THE IMPACT OF STAKEHOLDER IDENTIFICATION AND SALIENCE ON THE SUPPLIER’S IT INFRASTRUCTURE INTEGRATION WITH CUSTOMERS

Jeffrey C. F. Tai  
National Chiayi University, jeffreycftai@mail.nctu.edu.tw

Kai Wang  
National University of Kaohsiung, kwang@nuk.edu.tw

Gloria H. W. Liu  
National Central University, glorialiu@mgt.ncu.edu.tw

Follow this and additional works at: http://aisel.aisnet.org/pacis2014

Recommended Citation

This material is brought to you by the Pacific Asia Conference on Information Systems (PACIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in PACIS 2014 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
THE IMPACT OF STAKEHOLDER IDENTIFICATION AND SALIENCE ON THE SUPPLIER’S IT INFRASTRUCTURE INTEGRATION WITH CUSTOMERS

Jeffrey C. F. Tai, Department of Management Information Systems, National Chiayi University, Chiayi, Taiwan, R.O.C., jeffreycftai@mail.nctu.edu.tw

Kai Wang, Department of Information Management, National University of Kaohsiung, Kaohsiung, Taiwan, R.O.C., kwang@nuk.edu.tw

Gloria H. W. Liu, Department of Information Management, National Central University, Jung Li, Taiwan, R.O.C., gloraliu@mgt.ncu.edu.tw

Abstract

With the prevalence of electronic supply chain integration (e-SCI), increasingly more customers are asking their suppliers to integrate IT infrastructure for SCM and many suppliers indeed comply with their customers’ requests. However, a supplier can have multiple customers and limited resources. Therefore, the supplier typically responds to its customers’ requests for IT infrastructure integration selectively. To investigate this phenomenon, this study draws on Mitchell, Agle, and Wood’s (1997) stakeholder identification and salience framework to examine whether the customer’s stakeholder salience influences the supplier’s IT infrastructure integration for SCM. This study also examines whether the customer’s legitimacy, power, and urgency determine their salience perceived by the supplier. This study surveyed Taiwanese manufacturers. Based on one hundred and eight effective questionnaires, our findings showed that: (1) stakeholder salience is positively associated with IT infrastructure integration for SCM (i.e., data consistency and cross-functional application integration); (2) legitimacy and power have positive impacts on stakeholder salience while urgency does not. Our findings can facilitate customers to select appropriate suppliers for successful promotion of IT infrastructure integration for SCM.

Keywords: IT infrastructure integration for SCM, Stakeholder identification, Stakeholder salience
1. INTRODUCTION

Ever-intensified market competition has driven firms to pursue agility by selectively managing suppliers and treating them as a single entity (Min, Kim, and Chen, 2008). In such arrangement of supply chains, the focal firm and the selected suppliers cooperate with each other intensively in specific areas, including information sharing, information system linkage, process integration, joint decision making, knowledge creation, and IT-enabled resource pooling (Klein and Rai, 2009; Malhotra, Gosain, and El Sawy, 2005; Nevo and Wade, 2010; Rai, Patnayakuni, and Seth, 2006; Saeed, Malhotra, and Grover, 2011). Such initiatives synchronize and integrate supply chain activities across the partners seamlessly, so that the supply chains can better co-create customer values that other supply chains fail to achieve (Vargo and Lusch, 2004). However, the emergence of managed supply chains also brings new challenges to suppliers. Typically, most suppliers serve more than one single customer. Entering into a managed supply chain means that an supplier has to comply with the focal customer’s policy, which incurs considerable transaction costs. It is hence impossible for the supplier to engage in all of its customers’ managed supply chain. Therefore, suppliers need to deal with the issue of “who really count?” in making the partnership decision (Freeman, 1994), in which the decision of supplier-customer IT infrastructure integration is one (Rai et al., 2006).

