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ABSTRACT

The research reported in this manuscript provides insights regarding trucking related e-marketplaces and web-based offerings by truckers. Over 2,000 shippers were surveyed with 420 total responses. Overall, only 7% of shippers were currently utilizing e-marketplaces; however, those that are appear to be satisfied. Shippers ranked tracking, freight posting, and pricing, in that order of importance for trucking web sites.

INTRODUCTION

In today's competitive business environment, shippers increasingly view the transportation of goods as an integral component of supply chain management, rather than simply a cost of doing business. This new approach requires that every effort be made to increase visibility of the transportation of products in addition to managing this cost center.

The growth of the Internet has coincided with this new orientation. Electronic marketplaces, defined by Forrester Research as, "new models of electronic commerce, including auctions, aggregators, bid systems and exchanges," have made considerable inroads into the transportation industry as a means of improving efficiency by matching demand of the shippers with supply of transporters. In the trucking industry, load

matching follows shipment tracking as the second most commonly used Internet service function, followed by rate quotation and driver recruitment (Mele, 1998a).

That is not, however, to say that all e-marketplaces have been or will be successful. As Bannan (2001) points out, e-marketplaces often fail to reflect accepted business practices, such as allowing customers shipping prices to reflect their shipping volume levels. In the trucking industry specifically, Hyland (2001) reports that most shippers still conduct business on a contractual basis in the open market, rather than facing the uncertainties involved in dealing with unknown carriers. Indeed, data security, information privacy, government regulation and e-marketplace longevity are reported to be among the greatest concerns associated with the use of e-marketplaces in general (Gilbert 2001).

Shippers may also be deterred by the expensive proposition of hooking into e-marketplaces, which sometimes necessitates heavy systems integration and/or subscription fees (Hammer 2000). Part of the back-end system integration problem involves the use of XML, which provides a format for defining data elements in various documents, thereby simplifying document exchange. However, compatibility problems due to growth in the number of XML variations and the electronic data interchange (EDI) systems sometimes confuse shippers (Gladwin 2001).

Despite these drawbacks, this new form of linking shippers with transportation companies has caught the attention of many in the trucking industry. Galea and B rewer (2000) report that business-to-business electronic commerce is forecasted to increase to approximately $2.7 trillion by 2004 and that electronic marketplaces will account for between 45 and 74 percent of electronic commerce in the supply chain. According to Hyland (2001), there are reportedly more than 100 Internet-based logistics companies, including auctions, exchanges, and application service providers, many of which are regionally focused and specializing in a particular transportation mode (e.g., truck, air, ocean, etc.). Furthermore, Sami (2000) reported that there are approximately 55 trucking service-related web sites and that these load-matching sites will be helpful, particularly for small transportation companies, in terms of matching shippers with carriers and thereby reducing costs as fewer trucks will be running empty. Arndt (2001) also believes that the cost cutting potential of Internet usage is significant and that freight companies, through the use of e-marketplaces, are in a better position to manage flows and reduce cost by eliminating unneeded inventories.

Given the growing acceptance of e-marketplaces as a load-matching technique for increasing efficiency, more quantitative research needs to be conducted in this area. Therefore, this study is designed to contribute to this growing body of knowledge by exploring shippers' present and projected future e-marketplace usage patterns as well as their attitudes toward and satisfaction with various aspects of e-marketplaces in the transportation industry.

LITERATURE REVIEW

Internet usage in the supply chain has received little research attention (Dressner, Yao and Palmer 2001). Some studies have looked at Internet technology adoption in the supply chain, although not specifically in the motor carrier/shipper context. For example, Murphy and Daley (2000) surveyed international freight forwarders (IFF's) about their Internet usage patterns. A major

finding of their work was that the IFF's viewed the Internet as complimenting EDI, rather than replacing it. Dressner, Yao and Palmer (2001) surveyed food industry supply chain members regarding their Internet usage patterns and found that EDI accounted for a greater percentage of supply chain transactions than did the web. They also found that the activities performed most often over the web include obtaining product and pricing information from suppliers and providing pricing and product information to customers. Min and Galle (1999) surveyed purchasing managers and found that larger firms were more likely to require suppliers to use e-commerce than were smaller firms.

