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Making Partner Relationship Management Systems Work: The Role of Partnership Governance Mechanisms

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Research Highlights

- While the adoption of PRM systems in supplier-partner relationships has been on the rise, the performance implications have not been straightforward.
- This study examines the more recent claim that the effectiveness of PRM systems is influenced by the mechanisms employed by the supplier to oversee their partners, that is, the partnership governance mechanisms they use.
- This study investigates how the two capabilities of PRM systems (relationship and fulfillment capabilities) and two partnership governance mechanisms – formal (certification control) and informal (service support) – reinforce each other. These are then related to partner performance in terms of trust, commitment and customer satisfaction.
- The analysis of the data collected from 192 partners in the information and communications technology (ICT) sector suggest a complex relationship. For example, fulfillment capability had a direct negative relationship with partner commitment, which could be negated with the use of service support. Also, certification control weakened the positive link between the relationship capability and performance.
- The results suggest that the performance implications of PRM systems are not straightforward and need to be carefully considered in the decision of which PRM capabilities to invest in as well as which governance mechanisms to employ.

Making Partner Relationship Management Systems Work: The Role of Partnership Governance Mechanisms

Abstract

While the adoption of Partner Relationship Management (PRM) systems by suppliers to manage and monitor its network of partners (i.e. resellers) has been on the rise, the performance improvements have not been consistently realized. Governance theory suggests this may be due to how the PRM system builds on the mechanisms employed by the supplier to oversee their partners. This study investigates how the two capabilities of PRM systems (relationship and fulfillment capabilities) and two partnership governance mechanisms – formal (certification control) and informal (service support) – reinforce each other. These are then related to partner performance in terms of trust, commitment and customer satisfaction. Analysis of data collected from 192 partners in the information and communications technology (ICT) sector suggest a complex relationship. In terms of direct effects, a relationship capability increased trust yet, surprisingly, a fulfillment capability reduced commitment. In terms of moderating effects, certification control weakened the positive link between the relationship capability and performance. Service support, on the other hand, negated some of the detrimental impact of the fulfillment capability on performance. The results suggest the need of to tailor PRM systems in response to the specific performance expectations around them as well as a need to clearly understand how existing partnership governance mechanisms employed by the supplier will affect the performance of these systems.

Keywords: Supplier-reseller relationship, Partner Relationship Management system, Partnership governance

1. Introduction

Effective management of indirect sales channels is essential with significant profit implications for supplier companies (Bairstow and Young 2012; de Ruyter et al. 2001). This is particularly true in the information and communication technology (ICT) sector, where a significant portion of the sales for suppliers is generated by their partners¹. For example, Cisco derives over 80% of its revenues through its 55,000 channel partners (Kalyanam & Brar 2009). However, to cope with the large number and geographically dispersed partners, suppliers are moving away from face-to-face communication to information systems to manage their partner network. The effective management of these partner relationship management (PRM) systems has thus become a key issue in the performance of seller-partner relationships.

A PRM system is a computer-mediated capability that enables suppliers to exchange information and transact with their partners, as well as assist them in activities such as training, providing technical support and after sales service to the end customer (Varadarajan & Yadav 2002). These systems attempt to build closer and more productive supplier-reseller relationships by streamlining processes that run across suppliers, partners and customers; and by facilitating consistent communications between these players (Mirani et al. 2001; Mitchell 2001; Murtaza & Shah 2004).

The promise of PRM systems has been that they can help suppliers improve revenues by facilitating expanding partner sales and improve profits by reducing the manpower required to manage a large network of partners. However, there have been questions raised on the assumption that investing ever increasing amounts in PRM systems always improves performance (Lee et al. 2011). Research suggests less than two-thirds of suppliers

¹ In this research we refer to the producer of ICT products as the supplier, the reseller as the partner and the end-user of the ICT products the customer.

implementing PRM systems claimed a positive return on investment (DeSisto 2003).

Similarly, only 66% of partners thought that the PRM systems of their suppliers were effective (Baptie & Elbaum 2008).

In light of this dilemma, it has been suggested that to be effective, PRM systems must be supported by appropriate governance mechanisms (Lee et al 2011). Governance mechanisms are the means of regulating or influencing behavior to achieve organizations' desired goals. Governance theory distinguishes between two mechanisms (Gilliland et al. 2010; Li et al. 2010): Formal governance mechanisms are rooted in agency theory where actors are controlled through monitoring of performance and setting of clear goals (Eisenhardt 1989); whereas informal governance mechanisms are founded on the dynamics of the relationship and help parties expand the level of value created by the exchange (Burket et al. 2012). By considering a formal mechanism (specifically certification control) and an informal mechanism (specifically service support) together, this study answers a specific call for research into how different partnership governance mechanisms work within the context of PRM systems (Gilliland 2003; Osmonbekov et al. 2009).