This issue has been examined in the prior inter-organizational systems (IOS) research. For example, Oliver (1990) identified asymmetry, reciprocity, efficiency, and legitimacy as critical contingencies of interorganizational relationships that can influence trading partners’ IOS linkages (Robey, Im, and Wareham, 2008). Subsequent IOS studies found that a focal buyer may coerce or induce its suppliers to participate in IOS integration as long as the buyer possesses power over or has established trust relationships with the suppliers (e.g., Hart and Saunders, 1997; Ke et al., 2009; Patnayakuni, Rai, and Seth, 2006). Additionally, transaction attributes and various uncertainty factors have been identified as pivotal antecedents to IOS adoption that can be utilized to reduce transaction costs and improve interfirm information processing capacities (Kauffman and Mohtadi, 2004; Premkumar, Ramamurthy, and Saunders, 2005). Recent research also found that trading partners may be propelled to engage in IOS linkage due to institutional pressures (Teo, Wei, and Benbasat, 2003). Nevertheless, prior studies only identified antecedents of IOS linkages at the transaction-, dyadic-, or institutional-level; they did not address how the supplier prioritizes the request of forming IOS linkages from multiple customers.

In an attempt to shed light on this research gap, this study draws on the lens of stakeholder theory to examine the following questions:

- Is an supplier’s extent of IT infrastructure integration for SCM with a customer influenced by the customer’s stakeholder salience?
- What are the antecedents of a customer’s stakeholder salience perceived by an supplier?

The remainder of this paper is organized as follows. Section two illustrates the theoretical background and research hypotheses of this study. Section three states the research methods, and section four reports the results of data analysis. The last section presents the conclusion and future research direction.
2. THEORETICAL BACKGROUND AND MODEL

2.1. IT Infrastructure Integration for SCM

Drawing on the IT-enabled organizational capabilities perspective, Rai et al. (2006) suggested that firms that develop IT infrastructure integration for SCM are enabled to create a better supply chain integration capability and hence can obtain significant and sustainable performance gains. Such a practice has been increasingly exploited by big-name companies including Dell, Cisco Systems, and United Parcel Service. Technically, an IT platform is composed of a hierarchy of IT components, including data, application, and process (Weill and Broadbent, 1998). Seamless integration of higher-level IT components requires that lower-level components be connected based on shared standards (Ross, 2003). Hence, to support seamless supply chain processes, it is necessary to integrate lower-level IT components such as applications and data. This study posits that cross-functional application integration and data consistency are pivotal aspects of IT infrastructure integration for SCM. Moreover, IT infrastructure integration for SCM refers to the integration of information systems across the supplier and the customer for supporting supply chain exchanges. It allows trading partners to access consistent supply chain-related information in a timely way.

Cross-functional application integration is defined as the degree of real-time communication of a focal supplier’s customer-facing information systems (e.g., CRM) with its internal enterprise systems (e.g., ERP) as well as its customer’s supply chain-related systems (e.g., SCM or e-procurement). Recently, the rise of Internet and prevalence of open standards for data interchange (e.g., RosettaNet) allows supply chain exchanges with less efforts. However, extensive mutual commitment remains necessary because the supplier and the customer still need to map data schemes, translate data elements, convert data types and clean data for data integrity. The problem with data may hinder cross-functional application integration for SCM. As a result, this study argues that data consistency, defined as the degree to which common data definitions have been achieved across the focal supplier and its customer, is necessary for suppliers to achieve cross-functional application integration with customers.

H₁: Data consistency has a positive impact on cross-functional application integration.

2.2. Stakeholder Identification

The stakeholder approach asserts that it is management’s roles and responsibilities to include interests and claims of relevant stakeholders in order to maximize profits of the organization (Freeman, 1994). There are three streams of stakeholder studies: descriptive, instrumental and normative. Past studies adopting a descriptive stakeholder approach has showed that the nature, values, and relative influence of stakeholders predict an organization’s behavior (Jawahar and Mclaughlin, 2001); the studies adopting the instrumental stakeholder approach found that the practice of stakeholder management is associated with organizational performance (Jones, 1995); the normative stakeholder research advocated the stakeholders’ moral rights for participating in corporate activities are intrinsically valuable to the organization and should be taken care of in a fair way (Phillips, 1997). These streams
of stakeholder research not only help define who are the stakeholders for the organization but also suggest that managing stakeholders appropriately is instrumentally or morally important for the survival of the organization (Donaldson and Preston, 1995). Accordingly, this study defines the stakeholder as an actor who is directly relevant to an organization’s economic interests or to the organization’s duty of fairly distributing the harms and benefits of its action. In this research, customers are stakeholders of the supplier because they are pivotal to the economic interests of the supplier and they would be affected by the supplier’s adoption of IT infrastructure integration for SCM with them.