Other researchers have examined carrier/shipper Internet usage specifically. Kent, Parker and Luke (2001) found that shippers in their study rated e-business attributes (e.g., Internet tracking, e-mail, EDI capabilities) as moderately important carrier selection criteria and suggested that these ratings would have been higher had the data been collected more recently than 1999. In another Internet usage study involving the motor carrier industry, Clarke (2000) surveyed the 75 largest trucking companies in the U.S., and found that these carriers were shifting away from EDI to web-based information technologies. Clarke cited demand by customers for high quality, timely information, as well as flexible information systems as reasons for this shift as well as a lack of EDI standardization.

Clarke's (2000) findings are significant considering that EDI had made steady inroads into the trucking industry from the mid-1970's through the early 1990's. In a longitudinal study, Crum and Allen (1997) found that the percentage of motor carriers using EDI increased from 29 to 37 percent between 1990 and 1996. Crum, Johnson and Allen (1998) found that motor carriers

primarily use EDI for invoicing and providing tracing and shipment information. Load matching was reported by Mele (1998a) to be the second most commonly used Internet function in the motor carrier industry. The authors of this paper found no academic studies specifically addressing the topic of e-marketplaces in the trucking industry. The present study is designed to help fill this void.

Generally, markets are defined as people or organizations having a need for specific products, services, or information and have the ability, authority, and willingness to pay for these things through some type of an exchange process. Further, it has traditionally been assumed that in most cases a "market place" consists of a physical brick and mortar facility where buyers and sellers meet to formalize the exchange process. However, Senn (1996) indicates that in an electronic marketplace the meeting place is a network-based location rather than a physical location and that buyers and sellers are unlikely to know each other and are unlikely to have predetermined agreements. Given this rather nebulous meeting place and the apparent lack of cultivated relationships that have been so widely reported in the past, companies may need to closely examine the benefits of this new type of load matching system before abandoning time-tested methods of doing business. The basic questions would seem to be: what exactly is an e-marketplace and what is to be gained by embracing this type of system?

The origins of the electronic marketplace seem to be rooted in the use of inter-organizational information systems. As interorganizational information systems have continued to evolve, the e-marketplace is becoming more prominent as a method of bringing shippers and transportation companies together while offering the

convenience of cross-company electronic connections.

One of the most appealing features of the e-marketplace is the cost reduction that may be realized through the elimination of numerous business activities. For example, Bakos (1991) suggests that these interorganizational information systems have branched off into electronic marketplaces, which act as an intermediary between buyers and sellers in a vertical market thereby creating five potential characteristics that must be considered in terms of making markets more efficient. Bakos describes these characteristics as being 1) that these electronic marketplaces tend to reduce the costs of obtaining information about prices and product offerings of suppliers, 2) benefits increase as more organizations join the system, 3) these marketplaces impose significant switching cost thereby reducing the likelihood of members being enticed to join rival systems, 4) electronic marketplaces offer substantial economies of scale, and 5) potential members face considerable uncertainty of the benefits gained from joining this type of system. Perhaps this last characteristic might be the reason that Hammer (2000) argues that suppliers are often unwilling to pay a fee to join systems that have either an intent or a consequence of reducing prices to their lowest possible levels, thereby placing many firms in financial jeopardy.

Choudhury (1998) seems to agree that electronic marketplaces are interorganizational information systems and that they enable numerous buyers and sellers to: 1) identify potential trading partners by providing specific product information that can be used to locate sellers, 2) select trading partners by providing information which allows buyers to compare prices, and 3) to execute transactions by facilitating the exchange of information between buyers and sellers.

The advent of electronic marketplaces may prove even more valuable to the trucking industry as a series of events may have put them in the right place at the right time. The *Economist* (2000) reports that, while top drivers may earn more than $80,000 annually, most firms have a driver turnover rate five times higher than the average job. They further report that one of the results of this rapidly growing industry has been a shortfall of between 50,000 and 80,000 drivers and that in an effort to retain the present drivers, companies have been forced to reduce the length of trips to between 300-400 miles to allow drivers to spend more time with their families. To accomplish this reduction in miles traveled, many trucking firms were forced to establish regional warehouses allowing loads to be redistributed, thereby reducing travel time for drivers and the hauling of empty or partially empty trailers. These warehouses were then outsourced to manufacturers who were searching for cost saving changes in the traditional channel.