PRM systems have distinct capabilities, specifically; the PRM system's relationship capability (herein referred to as relationship capability) which creates supplier-partner intimacy by increasing the bonds between the firms (Mirani et al. 2001), and the PRM system's fulfillment capability which supports the transactions between the supplier, partner and end customer (Frohlich & Westbrook 2002). Recognizing the different capabilities of PRM systems strengthens the need to untangle the link between governance mechanisms and PRM systems. Contingency theory would suggest that it would be erroneous to automatically assume that both governance mechanisms have similar implications for the two different PRM capabilities (Drazin & Van de Ven 1985; Venkatraman & Camillus 1984). Recent

evidence also intimates a more complex relationship that requires further investigation (Kohtamäki et al 2012; Lee et al. 2011).

The objective of this study is to investigate the fit between PRM systems and governance mechanisms and examine the relationship between this fit and performance. As such we make two important contributions to theory. First, this study advances our understanding of the manner with which partnership governance mechanisms influence supplier-partner relationships in the context of PRM systems. By considering both formal and informal governance mechanisms their very different roles in managing relationships can be disentangled. The focus until now has been primarily on solitary governance mechanisms (Osmonbekov et al. 2009; Lee et al. 2011).

Second, we contribute to the theory of adaptive governance (Gilliland 2003). The fit between PRM systems and partnership governance has been raised in previous studies (e.g. Osmanbekov 2010) but not, to our knowledge, within the context of both alternative PRM capabilities and alternative governance mechanisms. The performance impact of the structural fulfillment capability will be contingent on informal governance (i.e., service support) whilst the implications of the relationship capability will be contingent on formal certification control. Thus answering a call for research needed to determine whether, and in what context, the interaction of PRM capabilities and a governance mechanisms are mutually reinforcing rather than merely complementary (Wang and Wei 2007).

By taking a multi-dimensional perspective of relationship performance (specifically trust, relationship commitment and customer satisfaction) the research is able to identify the unique influences on these different perspectives of partnership performance, expanding our understanding of PRM systems' impact on supplier-partner relationships. We empirically assess these intricate relationships on the basis of survey data collected from 192 partners in the ICT sector. Our results do support our argument that PRM systems need to be carefully

tailored, given the partnership governance mechanisms suppliers employ and performance expectations the supplier and partners have for such systems.

2. PRM Systems

A PRM system allows a supplier to link, coordinate tasks and exchange information with their channel intermediaries (Lee et al. 2011). A PRM system is a capability that can reduce transaction costs and mitigate opportunism in such relationships by decreasing information asymmetry and increasing the ease of monitoring (Wang and Wei 2007). Osmonbekov et al. (2009) suggested that PRM systems housed different sub-systems with different functions and that each would have different implications for the supplier-partner relationship. We consider two of these: the fulfillment capability and the relationship capability. The fulfillment capability provides oversight of supply chain functions including quality control, logistics, delivery and inventory management (Johnson et al. 2004). The fulfillment capability is directly tasked with delivering value and satisfaction to customers and is transaction-driven. In contrast, the relationship capability enables suppliers to manage the quality of the interactions with its partners (Wiertz et al. 2004) thus enhancing the relational bonds between themselves and their partners (Mirani et al. 2001). Managing this bond effectively increases the relational embeddedness between the organizations (Granovetter 1992).

3. Partnership Governance Mechanisms

Partnership governance mechanisms are used by suppliers to encourage and control the behavior of its partners and to promote the continuance of the relationship (Burket et al. 2012; Jap & Ganessen 2000). In this study, two governance mechanisms are considered: certification as a formal and service support as an informal governance mechanism.

Formal governance mechanisms build on the systematic collection of information as to partners' behavior and performance and are control oriented (Gundlach & Cannon 2010).

Monitoring is a process based formal governance mechanism, where information is collected by the supplier in order to be able to establish the extent of compliance by the partner (Gilliland et al 2010). Within the ICT sector monitoring is achieved via certification, which is a standardized, formalized process by which the supplier communicates and enforces its requirements on partner organizations for attaining proficiency and competency in the supplier's line of products or services (Modi & Mabert 2007).