2.3. **Stakeholder Salience**

Stakeholder engagement has been identified as a practice the organization undertakes to involve stakeholders in a positive manner (Greenwood, 2007). By being responsive, an organization can acquit its accountability and responsibility towards its stakeholders (Gray, 2002). Stakeholder engagement also allows the organization to manage risks posed by influential stakeholders (Deegan, 2002). As such, effective stakeholder engagement facilitates an organization to establish mutual beneficial and just scheme of cooperation with stakeholders, which in turn improves stakeholder support (Phillips, 1997).

In this study, the adoption of IT infrastructure integration for SCM is regarded as an effort by a supplier to engage its customer. Achieving IT infrastructure integration for SCM allows a supplier to delegate access rights of its information assets to customers (Rajan and Zingales, 1998). The customers thus are empowered to make joint decisions with the supplier with improved supply chain visibility (Aghion and Tirole, 1997; Spitzeck and Hansen, 2010). However, a supplier may have multiple customers and limited resources to engage all of its customers. Therefore, how a supplier makes choices among multiple customers determines whom and the extent to which it expends engagement efforts (i.e., the extent of IT infrastructure integration for SCM) (Magness, 2008; Mitchell et al., 1997; Neville et al., 2011; Crane and Ruebottom, 2011).

Social cognition theory suggests that social salience determines an individual’s attentional focus, which in turn influences the individual’s selective processing of relevant stimuli. Specifically, it is posited that the effect of social salience on attention is related to the effect of “selectivity” which can be further influenced by the “intensity” of the perception (Fiske and Taylor, 1984). Hence, the extent of social salience affects an individual’s mental effort devoted to the focus of attention. Applying this notion, Mitchell et al. (1997) defined stakeholder salience as the degree to which managers give priority to competing stakeholder claims. In this study, accordingly, a supplier tends to expend greater engagement efforts with the stakeholder perceived to be more salient. Therefore, this study argues that the higher a supplier’s perceived stakeholder salience with regard to a customer is, the greater the extent of their IT infrastructure integration for SCM is.

\[ H_{2a} \]: Customer’s stakeholder salience has a positive impact on the supplier’s data consistency.

\[ H_{2b} \]: Customer’s stakeholder salience has a positive impact on the supplier’s cross-functional application integration.
2.4. Antecedents of Stakeholder Salience

Because the degree of stakeholder salience is determined by the extent of selectivity and intensity of a stakeholder’s claim, Mitchell et al. (1997) went on and identified three antecedents of these two attributes, namely, legitimacy, power, and urgency.

Legitimacy is a generalized perception that something is desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions (Suchman, 1995). The normative stakeholder theory suggests that legitimacy is utilized to evaluate whether a stakeholder’s claim is intrinsically right and proper (Neville et al., 2011). The stakeholder’s claim can be a statement of its right or a response to a firm’s action. Besides, legitimacy is a desirable social good that is negotiated and shared at various levels of social organization. Both institutional theory and population ecology theory emphasize the importance of legitimacy to a firm’s survival (Meyer and Rowan, 1977; Carroll and Hannan, 1989). On the one hand, a firm could suffer from considerable pressures if it does not conform to social practices that are generally accepted (DiMaggio and Powell, 1983). On the other hand, a lack of legitimacy can increase a firm’s organizational mortality (Carroll and Hannan, 1989). Therefore, this study posits that a supplier tends to pay more attention to and respond to stakeholders with legitimate claims in order to increase its possibility of survival.

H₃: Legitimacy of IT infrastructure integration for SCM claimed by a customer is positively related to its stakeholder salience perceived by the respective supplier.