The *Economist* further suggests that with the advent of electronic marketplaces came the demand for warehouses that could fulfill the needs of storage and transportation. Given that many trucking companies had recently built warehouses for the purpose of retaining their drivers, it became obvious that it was mutually beneficial to also use these warehouses to support newly forming electronic marketplaces. The result of this marriage has been that, of the approximately 250 e-commerce fulfillment and logistics firms in the U.S., 25 have come directly from the trucking industry. Further evidence of having the right assets at the right time comes from Valentine and Morgan (2001), who report that, while shippers are

attempting to put in place systems that require fewer transportation providers, they also are seeking asset-based providers rather than "virtual" Internet companies. This desire plays into the hands of those trucking companies who have both the trucks and the warehouses in place to make the electronic marketplace work most effectively. Valentine and Morgan give further support for the probable success of these electronic based systems as they have found that approximately seventy percent of the respondents in their study expect their freight and transportation needs to change due to the rise of electronic commerce. Further, forty-four percent report that a transportation company must have an e-commerce system if they are to bid for their business.

Clearly, electronic marketplaces have made inroads into the transportation industry and are likely to become more important to both shippers and carriers in the coming years. Therefore, the purpose of this study is to contribute to the growing body of knowledge by providing information from shippers on their levels of satisfaction with electronic marketplaces and the likelihood of their use of these electronic marketplaces in the future.

METHODOLOGY

In the spring of 2001, questionnaires were sent priority mail to a list of shippers comprised of *Distribution Magazine* subscribers. A total of 420 were completed and returned out of the 2,132 that were mailed for a response rate of 20%. Among the respondents were many large and well-known shipping firms representing a variety of industries, (e.g., Abbott Labs, C & H Sugar, Merck, Ocean Spray, Pillsbury, S.C. Johnson, Tropicana, Tyson Foods, U.S. Gypsum, U.S. Tobacco, and Wal-Mart).

Three yes/no questions were asked of the respondents and were used as grouping variables in the ANOVA tests. The questions were:

1) "My company currently posts truckload freight on Internet e-marketplaces,"

2) "I regularly use my primary carrier's current web based offering," and

3) "My firm endorses the use of paperless billing by not requiring original paper proof-of-delivery."

Additionally, two questions were designed to gauge respondents' plans concerning future e-marketplace usage. The first asked respondents to rate, on a seven-point scale, their level of agreement with the statement, "My company plans to increase its use of e-marketplaces." Similarly, the next question asked the identical question, only replacing the word "increase" with "decrease." On the same seven-point scale, respondents were also asked to rate their agreement level with the following four statements:

1) "My company sees great potential for the usage of e-marketplaces,"

2) "My company would likely post freight on my primary carrier's e-marketplace,"

3) "Truckload carriers should provide web services similar to what the less-than-truckload (LTL) carriers offer," and

4) "My firm understands the implications of XML."

Respondents were also asked to rate the importance of six technology service offerings (e.g., Internet freight posting, Internet pricing, Internet tracking, Internet proof-of-delivery, traditional EDI capabilities,

satellite tracking and communications) on a seven-point scale (not important/very important).

FINDINGS

As shown in Table 1, responding shippers tended to agree more strongly with the statement that they were planning to *increase* their usage of e-marketplaces (mean = 3.72) than they did with the statement indicating plans to *decrease* future usage (mean = 2.86). Of the items in Table 1, the shippers agreed most strongly with the statement that truckload carriers should offer web services similar to those offered by LTL carriers (mean = 5.18), and disagreed most strongly with the statement concerning how likely their firm would be to post freight on their primary carrier's website (mean = 1.93).

They were relatively neutral in their agreement with statements regarding satisfaction with current e-marketplace usage (mean = 3.88) and e-marketplaces having great potential (mean = 4.07).

