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Purchasing Transportation Services

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In today's deregulated environment, shippers have many choices of carriers and transportation modes to select from to help keep their freight moving efficiently. Since transportation represents from 40% to 60% of a shipper's distribution costs, inbound and outbound transportation should be considered when making carrier selection decisions (Andel, 1996). Inbound transportation refers to all freight coming into the terminal for the shipper and outbound is the freight being shipped to a customer. Part of picking the right carrier involves rating the carrier's performance. The rating evaluates how long the freight takes to get to the customer without any problems. By looking at performance issues shippers can reduce their chances of choosing the wrong carrier.

According to Gentry (1991), shippers have increasingly emphasized cost since 1980. However, most shippers in the United States are more concerned about service than cost in making a carrier-selection decision. Carriers are becoming more sensitive to the special logistics service needs and are factoring services into their pricing structures. One of the services that shippers value is the management of information concerning the status of their products from point of origin to point of destination.

Carrier selection is a critical step in transportation decision-making. Most shippers use the same carrier selection process to establish long-term relationships with the carrier. The trend is to reduce the number of carriers used and establish long-term relationships with the few remaining carriers. Keller (1987) states that carriers must be willing to do whatever is necessary to efficiently meet the transportation needs of the shipper. The problem is that sometimes shippers succeed in choosing the most efficient carriers, and other times they do not. Thus, carrier selection is a critical step in

the process of establishing a long-term relationship between a shipper and a carrier.

The objective of this research is to examine the carrier selection criteria of a specific company. The specific research question this study will address is: What criteria are used to select a transportation motor carrier for a firm?

Methodology

Two interviews were conducted with members of the Purchasing/Logistics Department at Ashland Chemical Company, a division of Ashland Incorporated (Inc.) located in Dublin, Ohio. The interviews were conducted to obtain information on the carrier selection process used by Ashland Chemical Company. The first interview sought to gain information on the company's market perspective. During the second interview, a member of the logistics department provided information on the carrier selection process for U. S. and Canadian carriers.

Company Background

Founded in 1924 as a small eastern Kentucky refinery, Ashland Inc. has grown into a diversified energy and chemical company. Ashland Inc. ranks in the top 25 percent of the nation's 500 largest companies based on revenues. The company has approximately 37,200 employees and gross sales for fiscal year 1997 were more than \$14 billion. With headquarters in Russell, Ky., Ashland Inc. provides a wide range of products and services including plastics, chemicals, highway construction services, motor oil, and car care products.

Ashland Chemical Company manufactures, markets and distributes its products. The company owns and operates 34 manufacturing facilities, participates in 12 manufacturing joint ventures in 10 states and 14 foreign countries, and owns or

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leases 100 distribution facilities in 25 states and 17 foreign countries. Ashland Chemical is the leading distributor of industrial chemicals, fiber-reinforced plastic materials and thermoplastics, and fine ingredients in North America. With an expanding international presence in plastics distribution, Ashland Chemical serves markets in Europe, Latin America, Asia, Australia and New Zealand. The company is also a leading global supplier of specialty chemicals.

Ashland Chemical Carrier Selection Process

Ashland Chemical Company has developed an approved carrier program, for internal use, to aid in selecting motor carriers. The program analyzes various elements in seven categories and qualifies for-hire carriers from a safety and liability standpoint. The selection process does not take into consideration economic and service criteria. An approved carrier system was created in order to reduce potential liability associated with transportation. It is now a major component of Ashland Chemical's Responsible Care program. (Note: Responsible Care and the Responsible Care Logo are registered service marks of the Chemical Manufacturers Association.) The minimum criteria for the carrier selection process was established in five areas: safety, financial stability, insurance, operating authority and rate legality. Table 1 shows the number of U.S. and Canadian carriers that can provide transportation services to Ashland Chemical. Table 2 shows the number of carriers in each mode that have been approved to transport goods for the company. These numbers change on a quarterly basis.

The initial request for carrier approval is received in the Purchasing/Logistics Department. Ashland Chemical's coordinator of the carrier selection process determines whether or not the carrier should be reviewed for approval. If the answer is no, then the administrator notes that the carrier should not be listed in the database of approved carriers and sends a memo to the department. If the answer is yes, then the carrier is reviewed again by the modal team to determine the service need of the shipper (less than truckload, truckload, bulk, etc.). Once the modal team reviews the carrier, a packet is sent to a field location and the carrier receives the required informa-

Type of Carrier	Number of Carriers*
U.S.	193
Canadian	35

Note: These numbers may change every quarter.

Table 1: Ashland Chemical carriers in the carrier selection process.

tion. Each carrier in the United States is reviewed on an annual basis.