Power captures the influence aspect of the stakeholder-firm relationship (Mitchell et al., 1997). Dahl (1957) indicated that power exists in a relationship among social actors in which one actor, A, can get another actor, B, to do something that B otherwise would not have done. Past studies have identified various power bases that confer the ability of those who possess power to bring about the outcomes they desire (French and Raven, 1960). For example, Etzioni (1964) suggested a typology of power bases according to the resources used to exercise power: coercive power is based on the physical resources of force, violence, or restraint; utilitarian power is based on material or financial resources; normative power is based on symbolic resources. As such, a party in a relationship has power, to the extent it has or gains access to coercive, utilitarian, or normative means, to impose its will on the other party of the relationship. In our case, a supplier is said to be dependent on a customer to the extent that the customer controls the resources that the supplier values. Resource dependence theory suggests that resource dependence creates uncertainty that may threaten a firm’s survival (Pfeffer and Salancik, 1978). The theory suggests that a firm who is dependent on others tend to establish relationship with them in order to obtain the needed resources. In this study, this refers to that a supplier should seek to manage its customers who possess power over it in order to increase its autonomy. Hence, the higher the extent of power a customer has over a supplier is, the greater the extent of attention the supplier will put on the customer. According to Brown et al. (1995), the concept of power can be distinguished into two forms: mediated power and non-mediated power depending on whether the source does or does not control the reinforcements (e.g., rewards or punishments) to regulate the target’s behavior. This study thus proposes the following hypotheses.
H4a: A customer’s mediated power on a supplier is positively related to its stakeholder salience perceived by the supplier.

H4b: A customer’s non-mediated power on a supplier is positively related to its stakeholder salience perceived by the supplier.

Urgency is defined as the degree to which stakeholder claims call for immediate attention. Unlike that power and legitimacy are identified according to situational uniqueness of stakeholders, urgency is concerned with managerial perceptions about who is worthy of further attention as a key stakeholder. Mitchell et al. (1997) pointed out that such attention-getting capacity of urgent claims may be associated with the prevention of losses, the pursuit of goals, or selection pressures from the environments. They further indicated that urgency exists when two conditions are met: (1) when a relationship or claim is of a time-sensitive nature (i.e., time sensitivity) and (2) when that relationship or claim is important or critical (i.e., criticality). Urgency per se is not sufficient to identify a social entity as a stakeholder to the firm since it is irrelevant to whether there is a “stake” or “interest” involved in their relationship (Neville et al., 2011). However, urgency indeed may drive a firm to pay attention to an identified stakeholder when a relationship or claim is time-sensitive or when a relationship or claim is critical to the stakeholder (Jones, 1993). This is because either time sensitivity or criticality of a claim makes a social entity appears to be more demanding or dangerous to a firm. These claimants will actively seek power and/or legitimacy in order to be included within the managers’ consideration set. Therefore, managers should pay immediate attention to urgency claims in order to deal with the prevention of losses or outside pressures.

H5: Urgency of IT infrastructure integration for SCM claimed by a customer is positively related to its stakeholder salience perceived by the respective supplier.

3. RESEARCH METHODOLOGY

3.1. Data Collection

A cross-sectional mail survey was administered to collect data from manufacturing firms in Taiwan. A draft survey was developed largely based on measures identified in the literature as suitable for the current study. After compiling the English version of the questionnaire, the survey items were first translated into Chinese by a bilingual research associate and then verified and refined for its translation accuracy by two MIS professors. Two thousand manufacturing firms randomly selected from the directory of 2012 Top 5,000 Corporations in Taiwan published by China Credit Information Services, Ltd. serves as the samples for this study. The final questionnaire was distributed to the IS and SCM managers of these firms. Totally 146 surveys were returned, with 108 having completed data available for subsequent analysis. Since there were fifteen surveys undeliverable, the effective response rate of this study is 5.4%.

