

# More Effective Transfer of Competitor and Customer Intelligence *Mediating Roles of Common Knowledge Sharing and Source Credibility*

Sirisuhk Rakthin<sup>1</sup>, Roger J. Calantone<sup>1</sup> and Seungho Choi<sup>2</sup>

<sup>1</sup>Department of Marketing, Eli Broad Graduate School of Management, Michigan State University, East Lansing, U.S.A.

<sup>2</sup>Department of Management, Ewha School of Business, Ewha Womans University, Seoul, Korea

**Keywords:** Competitor Intelligence, Customer Intelligence, Perception of Common Knowledge Sharing, Source Credibility, Corporate Culture, Motivation, Inter-departmental Relationship, Ties.

**Abstract:** This research study examines the antecedents of competitor and customer intelligence transfer process between front-line and support personnel. Using structural equation analysis, the authors analyzed relationships among seven constructs—ties, motivation, supportive corporate culture, inter-departmental relationship, perception of common knowledge sharing, source credibility, and a transfer of competitor and customer intelligence. Hypotheses were tested among business executives and managers in four organizations in Thailand. The findings support the partially mediating effects of perception of common knowledge sharing and source credibility on a relationship between the antecedents and a transfer of competitor and customer intelligence.

## 1 INTRODUCTION

The ability to transfer knowledge effectively among individuals is critical to a host of organizational processes and outcomes (Reagans and McEvily, 2003); (Szulanski, 1996). According to some scholars, the ability to transfer and use market intelligence represents a distinct source of competitive advantage for organizations (Menon and Varadarajan, 1992); (Maltz and Kohli, 1996). Managers often obtain intelligence formally (e.g., monthly reports, sales meeting) and informally (e.g., hall talk, telephone phone conversation, e-mail) from various personal and published sources. Informal interpersonal knowledge and information transfer are thought to play an important role in the knowledge transfer process (Reagans & McEvily, 2003), especially when considering a transfer of competitor and customer intelligence within the organization.

Several studies extensively examined the relationship between informal networks and knowledge transfer; yet, despite unique characteristics of competitor and customer intelligence which comprise explicit and tacit knowledge and are very sensitive and critical to corporate advantage and competitive strategy, several organizational and individual conditions

encourage or support transfer of intra-firm competitor and customer intelligence.

Hence, one expects there are a number of antecedents that influence the effectiveness of competitor and customer intelligence transfer between the front-line personnel and the support units/personnel. Structural equation analysis was employed to analyze relationships among seven constructs—ties, motivation, supportive corporate culture, inter-departmental relationship, perception of common knowledge sharing, source credibility, and a transfer of competitor and customer intelligence. In addition, this research study also examines the impact of two potential mediating constructs—a perception of common knowledge sharing and a source credibility—including an independent effect of these two mediators on the extent of competitor and customer intelligence transfer within an organization. It was hypothesized that the (1) recipient's perception of source credibility and (2) perception of benefit and necessity of sharing common knowledge will mediate a relationship between personal ties, motivation, inter-departmental relationship, supportive corporate culture and the extent of the competitor and customer intelligence.

The hypotheses were tested among participants in 4 firms in Thailand. Targeted respondents were

executives and middle managers involved in front-line tasks (e.g., sales and marketing) and support tasks (e.g., sales support, technical support, legal, finance and accounting, and etc.). The findings support the partially mediating effects of perception of common knowledge sharing and source credibility on a relationship between the focal constructs and a transfer of competitor and customer intelligence. The empirical results indicate that although inter-departmental relationship does not affect the perception of sharing common knowledge and the personal ties does not predict the source credibility, both mediators still have a substantial influence on a transfer of competitor and customer intelligence. In addition, a significant relationship was found between supportive corporate culture and a transfer of competitor and customer intelligence. Therefore, it can be safely concluded that source credibility partially mediates a relationship between supportive corporate culture and a transfer of competitor and customer intelligence.

## 2 FOCAL CONSTRUCTS

### 2.1 Competitor and Customer Intelligence Transfer

Generally, knowledge can be transferred from a source to a recipient through a variety of formal and informal mechanisms. Researchers have found a number of explanations for how the transfer processes occur, including how the organizational and individual factors can facilitate or obstruct them (e.g., Cavusgil et al., 2003); (Gupta and Govindarajan, 2000); (Nonaka, 1994). Since this study intends to examine a transfer of competitor and customer intelligence, their unique characteristics will be of primary focus.

