LEVERAGING TRANSPORTATION COSTS: A Vital Key to Improving Supply Chain Management

by Robert Murray, CSCMP Member

This article appeared in the Council of Supply Chain Management Professional's newsletter, *CSCMP Supply Chain Comment,* Volume 42, Sept./Oct. 2008. *CSCMP Supply Chain Comment* is published six times a year by CSCMP.

With today's escalating fuel costs, the most significant key to supply chain management is controlling the increase in transportation costs. Supply chain managers need to focus on five main areas to effectively manage these costs. They are:

1 LOAD FACTOR:

An easy tool to focus on providing immediate- to near-term results that can lower transportation costs by 10 to 25%.

- **Product loading** – Increase shipment weight on all freight.
  - *Stock freight* – Start here first. You control these shipments and, therefore, can easily make changes that will result in savings.
  - *Customer freight* – Work with your largest customers to improve their order load factors. A simple rule is to fill the remaining load with the highest volume product for that customer, thereby making sure the flow through and inventory turns remain high.
- **Product packaging** – People who are knowledgeable in this field can work with production and packaging management to assess, evaluate, and plan cost-reduction changes that can generate significant savings in production, packaging, and load factor, and hence, transportation costs.
- **Pallet programs** – Evaluate the need for expensive pallets and their returns versus floor loading or slip sheets. Load improvements and related savings are common.

2 FUEL:

Purchase strategy and timing can yield big benefits to your business.

- **Lock in pricing** – Commitment to future fuel pricing now can yield lower costs in an increasing cost market. This applies to common carrier, private, or leased fleets, and should be part of a carrier or leased fleet agreement. Savings are available from some truck stops based on volume.
- **Identifying least-price locations** – When buying fuel on the road, identify, target, and plan fuel purchases at locations where they are the lowest within the state in question. The International Fuel Tax Agreement (IFTA) will spread road taxes based on miles traveled by state, but low-cost purchasing within a given state is appropriate.
- **Fuel price info** – Use Internet information on current pump prices at various locations within a given state. Transportation management systems (TMSs) can assist in this area.

3 DRIVERS:

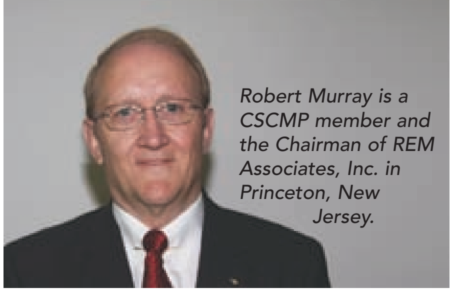
Supply and demand have played a key role in today's transportation environment in terms of hiring, training, and retaining this valuable resource, representing 45 to 50% of total transportation costs.

- **Employment** – Retain only accident- and driving while under the influence- (DWI) free drivers with good histories on the type of equipment to be operated. Transitional drivers keep overhead costs high by constant recruiting and training. Pay what is necessary to retain the best. Don't try to confuse drivers on pay potential.
- **Training** – Provide on-the-job training on the specific equipment type to be operated to and from the usual customers. Accident-free master drivers are good trainers after attending coaching classes.
- **Retention** – Provide feedback and coaching on fuel economy, claims/customer relations, and safety. Arrange for a recognition program. Avoid "tough guy" supervision. This style's effectiveness is long gone with the current driver shortage.

4 EQUIPMENT:

The key here is minimizing the weight of the equipment and maximizing the weight of the load—normally an easy 10 to 15% potential savings opportunity. On-board fuel should be minimized to that which is necessary for a day's run to maximize payload.

- **Specifications** – Relate the power unit and trailer to the requirements of the load and destination. Make sure carriers or lessors are giving you equipment that can maximize payload. Pay close attention to owner-operator equipment
  - Don't over spec power units—use the lowest weight possible for dense shipments.
  - Use the right size and weight trailer to match load requirements.
- **Maintenance and operations** – Maintain and operate the equipment in the most cost-effective manner.
  - Ensure that your equipment, private or for hire, has Alternative Power Units (APU) to reduce idling costs and save fuel.
  - Maintain proper tire inflation for both the trailer and tractor.



Robert Murray is a CSCMP member and the Chairman of REM Associates, Inc. in Princeton, New Jersey.