The characteristics of the responding firms are depicted in Table 1. Eighty eight, ninety five, and eighty nine percent of the responding firms, respectively, have assets of greater than NTD 80 million, annual sales of greater than NTD 100 million, and over 50 employees. This indicates that our samples
represent medium to large companies in Taiwan. In terms of industry distribution, the computer and electronics industry category accounts for over 35 percent of the responding firms. This category is greater than the proportion of the other industry categories, ranging from 3.7 to 13.9 percent of the responding firms.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage of firms (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automobile</td>
<td>11.1</td>
</tr>
<tr>
<td>Chemical</td>
<td>10.2</td>
</tr>
<tr>
<td>Computer &amp; electronics</td>
<td>35.2</td>
</tr>
<tr>
<td>Machine &amp; tool</td>
<td>13.9</td>
</tr>
<tr>
<td>Metal</td>
<td>11.1</td>
</tr>
<tr>
<td>Textile</td>
<td>3.7</td>
</tr>
<tr>
<td>Food</td>
<td>6.4</td>
</tr>
<tr>
<td>Other</td>
<td>8.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total assets (NT$)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 0.08B</td>
<td>12.0</td>
</tr>
<tr>
<td>0.08 - 0.5B</td>
<td>38.9</td>
</tr>
<tr>
<td>0.5 - 1B</td>
<td>18.5</td>
</tr>
<tr>
<td>1 - 5B</td>
<td>19.4</td>
</tr>
<tr>
<td>5 - 10B</td>
<td>4.7</td>
</tr>
<tr>
<td>10 - 50B</td>
<td>4.6</td>
</tr>
<tr>
<td>Over 50B</td>
<td>1.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Sales (NT$)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 0.1B</td>
<td>4.6</td>
</tr>
<tr>
<td>0.1 - 1B</td>
<td>40.7</td>
</tr>
<tr>
<td>1 - 5B</td>
<td>36.1</td>
</tr>
<tr>
<td>5 - 10B</td>
<td>6.5</td>
</tr>
<tr>
<td>10 - 100B</td>
<td>8.3</td>
</tr>
<tr>
<td>Over 100B</td>
<td>3.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than or equal to 50</td>
<td>11.1</td>
</tr>
<tr>
<td>51 - 200</td>
<td>39.8</td>
</tr>
<tr>
<td>201 - 1,000</td>
<td>32.4</td>
</tr>
<tr>
<td>1,001 - 5,000</td>
<td>13.9</td>
</tr>
<tr>
<td>Over 5,000</td>
<td>2.78</td>
</tr>
</tbody>
</table>

Table 1. Demographics of the responding firms (n=108)

3.2. Measures

IT infrastructure integration for SCM. This construct was operationalized into two formative constructs: data consistency and cross-function application integration (Rai et al., 2006). Data consistency was measured using three items and cross-function application integration was measured with four items. These items were all on a five-point Likert scale anchored from 1 “strongly disagree” to 5 “strongly agree.”

Stakeholder salience. This study adapted the instrument developed by Agle et al. (1999) to measure stakeholder salience. There are three measurement items, and they measure the extent of agreement on (1) the customer received high priority from our firm, (2) the customer received a high degree of time and attention from our firm, and (3) satisfying the claims of this customer was important to our firm, using five-point Likert scale design.
Legitimacy. Based on Suchman (1995), legitimacy was defined as “a generalized perception that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.” To assess whether a customer’s claim of IT infrastructure integration for SCM is desirable, proper, or appropriate under different socially constructed systems, this study evaluated various perspectives ranging from the customer, the supplier, employees of the supplier, the society, and the competitor (Mitchell et al., 1997). These items were all on a five-point Likert scale anchored from 1 “strongly disagree” to 5 “strongly agree.”

Power. According to Brown et al. (1995), power was operationalized into mediated power and non-mediated power. Mediated power is comprised of three dimensions, including reward power, coercive power, and legitimate power; non-mediated power consists of expertise power, referent power, and information power. Both mediated power and non-mediated power were modeled as second-order formative constructs. The instruments for these dimensions were adapted from Ke et al. (2009), in which the items adopted five-point Likert scale design.