There are several definitions of competitor and customer intelligence in various dimensions (e.g., Kelly, 2006); (Wright et al., 2002). In brief, competitor intelligence could be summarized as the knowledge that enables us to know what competitors have and their competing strategy, while customer intelligence could be considered as the knowledge that enables us to know what the customers need and their buying decision model.

A challenging point for managing an intra-firm knowledge transfer mechanism is that many firms fail to analyze competitor and customer intelligence collected from or by the front-line units, e.g., marketing, sales, or customer service personnel, or to integrate this data into the general market

intelligence system (Festervand et al., 1988); (Le Meunier-FitzHugh and Piercy, 2006). Thus, we assess the extent of a transfer of competitor and customer intelligence between the front-line and support units from the respondents' perception of their dissemination of such knowledge across departmental boundaries, as valuable, timely, and relevant to company's current objectives.

### 2.2 Ties and Inter-departmental Relationship

The strength of an interpersonal connection can also affect a knowledge transfer process either within or across firms (Granovetter, 1973); (Hansen, 1999). Individuals who frequently share communications or have strong emotional attachment with each other are more likely to share knowledge than those who communicate infrequently or who are not emotionally attached (Reagans and McEvily, 2003). In this study, the assessments of personal ties and inter-departmental relationship are separated to help differentiate the effects on the competitor and customer intelligence transfer.

### 2.3 Motivation

Cyert (1995) suggested that a unit with uniquely valuable knowhow is likely to enjoy an "information monopoly" within an organization (Gupta and Govindarajan, 2000). In addition, the sender of such knowledge may be unwilling to devote time and resources to support the transfer (Szulanski, 1996). However, considering the fact that employees may also possess personal motivation to retrieve the knowledge or, in this case, the competitor and customer intelligence, from the other units in the organization, we have decided to include the respondent's perception of need and value of competitor and customer intelligence transfer in the research study. We expect that the reciprocal interaction to transfer such intelligence will increase the extent of a dissemination of competitor and customer intelligence within an organization.

### 2.4 Supportive Corporate Culture

Similar to the personal motivation, the supportive corporate culture is expected to stimulate an intra-firm transfer mechanism of competitor and customer intelligence by increasing the "eagerness to share and help others" (Gupta and Govindarajan, 2000) and encouraging the sharing knowledge activities either at the individual or group level.

## 2.5 Perception of Having Common Knowledge and Source Credibility as Mediating Constructs

The degree to which the sender and the recipient share common knowledge is expected to have a positive effect on knowledge and information transfer since it will be easier for an individual to accumulate knowledge in the areas in which he or she has made prior investments (Reagans and McEvily, 2003). However, to our current knowledge, no research study has examined the effect of the sender's perception of benefit and necessity of sharing common knowledge on the relationship between personal ties, motivation, inter-departmental relationship, and supportive corporate culture and the extent of the competitor and customer intelligence. We expect that the sender's perception of common knowledge sharing will mediate such relationships.

In addition, the reluctance of some recipients to accept the knowledge or information because the source unit is not perceived as reliable, trustworthy, or knowledgeable, has long been widely accepted among research scholars (Szulanski, 1996); (Zaltman et al., 1973). Lack of the source credibility may reduce the motivation to receive such intelligence from that source. Furthermore, advice and examples from such source are likely to be challenged and resisted (Szulanski, 1996); (Walton, 1975). However, because most competitor and customer intelligence are collected by sales or marketing personnel, the recipient's perception of source credibility could become even more crucial. As Moss (1979) noted, since the prime interest of salespeople is making sales, they may not be objective observers or reporters of reliable information. Thus, we expect that the recipient's perception of source credibility will mediate a relationship between personal ties, motivation, inter-departmental relationship, supportive corporate culture and the extent of the competitor and customer intelligence. The overarching framework developed in this section can be translated into the following hypotheses:

H1: There is a positive relationship between strong ties of front-line and support personnel, personal motivation, inter-departmental relationship, supportive corporate culture and the perception of benefit and necessity of sharing common knowledge.

H2: There is a positive relationship between strong ties of front-line and support personnel, personal motivation, inter-departmental relationship,

supportive corporate culture and the source credibility.

H3: Perception of benefit and necessity of sharing common knowledge mediates relationship between strong ties of front-line and support personnel, personal motivation, inter-departmental relationship, supportive corporate culture and the extent of competitor and customer intelligence transfer.

H4: Source credibility mediates relationship between strong ties of front-line and support personnel, personal motivation, inter-departmental relationship, supportive corporate culture and the extent of competitor and customer intelligence transfer.

