Abstract. Information sharing is at the heart of supply chain management (SCM). Electronic communication media and supply chain systems facilitate information sharing and creation of closer buyer/supplier relationships. In addition, information sharing nudges these relationships even closer, and facilitates performance improvement. In this session, the presenters interact with participants and discuss recent research results on information sharing, along with some implications of those results for supply managers.

Information Sharing. According to Handfield and Nichols (1999), information sharing among buyers and suppliers is a “fundamental requirement for effective supply chain management.” Kwon and Suh (2004) suggest information sharing is the most important factor for successful SCM. A supply chain partnership entails intensive but selective information sharing and joint improvement activities (Liker and Choi 2004). We like to distinguish between two levels of information sharing: (1) purchasing information sharing – here the buyer only shares tactical information, e.g. purchase orders; and (2) supply chain information sharing – the supplier has access to strategic information, such as buyer’s inventory levels, sales forecasts, production schedules, etc.

Enter IT. Information technology (IT) offers two important enablers of information sharing—electronic communication media and supply chain systems. While supply chain systems transform raw data into information to support decision making, electronic communication media transmit formatted data and/or information within and among organizations.

CPFR. Conceptually, our model is in alignment with Collaborative Planning, Forecasting and Replenishment (CPFR). While electronic communication technology and systems software enable CPFR, a spirit of collaboration is essential as well (Smith 2006). Supply chain partners using CPFR share information intensively, and work closely together to develop joint forecasts and business plans. The ultimate purpose of CPFR is to improve supply chain performance (Ireland 2005).

Research Hypotheses. Inspired by the SCM and CPFR literature, along with focus groups with supply management practitioners, we tested the following seven hypotheses—

H1: Electronic communication media enable closer buyer/supplier relationships.

H2: Electronic communication media facilitate supply chain information sharing.
H3: Supply chain systems enable closer buyer/supplier relationships.
H4: Supply chain systems facilitate supply chain information sharing.
H5: Supply chain information sharing enables closer buyer/supplier relationships.
H6: Supply chain information sharing yields performance improvement.
H7: Closer buyer/supplier relationships yield performance improvement.

The figure below depicts our model, with information sharing at the heart of SCM. The seven hypotheses are represented by the arrows in the figure.

Survey Results. To test these hypotheses, data were gathered via a questionnaire e-mailed to 11,150 Canadian managers. As an incentive, all survey respondents were entered in a drawing for a digital camera. A total of 1,140 responses were received; a response rate of 10.2 percent. Only responses from supply chain professionals (n = 527) were used in the statistical analysis.

As the table below shows, all seven hypotheses are supported by the data. Electronic media and supply chain systems facilitate information sharing and the formation of close relationships in the supply chain. In addition, information sharing and close relationships lead to improved performance. Finally, there is a strong link between information sharing and relationships.
### Structural Relationships

<table>
<thead>
<tr>
<th>Structural Relationships</th>
<th>Coefficient</th>
<th>t-statistic*</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_1$: Electronic Media → Relationships</td>
<td>0.22</td>
<td>4.73</td>
</tr>
<tr>
<td>$H_2$: Electronic Media → Information Sharing</td>
<td>0.11</td>
<td>2.30</td>
</tr>
<tr>
<td>$H_3$: Supply Chain Systems → Relationships</td>
<td>0.43</td>
<td>4.71</td>
</tr>
<tr>
<td>$H_4$: Supply Chain Systems → Information Sharing</td>
<td>0.47</td>
<td>5.21</td>
</tr>
<tr>
<td>$H_5$: Information Sharing → Relationships</td>
<td>0.34</td>
<td>6.48</td>
</tr>
<tr>
<td>$H_6$: Information Sharing → Performance</td>
<td>0.22</td>
<td>3.96</td>
</tr>
<tr>
<td>$H_7$: Relationships → Performance</td>
<td>0.26</td>
<td>4.85</td>
</tr>
</tbody>
</table>

*t-statistics > |2| are considered statistically significant.

### Implications for Supply Managers

We believe these results compel the following plan of action, including numerous questions worthy of consideration.

1. **Identify a select few potential partners among your suppliers.** Which suppliers would be attractive supply chain partners? What makes your organization an attractive partner?

2. **Determine joint information requirements with your potential partners.** What information do you need? What information do your suppliers need? What information are you willing to share with suppliers, and under what conditions? Are you getting enough information? Are you getting too much information?

3. **Develop an information technology (IT) and knowledge management (KM) strategy to support supply chain information sharing and relationships.** What technology is needed? Are there opportunities for joint investment in technology with your supply chain partners? What is your approach to knowledge management (KM)?

### REFERENCES