Urgency. Urgency is defined as the degree to which stakeholder claims call for immediate attention (Mitchell et al., 1997). It is determined based on two attributes: (1) time sensitivity - the degree to which managerial delay in addressing the claim or relationship is unacceptable to the stakeholder, and (2) criticality - the importance of the claim or the relationship is important to the stakeholder. Thus, this study used three items adapted from Mitchell et al. (2007) to measure these two attributes. The three items also adopted five-point Likert scale design in this study.

4. DATA ANALYSIS

4.1. Common Method Bias

We adopted a single-informant approach to collect data, and, therefore, the possibility of common method bias should be assessed (Podsakoff et al., 2003). Harman’s single factor test was employed to examine whether a significant amount of common variance exists in the data. All the measurement items were cast into principal components factor analysis. The result yielded nine factors with eigenvalues greater than 1.0, which accounted for 72.5% of the total variance. The first factor captured only 29.7% of the variance in the data. These results indicated the absence of a substantial amount of common method variance in the data. Therefore, common method bias should not be a serious problem in the study.

4.2. Measurement Model

Item reliability, convergent validity, and discriminant validity serve to evaluate measurement properties in PLS. Individual item reliability can be examined by observing the item-to-construct loadings, and a factor loading of .71 and above indicates 50 percent or more of the variance in the item is shared with the latent construct. Based on the above criteria, we purified the measurement model and dropped some items due to the smaller factor loadings. We also found that the factor loadings of some items were less than .71. But, they were nevertheless kept for subsequent analyses for maintaining content validity.
The table below shows the AVE, Cronbach’s $\alpha$, and Composite Reliability values for various constructs.

<table>
<thead>
<tr>
<th></th>
<th>AVE</th>
<th>Cronbach’s $\alpha$</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>OL</td>
<td>0.68</td>
<td>0.85</td>
<td>0.90</td>
</tr>
<tr>
<td>MP</td>
<td>0.44</td>
<td>0.87</td>
<td>0.86</td>
</tr>
<tr>
<td>NMP</td>
<td>0.58</td>
<td>0.90</td>
<td>0.91</td>
</tr>
<tr>
<td>UG</td>
<td>0.78</td>
<td>0.91</td>
<td>0.91</td>
</tr>
<tr>
<td>SS</td>
<td>0.68</td>
<td>0.90</td>
<td>0.93</td>
</tr>
<tr>
<td>DC</td>
<td>0.62</td>
<td>0.73</td>
<td>0.83</td>
</tr>
<tr>
<td>CFAI</td>
<td>0.61</td>
<td>0.86</td>
<td>0.86</td>
</tr>
</tbody>
</table>

Note: OL: organizational legitimacy; MP: mediated power; NMP: non-mediated power; UG: urgency; SS: stakeholder salience; DC: data consistency; CFAI: cross-functional application integration

Table 2. AVE, Cronbach’s $\alpha$, and Composite Reliability Values

Convergent validity can be assessed in terms of reliability of construct (Cronbach’s alpha) and average variance extracted (AVE) by constructs (Fornell and Larcker, 1981). The former measurement property is interpreted as acceptable with a score of .70 or above. AVE reflects the variance captured by indicators, and a score of .50 or above is desirable, meaning that the variance captured by indicators is greater than the measurement errors. In this study, the results of Cronbach’s alpha test met the criteria of convergent validity with values no less than .73. In addition, except for mediated power, the AVE values of the other constructs were greater than .58.

The table below shows the correlation matrix of research constructs.

<table>
<thead>
<tr>
<th></th>
<th>OL</th>
<th>MP</th>
<th>NMP</th>
<th>UG</th>
<th>SS</th>
<th>DC</th>
<th>CFAI</th>
</tr>
</thead>
<tbody>
<tr>
<td>OL</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MP</td>
<td>0.25</td>
<td>0.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NMP</td>
<td>0.45</td>
<td>0.59</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UG</td>
<td>0.62</td>
<td>0.39</td>
<td>0.48</td>
<td>0.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS</td>
<td>0.56</td>
<td>0.45</td>
<td>0.42</td>
<td>0.47</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC</td>
<td>0.34</td>
<td>0.40</td>
<td>0.38</td>
<td>0.36</td>
<td>0.43</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>CFAI</td>
<td>0.28</td>
<td>0.31</td>
<td>0.35</td>
<td>0.26</td>
<td>0.32</td>
<td>0.39</td>
<td>0.78</td>
</tr>
</tbody>
</table>