## 3 METHOD

### 3.1 Samples and Data Collection

Data are collected from respondents in 4 companies in Thailand. Two of them are in banking and financial businesses, the third one is in telecommunications, and the last one is in online-game business. The authors developed an instrument to assess the focal and mediating constructs as described earlier. The instrument was evaluated initially by interviewing executives and senior managers in each company. In each interview, the manager was asked to fill out the survey in the presence of the researcher and raise questions as problems or any ambiguities arose. After the first 10 interviews, a new survey was drafted professionally. Then, a pre-test study was conducted by interviewing a new group of executives and senior managers in each company (N = 30). The responses from the pre-test significantly assist the researcher in understanding (a) nature of existing workflow among front-line and support personnel, (b) competitive environments in the industries, and (c) executive's opinion towards a transfer of competitor and customers intelligence between front-line and support personnel in each company.

After the pre-test, a total number of 399 refined surveys were sent to the respondents in four organizations. Targeted respondents are executives and middle managers who are involved in front-line tasks (e.g., sales and marketing) and support tasks (e.g., sales support, technical support, legal, finance and accounting, and etc.). The respondents were informed that the survey was for both educational and managerial purposes and that their responses would be anonymous. A total of 180 responses were

returned, with a response rate of 45%, while 18 out of 180 were excluded from the final response calculation because of some missing data, leaving a base of 162 respondents as a final sample size.

The procedures recommended by Brislin (1990) for survey translations across different languages were applied before the pre-test study. It is important to stress that this research study elicited perceptions of the personnel who were strongly involved in a competitor and customer intelligence transfer process. As the researcher intended to model managerial behaviour, it may be more appropriate to focus on perceived rather than actual situations (Weick, 1969).

### 3.2 Measures

Twenty-eight measures are used to capture seven latent constructs. All of the exogenous and endogenous measures were adapted from a variety of sources. Several techniques were used in the survey design to decrease the potential for halo effects, including a use of a variety of measurement scales, grouping together items designed to measure a single construct, and spatially separating the items for various constructs. In a survey, the questions include two different types of scale—Likert-scaled and semantic differential. *Due to limited space in the conference proceedings, details of all measurement items including all tables and figures in this paper cannot be presented here.*

## 4 RESULTS

### 4.1 Measurement Model

According to Andersen and Gerbing (1988), we use a two-step approach in testing structural equation models. This approach is particularly salient when using structural equation modeling to assess construct validity since it is essential to identify potential sources of misfit so that researchers can reach consensus on a well-established construct measure before testing substantive research questions. Therefore, the measurement model will be tested and followed by a simultaneous test of the measurement model and the structural model.

As recommended by Bollen (1989) and Nunnally (1978), a confirmatory factor analysis (CFA) was conducted to assess the measurement model. All indicators were restricted to load on one factor to which they are supposed to measure so as to reflect the hypothesized simple structure of the

measurement model (Thurston, 1940); (Kaplan, 2000). However, LM Test was used to examine whether the restrictions imposed on the model were valid. Factor variances were constrained to equal one to set the metric of the latent variables. In addition, the latent variables were allowed to covary freely to consider the validation of this measurement model. The overall fit indices obtained in EQS (Bentler, 2004) were close to admissible range ( $\chi^2 = 530.32$  (df=313),  $p=0.00$ , CFI=.97, GFI=.83, and RMSEA = .058 with 90% confidence interval .049-.067). All exogenous and endogenous constructs were measured in the following manner.

To test for a reliability of all measurement scales in the model, composite reliability or CR (Werts et al., 1974) is used to examine the internal consistency of a measurement scale. CR is considered to be a closer approximation to reliability than coefficient alpha (Chin, 1998). Internal consistency reliabilities for most measurement scales in a model were found to be above commonly accepted standards ( $CR > .7$ ). Hair et al., (2007) suggest that reliability is also an indicator of convergent validity and that high construct reliability indicates the existence of internal consistency.

In addition, the high factor loadings of each indicator and high coefficient average variance extracted or AVE ( $> .5$  in all cases, and in most cases  $> .7$ ) also indicate high convergent validity. Furthermore, since construct validity is proved through establishment of convergent and discriminant validities, the procedure suggested by Fornell and Larcker (1981) is frequently used to test discriminant validity. According to this procedure, the square root of the coefficient average variance extracted or AVE for a given construct should be larger than any correlation between that construct and the other constructs. This result reveals good discriminant validity. Thus, we can conclude that each latent construct explains its item measures better the other constructs or, in other words, individual measured items also represent only one latent construct in the model.