As shown in Table 2, shippers rated satellite tracing and communication (mean = 4.95) as the most important service attribute, followed by traditional EDI capabilities (mean = 4.41) and Internet tracking (mean = 4.37). In contrast, Internet pricing service (mean = 3.15) and Internet freight posting (mean = 3.26) were rated the two least important Internet services.

Two groups were formed by combining shippers that answered "yes" to being regular users of their primary carrier's web based offering into one group (n = 83), and those

TABLE 1
MEANS FOR ITEMS

Item	Mean
Plan to increase e-marketplace usage	3.72
Plan to decrease e-marketplace usage	2.86
Satisfied with current usage of e-marketplace	3.88
See great potential for e-marketplaces	4.07
Would likely post freight on primary carrier's e-marketplace	1.93
Truckload carriers should provide web services similar to LTL	5.18
Shipping firm understands implications of XML	3.45

Note: Means are calculated with a seven-point scale (anchored with strongly disagree/strongly agree) with higher scores indicating higher amounts of attribute.

TABLE 2
MEANS FOR IMPORTANCE ITEMS

Importance Item	Mean
Importance of Internet freight posting service	3.26
Importance of Internet pricing service	3.15
Importance of Internet tracking service	4.37
Importance of Internet proof-of-delivery service	3.94
Importance of traditional EDI capabilities	4.41
Importance of satellite tracing and communications	4.95

Note: Means are calculated with a seven-point scale (anchored with not important/very important) with higher scores indicating higher amounts of attribute.

answering "no" to this question into the other group (n = 323). ANOVA tests were run to determine whether the regularity of usage of primary carriers' web offerings affected future e-marketplace usage plans and attitudes towards e-marketplaces as measured by other items mentioned above, as well as the Internet service attribute importance ratings. As shown in Table 3, significant differences were found on eight items, and on each of these, the regular user respondents gave higher mean ratings.

Another two groups were created by combining shippers that answered "yes" to the question concerning whether their company endorses the use of paperless billing by not requiring an original paper proof-of-delivery into one group (n = 83), and those that answered "no" into the other group (n = 321). Similarly, two groups were also created by placing shippers that answered "yes" to the question about currently being involved in the practice of posting truckload freight on Internet e-marketplaces (n = 28), and those answering "no" to this question into another group (n = 384). ANOVA tests were again run to determine the affect of these variables

on the above-mentioned items. As shown in Table 4, in the case of paperless billing endorsement, significant differences were found on six of these items. As indicated in Table 5, for the freight posting variable, significant differences were found on seven items. As was the case with the regular users of the primary carrier web offerings, it was the participating firms that gave higher ratings (either agreement or importance) to each of these items.

DISCUSSION

The results indicate that shippers tend to agree more strongly with statements that they plan to increase, as opposed to decrease, their e-marketplace usage, which is a positive finding for e-marketplaces. The findings also indicate that shippers expect the same kind of web services from their truckload carriers that they have come to expect from their LTL. Not surprisingly, Internet services related to tracing and tracking of shipments were most valued by respondents. Mele (1998b) reported that shipment tracking was the most popular Internet application in all modes of freight transportation. Shippers benefit from these services by having their

TABLE 3
MEANS FOR ITEMS BY REGULAR USAGE
OF PRIMARY CARRIER WEB OFFERING

Item	Regular User	Not Regular User	P > F
Plans to increase use of e-marketplaces	4.48	3.32	.003
Sees great potential for e-marketplaces	4.90	3.64	.006
Truck carriers should provide services similar to those LTL provide	5.67	4.91	.049
Internet freight posting service importance	4.43	2.96	.000
Internet pricing service importance	4.35	2.84	.000
Internet tracking service importance	5.66	4.03	.000
Internet POD service importance	5.06	3.65	.000
Satellite tracing and communication importance	5.29	4.86	.045

Note: Means are calculated with a seven-point scale with higher scores indicating higher amounts of attribute.