The carrier is requested to send all of the required information to the coordinator of the program in the Purchasing/Logistics Department. Next, the completed forms are sent to the Supply Chain group to review the carrier's rate legality. The rate legality is verification that Ashland Chemical has a contract or tariff on file that covers all movements a carrier is making for them. Once the coordinator sees approval for the rate legality, the other four carrier selection criteria are reviewed.

The review of insurance requirements is another important aspect of Ashland Chemical's selection process. All U. S. carriers must have automobile, as well as general and excess liability insurance. General and excess liability covers property, environment, and cargo or hazardous materials. Ashland has established minimum levels of insurance for automobile, general, and excess insurance, and workers' compensation for bulk and packaged shipments.

Each U.S. carrier must possess a Department of Transportation (DOT) Safety Rating of satisfactory. The DOT tracks the total reportable accidents per million miles traveled by the carrier. Ashland Chemical's Environmental Health and Safety department evaluates each carrier using a highway carrier assessment protocol. Information on incidents and spills is collected internally to calculate the number of incidents divided by the total number of shipments handled by the carrier for a specific customer. The U.S. uses the Chemical Manufacturers Association's Assessment Protocol to aid in the carrier selection process. It is a self-assessment test provided by the carrier. Compliance history, claims performances, and the DOT incident reports are other aspects of the U.S. carrier's safety rating. Ashland reviews the financial rating of the carrier. The carrier's balance sheet and income statement are

reviewed for the most current fiscal year. Of the potential carriers to provide transport services for Ashland, the number of approved U.S. carriers who met the approval process was over 100.

The Canadian carrier selection process is similar to the U.S. carrier selection process. Canadian carriers are reviewed every other year using the Canadian Chemical Producers' Association to aid in the selection process. The administrator sends an approval update packet to the Canadian carriers to review and complete. The administrator sends the approval paperwork to the Supply Chain Group to review the rate legality. After all information is approved, the minimum criteria for the carrier selection process is established in five areas: safety, financial stability, insurance, operating authority, and rate legality.

Canadian carriers' insurance requirements are the same as for the U.S. carriers—with the exception that minimum standards for workers compensation are not required. Similar requirements apply to Canadian and U.S. carriers with respect to DOT safety and the carrier's financial status. Based on the carrier selection criteria, 35 Canadian carriers were approved for Ashland Chemical Company.

There are four noted differences between the U.S. and Canadian carrier selection process. First, in Canada the Interstate Commerce Commission mandates that carriers have the minimum amount of insurance required by the Canadian Transportation Board. Second, workers' compensation is mandated in the U.S., but in Canada minimum standards for workers' compensation are not required. Third, the U.S. carrier selection process is longer because it has to go through numerous individuals for approval. Fourth, U.S. carriers go through the carrier selection review process annually, while Canadian carriers have on-site reviews every six months.

Once documents for U.S. and Canadian carriers are processed and reviewed,

they are stored in a software package for carrier selection. The filed documents include: insurance, MCS-90 (Environmental Restoration), HM208 (hazardous material certification of registration), operating authority, and freight rates that covers all shipments made for Ashland Chemical Company. Carriers that provide transportation service to Ashland Chemical in both the U.S. and Canada are evaluated using the carrier selection process for U.S. carriers. Ashland Chemical had several contracts with U.S. and Canadian carriers that fell into this category.

Once carriers are selected and approved, an approved carrier list is distributed quarterly to individuals that make routing decisions. Approved air freight, bulk, expedite, intermodal, local, less-than-truckload (LTL), small package, truckload (TL) and waste carriers are contracted to transport goods to Ashland Chemical's customers.

Conclusion

Carrier selection is an important step in transportation decision making. It involves more than just picking the right carrier. Carrier selection takes a lot of time and research to select the best carriers. This study offered several viewpoints on carrier selection and provided an example of Ashland Chemical's criteria used to select carriers.

Carrier Mode	Number of Carriers*
Air	4
Bulk	64
Less-than-truckload	22
Truckload	50
Expedite	3
Small Package	2
Waste	8

*Note: These numbers may change every quarter.

Table 2: Ashland Chemical approved carriers.

The trend in today's carrier selection process is for shippers to decrease the total number of carriers they used. Also, shippers evaluate current carriers to determine which carriers to use over the long term. The relationship between a shipper and a carrier is based on the carrier's performance such as on-time delivery, reliability, efficiency and consistency. A good relationship between a shipper and a carrier will in most cases increase productivity and customer satisfaction. Based on this study, it appears that there are a number of important criteria used in making a carrier selection decision. This study provided information on how a company selects carriers to transport goods in the U.S. and Canada. ■

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