### 4.2 Testing the Hypothesized Structural Model

The hypothesized structural model was tested using EQS (Bentler, 2004). Residual analysis supported multivariable normality assumptions and revealed that there are no influential outliers. ML (Maximum Likelihood) estimation procedures are employed. The overall fit indices were close to acceptable range ( $\chi^2 = 503.22$ :df=313,  $p=0.00$ , CFI=.97,

GFI=.83, and RMSEA=.058 with 90% confidence interval .049-.067). Following the proposed conceptual model, we first discuss the links between the four antecedents and the mediators, and then the effects of the mediators on such paths.

#### 4.2.1 Results of Main Effects

H1 states the positive relationship between strong ties of front-line and support personnel, personal motivation, inter-departmental relationship, supportive corporate culture and the perception of benefit and necessity of sharing common knowledge. The empirical results afford mixed support for this hypothesis. Ties, motivation, and supportive corporate culture predict the extent of perception of common knowledge sharing. However, the inter-departmental relationship does not predict the perception of benefit and necessity of sharing common knowledge ( $\gamma = -.082$ , n.s.). Thus, we conclude that the results partially support H1.

H2 states that there is a positive relationship between strong ties of front-line and support personnel, personal motivation, inter-departmental relationship, supportive corporate culture and the source credibility. As theorized, motivation, inter-departmental relationship, and supportive corporate culture predict the extent of source credibility. However, the personal ties does not predict the source credibility ( $\gamma = -.098$ , n.s.), thus H2 is partially supported.

#### 4.2.2 Results of Mediating Effects

The hypothesized mediating models (H3 and H4) state that a sender's perception of benefit and necessity of sharing common knowledge and a source credibility mediate a relationship between the four main antecedents and a transfer of competitor and customer intelligence. Although inter-departmental relationship does not affect the perception of sharing common knowledge and the personal ties does not predict the source credibility, both mediators still have a substantial influence on a transfer of competitor and customer intelligence. Thus, H3 and H4 are also partially supported.

In addition, we also found a significant relationship between supportive corporate culture and a transfer of competitor and customer intelligence ( $\gamma = .330$ ,  $p < .01$ ). So, it can be concluded that source credibility partially mediates a relationship between supportive corporate culture and a transfer of competitor and customer intelligence. We also conduct the hypothesized structural model without residual covariation within

a set of indicators and across latent variables (unconstrained model). There are no significant differences in structural elements (paths) between unconstrained and constrained model. Since the key concern in the hypothesized model is the mediating role of a perception of common knowledge and a source credibility in determining the extent of intelligence transfer, it is logical to test whether the deletion of some mediation paths will significantly improve the model fit.

## 5 DISCUSSION

This research represents one of only a few empirical examinations of mediating effects of a perception of common knowledge sharing and a source credibility on a relationship between the focal antecedents and a transfer of competitor and customer intelligence. There are a number of reasons that the unique characteristics of competitor and customer intelligence including the nature of front-line personnel will shape an intra-firm transfer mechanism of competitor and customer intelligence. For example, the recipients may be reluctant to accept the transferred competitor and customer intelligence if the source unit is not perceived as reliable, trustworthy, or knowledgeable (Szulanski, 1996); (Zaltman et al., 1973). Also, suggestions from that particular source are likely to be challenged and resisted (Szulanski, 1996); (Walton, 1975). In addition, based upon the results of the interview during the pre-test study, most of the managers who were in the support units believe that front-line personnel may not be willing to report or share information or knowledge or even intentionally keep some parts of competitor and customer intelligence to themselves, especially when they expect that a conflict of interest may occur as a result of sharing such knowledge. The concept of agent-principal relationship and intrinsic motivation in agency theory could be applied in this case (Eisenhardt, 1989). Thus, the empirical analysis of a competitor and customer intelligence transfer suggested that the source credibility could mediate a relationship between these antecedents—(a) inter-departmental relationship, (b) corporate culture, and (c) personal motivation—and the extent of competitor and customer intelligence transfer between the front-line and the support personnel. It is logical to acknowledge that a source credibility does not mediate a relationship between personal ties and a competitor and customer intelligence transfer since the strong personal ties between front-

line and support personnel could reduce the recipient's suspicion of whether the source of such intelligence is unreliable. This notion is empirically supported by the findings in this study.

Furthermore, two mediators illustrates that the flow of knowledge between senders and recipients can be affected by cognitive and relational factors. Source credibility can be considered as a social and relational mediator. Knowledge transfer process gets involves with the connections of employees and the quality of relationships between recipients and senders influences the process. In addition, a perception of benefit and necessity of common knowledge sharing represents cognitive perspective of knowledge transfer mechanisms. Sharing cognitive map between senders and recipients is the critical path of knowledge transfer.

