments under your control are given to carriers under contract? _____ % What is the average length of contract? _____ Years

The following questions relate to how you evaluate carriers

13. Assign a total of 100 points to the following individual criteria that would be used by this firm (regardless whether such evaluations are done at this facility or at a centralized office.) Do not assign points to those criteria that are not considered by your firm.

a. _____ Equipment Availability (ordered equipment supplied on-time)
b. _____ Quality of Equipment and Driver
c. _____ On-time Pick-Up and Delivery Performance (neither early nor late)
d. _____ Loading/Unloading Cost
e. _____ Accurate Billing
f. _____ Transport Cost (rates)
g. _____ Loss and Damage
h. _____ Available Accessorial Services
i. _____ Quality of Information Exchange with Carrier
j. _____ Safety Record
k._____ Carrier Flexibility, Responsiveness, etc.
l._____ Financial Status of Carrier
m _____ Other (specify) _____
100 Total

14. If On-time Performance is part of your criteria, indicate what defines on-time relative to the appointed time, e.g.,

_____ 15 min. _____ 30 min _____ 1 hour _____ day _____ Other

15. What is the frequency that your firm evaluates carriers under contract? (check one)

__ monthly __ quarterly __ biannually __ annually __ other (specify) _____
16. Frequency that your firm evaluates carriers NOT under contract? (check one)

__ monthly __ quarterly __ biannually __ annually __ other (specify) _____

17. Does your firm use a composite evaluation process where some or all of the above criterion are weighted and totaled into an overall quantitative score or is the carrier evaluated on one or more of the above criterion without any kind of weighting system?
_____ Weighting System _____ Individual Criterion-no weighting system

18. Does this firm use an electronic method for storing carrier evaluation data, e.g.,
_____ commercially available spreadsheet, e.g., Lotus 123 or similar
_____ commercially available database, e.g., M/S Access or similar
_____ specially designed in-house electronic system
_____ manual system

19. Consider the following list of metrics. Indicate those that your organization currently uses and those that would be of use in evaluating transportation vendors.

	Use Now	Would be Useful
% on time delivery	_____	_____
% on-time equipment/pick-up/drop-off)	_____	_____
% accurate billing	_____	_____
% of shipments with loss & damage claim	_____	_____
Evaluation of carrier's responsiveness,	_____	_____
Evaluation of carrier feedback and information exchange	_____	_____
Other Metrics (specify) _____	_____	_____

20. Would this firm find value in gaining access to carrier-specific evaluation data, as suggested in Q 19, from a larger group of shippers—in addition to its own data? Assume the firms supplying such information were all located in the same geographic area and the data were supplied in a compatible electronic format. _____ Yes _____ No

21. Would this firm find more or less value in such additional evaluation data if firms in the same or similar industries supplied it? _____ More _____ Less _____ Same

22. Would this firm be willing to share some of its carrier evaluation information to such a pool of data? (assume no shippers would be identified) _____ Yes _____ No

23. Would you like a copy of the tabulated survey? If so indicate name and address below:

Name _____
Firm _____
Address _____
City/State/Zip _____
Email _____