TABLE 4
MEANS FOR ITEMS BY ENDORSEMENT OF PAPERLESS BILLING

Attribute	Endorses Paperless Billing	Doesn't Endorse Paperless Billing	P > F
Sees great potential for e-marketplaces	4.82	3.84	.045
Firm understands XML	4.28	3.18	.022
Internet pricing service importance	3.53	3.05	.019
Internet tracking service importance	4.90	4.21	.004
Internet POD service importance	4.78	3.72	.000
Traditional EDI capabilities importance	4.78	4.32	.030

Note: Means are calculated with a seven-point scale with higher scores indicating higher amounts of attribute.

TABLE 5
MEANS FOR ITEMS BY FREIGHT POSTING

Attribute	Posts Freight on Internet	Doesn't Post Freight	P > F
Plans to increase use of e-marketplaces	4.48	3.32	.005
Sees great potential for e-marketplaces	4.69	3.78	.042
Internet freight posting service importance	4.46	3.16	.000
Internet pricing service importance	4.18	3.07	.000
Internet tracking service importance	5.21	4.28	.000
Internet POD service importance	5.00	3.84	.000
Satellite tracing and communications	5.57	4.87	.000

Note: Means are calculated with a seven-point scale with higher scores indicating higher amounts of attribute.

shipments' visibility increased. This enables the accurate prediction of shipment arrival times, which enhances just-in-time systems by allowing inventory levels and safety stock to be minimized (Krapf 1997). Clearly, carriers seeking to develop web offerings reflective of the needs of shippers should strongly consider incorporating some form of web tracking into their system.

The findings of this study also suggest that the overwhelming majority of shipping firms do not participate in e-marketplace services. For example, only 20% classify themselves as "regular" users of their primary carrier's e-marketplace, and only seven per cent reported that they currently post truckload freight on Internet e-marketplaces. Despite offering cost-efficiency advantages, shippers seem to view e-marketplaces as a risky and expensive alternative to traditional shipper/freight matching methods. Evidently, most shippers currently tend to view the costs of participating in e-marketplaces as outweighing their potential benefits.

The results of this study support the idea that firms currently using the various aspects of e-marketplaces tend to be more positive regarding their expected future usage of and attitudes towards e-marketplaces than their non-user counterparts. This is actually not surprising. In light of the considerable start up costs associated with becoming initially involved in an e-marketplace, one would expect that shippers currently using e-marketplaces would be more prone to increase their usage than those that have yet to incur the initial cost. Another possible explanation for this finding is that, due to the perceived risk of using e-marketplaces, firms may begin their e-marketplace participation by experimentally shipping only a small percentage of their freight. As their confidence in the system grows, they will presumably trust increasingly larger percentages of their shipments to e-marketplaces. Assuming positive e-marketplace experiences, shippers at this stage of the process would naturally indicate a tendency to increase their e-marketplace

usage. Apparently, these firms like what they are experiencing and want more in the future.

MANAGERIAL IMPLICATIONS

From a carrier's perspective, e-marketplaces should not be ignored as a source for finding freight. Shippers indicated that they were more likely to increase their usage for e-marketplaces than decrease their usage. Truckload carriers should take note of what LTL carriers are doing with regard to their company web sites. This was the most strongly agreed with statement by the shippers in the survey. Additionally, carriers should prioritize their future web offerings to include tracking, freight posting, and pricing in that order. Carriers should not necessarily expend resources to create their own e-marketplace. Shippers overwhelmingly prefer not to post their freight on a carrier maintained e-marketplace. Finally, keep the resources flowing to the satellite communications and EDI applications, shippers ranked those two areas as the most important.

From a shipper's perspective, the usage of transportation e-marketplaces is clearly evolving and is in the infancy stage. Shippers who are currently using an e-marketplace service reported that they are generally satisfied. Additionally, much more importance was placed on traditional EDI and satellite communications by shippers, than on the more contemporary web-based applications such as pricing and freight posting.

From the e-marketplace perspective, the good news is that shippers using such services are more positive towards e-marketplaces than nonusers. The simple fact that they are bodes well for the future of e-marketplaces in the transportation industry. Consider the consequences to trucking e-marketplaces if participating shippers were generally dissatisfied with the process and, as a result, held a negative attitude towards the possibility of increasing their future usage levels. No doubt, this negative word-of-mouth would have a devastating effect on the future of e-marketplaces in this industry.