## REFERENCES

- Anderson, J. C. & Gerbing D. W., (1988). Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach. *Psychological Bulletin*, 103(3), 411-423.
- Bollen, K. A., (1989). *Structural Equations with Latent Variables*. John Wiley & Sons, Inc.
- Brislin, R. W., (1990). Applied Cross-Cultural Psychology: An Introduction. In R. W. Brislin (Ed.). *Applied cross-cultural psychology*. Newbury Park, CA: Sage.
- Cavusgil, S. T., Calantone, R. J. & Zhao, Y., (2003). Tacit Knowledge Transfer and Firm Innovation Capability. *Journal of Business & Industrial Marketing*, 18(1), 6-21.
- Chin, W. W., (1998). The Partial Least Squares Approach to Structural Equation Modeling. In Marcoulides, G.A. (Eds). *Modern Methods for Business Research*. Lawrence Erlbaum Associates Inc., Hillsdale, NJ, 295-336.
- Cyert, R. M., (1995). Management of Knowledge. Keynote Address at the Carnegie Bosch Institute's 1995 International Conference on High Performance Global Corporations. Excerpted in *Global View*, Newsletter of the Carnegie Bosch Institute for Applied Studies in Management, The Carnegie Mellon University.
- Eisenhardt, M. K., (1989). Agency Theory: An Assessment and Review. *Academy of Management Review*, 14(1), 57-74.
- Festervand, T. A., Grove, S. J. & Reidenbach, R. E., (1988). The Sales Force as a Marketing Intelligence System. *The Journal of Business and Industrial Marketing*, 3(1), 53-59.
- Granovetter, M., (1973). The Strength of Weak Ties. *American Journal of Sociology*, 6, 1360-1380.
- Gupta A. K. & Govindarajan V., (2000). Knowledge Flows within Multinational Corporations. *Strategic Management Journal*, 21, 473-496.
- Hansen, M. T., (1999). The Search-Transfer Problem: The Role of Weak Ties in Sharing Knowledge across Organization Subunits. *Administrative Science Quarterly*, 44, 82-111.
- Hair, J. F., Black, W., Babin, B., Anderson, R. E. & Tatham, R., (2007). *Multivariate Data Analysis, 6<sup>th</sup> edition*. Englewood Cliffs, N.J.:Prentice Hall.
- Kaplan, D., (2000). *Structural Equation Modeling: Foundations and Extensions*. Sage Publications.
- Kelly, S., (2006). *Customer Intelligence: From Data to Dialogue*. Wiley, Chichester.
- Le Meunier-FitzHugh, K. & Piercy, N. F., (2006). Integrating Marketing Intelligence sources. *International Journal of Market Research*, 48 (6), 699-719.
- Maltz, E., & Kohli, A., (1996). Market Intelligence Dissemination across Functional Boundaries. *Journal of Marketing Research*, 33, 47-61
- Menon, A., & Varadarajan, P. R., (1992). A Model of Marketing Knowledge Use within Firms. *Journal of Marketing*, 56 (4), 53-71.
- Moss, C., (1979). Industrial Salesmen as a Source of Marketing Intelligence. *European Journal of Marketing*, 13 (3), 94-102.
- Nonaka, I., (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organization Science*, 5(1), 14-37.
- Nunnally, J. C., (1978). *Psychometric Theory*. McGraw-Hill: New York.
- Reagans, R. & McEvily, B., (2003). Network Structure and Knowledge Transfer: The Effects of Cohesion and Range. *Administrative Science Quarterly*, 48, 240-267.
- Szulanski, G., (1996). Exploring Internal Stickiness: Impediments to the Transfer of Best Practice within the Firm. *Strategic Management Journal*, 17, 27-43.
- Thurston, L. L., (1940). Experimental Study of Simple Structure. *Psychometrics*, 5, 153-168.
- Walton, R. E., (1975). The Diffusion of New Work Structures: Explaining Why Success didn't Take. *Organizational Dynamics*, Winter, 3-21.
- Weick, K., (1969). *The Social Psychology of Organizing*. Boston: Addison Wesley Publishing Company.
- Werts, C. E., Linn, R. L. & Jöreskog, K. G., (1974). Interclass Reliability Estimates: Testing Structural Assumptions. *Educational and Psychological Measurement*, 34(1), 23-33.
- Wright, S., Pickton, W. D., & Callow, J., (2002). Competitive Intelligence in UK Firms: A Typology. *Marketing Intelligence & Planning*, 20(6), 349-360.
- Zaltman G., Duncan R. & Holbeck J., (1973). *Innovations and Organizations*. Wiley, New York.