Note: OL: organizational legitimacy; MP: mediated power; NMP: non-mediated power; UG: urgency; SS: stakeholder salience; DC: data consistency; CFAI: cross-functional application integration

Table 3. Correlation Matrix of Research Constructs

Discriminant validity can be assessed by observing the factor loading of indicators to verify whether the measures of constructs are different from each other. Discriminant validity is assured when (1) each item’s correlation with its own construct is greater than its cross-correlation with other constructs, (2) the value of the square root of the AVE of each construct is larger than the correlations of this construct with all other constructs, and (3) correlation between pairs of constructs is below .90 (Gefen and Straub, 2005). Table 3 shows the correlation matrix of the constructs in this study. The diagonal shows the square root of the AVE values. Our analyses showed that the above criteria for discriminant validity hold.
4.3. Structural Model

In our PLS structural model, four constructs (data consistency, cross-functional application integration, mediated power, non-mediated power) were modeled as formative factors while the others (stakeholder salience, legitimacy, urgency) were modeled as reflective factors. This study adopted a bootstrap procedure with 200 resamples to generate t-statistics and standard errors of path coefficient estimates. Path coefficients are interpreted as standardized beta weights in a regression analysis, and their values and the extent of significance can be utilized to assess whether research hypotheses gain empirical support. Figure 1 shows the path coefficients and explained construct variances of our PLS structural analysis.

$R^2$ value represents the amount of variances in a dependent variable that is explained by the independent variables. As shown in Figure 1, the $R^2$ values of stakeholder salience, data consistency, and cross-functional application integration range from .16 to .40. The results indicate that the variances of the endogenous variables are well explained by the proposed antecedents. In addition, four out of the five hypotheses receive partial ($H_4$) or significant ($H_1$ to $H_3$) support from the PLS structural analysis. Nevertheless, the analysis indicates that the empirical data fails to support $H_5$.

Note: * indicates $p<0.05$, ** indicates $p<0.01$, *** indicates $p<0.001$

Figure 1. Structural Model Analysis

5. CONCLUSION

The major contribution of this study is the use of stakeholder theory to account for why a supplier implements IT infrastructure integration for SCM with a specific customer. Specifically, the integration efforts can be understood as the supplier’s response to its customer’s instrumental or moral claims for the purpose of continuing their value creation relationship. As such, the instrumental and normative streams of stakeholder research can be synthesized into a unified framework.

In addition, the notion of stakeholder salience further advances our understanding about how managers prioritize multiple claimants. Drawing on this notion, an institutional entrepreneur (e.g., the focal customer) who attempts to promote IOS-based initiatives to its stakeholders (e.g., the suppliers) can thus figure out which ones would be more likely to take their words seriously. This is illustrated in our empirical results that when a supplier regards a customer’s claim of IT infrastructure integration for SCM to be legitimate and the customer possess mediated power over it, the supplier
tends to regard the customer as salient and respond by implementing greater extents of data consistency and cross-functional application integration.

There are several avenues to enhance this study. First, future studies should examine whether the supplier’s stakeholder engagement efforts (e.g., IT infrastructure integration for SCM) actually lead to greater performance for the supplier. Second, in order to validate the pivotal role of stakeholder salience, future studies should examine whether customer’s stakeholder salience fully mediates the impact of legitimacy, power, and urgency on the extent of the supplier’s IT infrastructure integration for SCM. Third, the effect of urgency on stakeholder salience was insignificant in the current study. As mentioned by Mitchell et al. (1997), urgency in fact is not an attribute for defining whether or not an entity is a stakeholder for another organization. Yet, urgency is indeed pivotal to determine how an organization responds to its stakeholders. Therefore, future studies should reconsider the role of urgency in the stakeholder identification and salience framework.

References