Essentially, these user firms are the early adopters of e-marketplace technology. As is generally the case with the diffusion of any innovation, early adopters play a key role in leading the opinions of the later adopting groups. Thus, the experience of these early adopting groups will largely determine the long-term prospects of e-marketplaces. Fortunately for the e-marketplaces, their experiences appear to be positive.

REFERENCES

Arndt, Michael (2001), "Transportation." *Business Week*, (3714):130.

Bakos, Yannis J. (1991), "A Strategic Analysis of Electronic Marketplaces." *MIS Quarterly*, 15, (3): 295-311.

Bannon, Karen (2001), "E-marketplaces." *PC Magazine*, 20, (13): 146-149.

Choudhury, Vivek (1998), "Uses and Consequences of Electronic Markets: An Empirical Investigation in the Aircraft Parts Industry." *MIS Quarterly*, 22, (4): 471-508.

Clarke, Richard (2000), "The Use of EDI and Internet Technologies in the U.S. Motor Carrier Industry." *Journal of Transportation Management*, Fall, 47-54.

Crum, Michael and Benjamin Allen (1997) "A Longitudinal Assessment of Motor Carrier-Shipper Relationship Trends, 1990-1996." *Transportation Journal*, 37 (1): 5-17.

Crum, Michael, Deborah Johnson and Benjamin Allen (1998), "A Longitudinal Assessment of EDI Use in the U.S. Motor Carrier Industry." *Transportation Journal*, 38 (1): 15-28.

Dresner, Martin, Yuliang Yao, and Jonathon, Palmer (2001), "Internet Technology Use Across the Food Industry Supply Chain." *Transportation Journal*, Summer, 14-21.

Economist (2000), "Big Rigs' Lucky Break." 355, (8173): 66

Forrester Research (2000), "E-Marketplaces Boost B2B Trade." February.

Galea, Christine and Geoffrey Brewer (2000), "Selling in an E-Marketplace." *Sales & Marketing   Management*, 152, (4): 103.

Gilbert, Alorie (2001), "Reduce Your E-marketplace Risk." *Information Week*, (827): 86.

Gladwin, Lee (2001), "E-Marketplaces." *Computerworld*, 35, (7): 45.

Hammer, Michael (2000), "The Truth About E-Marketplaces." *Information Week*, (815): 242.

Hyland, Tricia (2001), "Shippers Adopt 'Wait and See' Attitude Towards E-commerce." *Transportation and Distribution*, 42, (1): 33-36.

Kay, Emily (2000), "Online Exchange Helps Trim Shipping Costs." *Computerworld*, 34, (51): 74.

Kent, John, R. Stephen Parker, and Robert Luke (2001), "An Empirical Examination of Shipper Perceptions of Service-Selection Attributes in Five Truckload Industry Segments." *Transportation Journal*, Fall, 27-36.

Krapf, Eric (1997), "New Technologies Rev up Transportation Companies." *Business Communication Review*, (October): 55-58.

Mele, Jim (1998a), "E-commerce & Trucking." *Fleet Owner,* 93, (12): 61.

Mele, Jim (1998b), "A lesson half learned." *Fleet Owner*, 93, (9): 8.

Min, H. and W.P. Galley (1999), "Electronic Commerce in Business-to-Business Purchasing." *International Journal of Operations and Production Management,* 19, (9), 909-921.

Murphy, Paul and James Daley (2000), "An Empirical Study of Internet Issues Among International Freight Forwarders." *Transportation Journal*, 39, (4): 5-13.

Sami, Lais (2000), "Still a World Wild Web in the Trucking Industry." *Computerworld*, 34, (14): 36.

Senn, James A. (1996), "Capitalizing on Electronic Commerce." *Information Systems Management*, 13, (3): 15-25.

Valentine, James and Stanley Morgan (2001), "Internet Usage Will Change Freight Patterns." *Transportation & Distribution*, 42, (1): 38-39.

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