- Replace fuel filters at proper intervals.
- Keep all axles properly aligned to minimize rolling resistance.
- Use good synthetic lubricants in the transmission and axles.
- Slow down. Fuel economy improves when a 62 miles-per-hour (mph) cruise speed is maintained; 10 to 20% savings can be achieved from 70 mph.
- Use a fuel economy display device that permits monitoring so drivers may correct fuel economy performance by the minute.
- Use of cruise control will typically enhance fuel economy performance.
- Maintain optimal revolutions per minute (RPM) for the specific engine. Each engine has a unique torque curve, typically between 1,200 and 1,600 RPMs.
- Minimize idling. Two minutes of warm up and the same for cool down is adequate. Depending on its speed, idling uses between 0.5 and 1.2 gallons per hour.
- Repair body damage such as dings, dents, and loose fairing that may create additional drag.

5 DISTRIBUTION NETWORK AND SYSTEMS:

While not a near-term solution, certainly the distribution network can and will provide the greatest intermediate- to longer-term solution to the increasing costs of transportation. Implementation of a well-planned distribution network strategy can yield 25 to 35% total supply chain savings, including warehousing, transportation, and inventory through:

- **Plant direct shipping** – Work with your largest customers to promote truckload ordering with shipment directly from production locations.
- **Minimizing stops in route** – The multi-stop route system is a thing of the past based on its adverse effect on loaded miles, driving hours, and route costs.
- **Customer delivery cycles** – Offering customers less frequent deliveries and/or charging a premium for additional deliveries based on increased costs will reduce transportation costs and/or improve customer profitability.
- **Distribution center (DC) locations** – The key is to move product to the market at the least cost. Therefore, as transportation costs increase, this places more pressure on moving full truckloads as close to the market as possible, placing more DC locations in close proximity to the marketplace and key customers.
- **Routing** – Software can greatly assist in planning outbound transportation and delivery in the most cost-effective manner in order to maximize loaded miles and minimize empty miles.
- **Full-load ordering of raw materials and packaging** – Working with vendors, orders should be placed in efficient quantities to minimize landed costs, considering unit pricing, delivery, and inventory.
- **TMSs** are a way for shippers to stem the tide of rising transportation costs. The potential benefits vary according to the state of a shipper's current operations.
  - In general, companies that rely on manual processes, where employees call up carriers to tender loads and fax out routing instructions, have the most to gain from implementing a TMS. Some experts say the range of savings will depend on how manual your processes are to begin with. They could be significant, with the range of savings from 5 to 20%. Other experts put the savings at somewhere between 5 and 10% of transportation expenditures.
  - A benchmark to warrant the expense of purchasing or renting a system is that a company must spend at least $8 million US a year on transportation.
- **Automation of freight payment,** rating, auditing, and claim filing can also help reduce freight expenditures. A recent Aberdeen Group study titled, *Achieving Closed-Loop Transportation Spend Management*, indicated that best-in-class companies had an average cost per invoice processed of $1 to $10, an industry average of $11 to $50, with industry laggards coming in at costs greater than $51 per invoice processed. In addition, back-end audit savings can range from 4 to 8% of transportation spend.

Working with and sharing savings with customers, vendors for inbound freight, and in some cases, competitors, can yield significant results currently not considered and untapped in the business. Not all of these areas will apply directly to your current supply chain strategy and tactics. However, focusing on these key areas in the near-, intermediate-, and longer-term can yield significant results to an increasingly costly transportation segment of the business supply chain.

The potential total transportation target for a focused effort in these areas should be:

- *Immediate savings of 10 to 15%*
- *Near- to intermediate-term savings of 15 to 25%*
- *Longer-term savings of 20 to 35%*

A final thought: Be a good shipper, one who carriers and drivers want to do business with:

- *Make freight easy to handle.*
- *Reduce the cost of pick up.*
- *Reduce carriers' dock time.*
- *Reduce carriers' line-haul costs; select carriers who can effectively route and handle your freight.*
- *Create a fair fuel program for shippers and carriers related to miles traveled and miles per gallon.*
- *Reduce costs of delivery.*
- *Pay carriers promptly.*
- *Maintain a secure and comfortable driver waiting area.*

Once economic conditions improve and the need for incremental drivers increases, whether you are a "good shipper" or not will have a major impact on your trucking capacity and costs. This is the time to show that you can be a "good shipper."