Informal governance mechanisms build on positive reinforcement by focusing on the beliefs, knowledge and capabilities of the target (Geyskens et al. 1999). These mechanisms can be direct and based on rewards, or indirect and aimed at achieving behavioral change by altering the partner's perceptions (Geyskens et al. 1999). In technology related research, the use of rewards has been found to be ineffective in ensuring long-term commitment to the use of technologies (Zablah et al. 2005). Therefore this study considers service support as an indirect informal governance mechanism. Service support includes the technical assistance and knowledge that suppliers offer to partners. The premise, from the theory of supply chain contagion (McFarland et al 2008), is that by providing high quality service to partners, partners will mirror this behavior with their customers.

4. PRM Systems and Partnership Governance Mechanisms as Drivers of Partnership Performance

The conceptual model, as seen in figure 1, builds on the suggestion that supplier PRM systems can generate effective partner performance and hence commitment either through providing services, assistances, and valued actions that create dependence, or by making it more difficult and costly to break off interaction (Scheer et al. 2010), but for that they need to be supported by appropriate governance mechanisms. Building on the concept of fit (Venkatraman & Camillus 1984), we suggest that two partnership governance mechanisms –

certification control and service support - moderate the relationships between the PRM capabilities and performance.

Place Figure 1 here

This research considers relationship performance from multiple perspectives (Osmonbekov et al. 2009). Relationship trust is an internal measure of relationship performance and is the degree to which a partner believes that their supplier is honest, reliable and interested in their welfare (Johnson et al. 2004; Kumar et al. 1995; Morgan & Hunt 1994). Customer satisfaction is a measure of external relationship performance. This is the satisfaction of the partners' customers as perceived by the partner (Wu et al. 2003). Relationship commitment, the fundamental objective in effective management of channel relationships (Geyskens et al. 1999; Sigauw et al. 2003), is defined as an enduring desire to maintain a valued partnership (Moorman et al. 1992).

4.1. The Relationship Capability and Trust

A relationship capability is an enabler of cooperative relationships between exchange partners by facilitating effective and efficient access to and sharing of information (Fraser et al. 2000). Moreover, a relationship capability that is responsive to partners' needs enable this information to be updated continuously and tailored to relationship needs of individual partners (Biland 2000). Via the responsiveness of its relationship capability, a supplier can create a close working relationship with its partners, which in the long run will lead to trust (Wiertz et al. 2004). Frequent and relevant information exchanges demonstrate the partners' interest in the relationship and contribute to the development of trust (de Ruyter et al. 2001; Johnson et al. 2004; Morgan & Hunt 1994). Thus we propose:

Hypothesis 1: A relationship capability is positively related to trust

4.2 The Fulfillment Capability and Customer Satisfaction

A fulfillment capability facilitate companies to effectively manage their supply chains with their business partners in an integrated fashion, ultimately adding value to products and services sold to end customers (Scheer et al. 2010). As a result, a fulfillment capability not only affects partners' sales, but also improves the partner's customer satisfaction helping with their own customer retention (Evans and King 1999). A responsive fulfillment capability can speed up service turn-around. For example customers can self-serve information instead of waiting for sales representatives enhancing customer satisfaction. Customer service is no longer constrained by access; a business can take customer questions and/or service requests online and provide detailed answers in real-time (Lancioni et al. 2000). Therefore, our hypothesis is:

Hypothesis 2: A fulfillment capability is positively related to customer satisfaction

4.3. PRM Systems and Relationship Commitment

The time and effort spent in adopting a PRM system (relationship or fulfillment capabilities) specific to a particular supplier are difficult, if not impossible, to redeploy to another channel relationship. Firms that have made investments specific to a relationship work to preserve the relationship by collaborating closely and engaging in joint actions (Gu & Wang 2011; Heide & John 1990). Such investments have been found to have a strong effect on the commitment of both parties to the relationship (Anderson & Weitz 1992; de Ruyter et al. 2001).

More specifically, the relationship capability allows information to be provided to the partner with greater frequency, and encourages more bidirectional information exchange. These encourage learning and enhance the development of the partner's capabilities (Gilliland 2003) which help commit the partner to the supplier. With respect to the fulfillment capability, as it enhances coordination efforts between channel partners, it is reasonable to expect that its adoption will result in greater operational integration and interdependence

(Zablah et al. 2005). Its adoption can also reduce conflict and disagreements as improved information regarding ordering and shipping minimize logistical errors (Osmonbekov et al. 2009). Thus, we hypothesize that:

Hypothesis 3a: A relationship capability is positively related to relationship commitment

Hypothesis 3b: A fulfillment capability is positively related to relationship commitment

4.4. Certification Control and Partnership Performance

There has been strong evidence that certification control has positive implications for supplier-partner relationships. For example, Cisco has clear rules, procedures, roles, communication channels, and mechanisms to solve problems in its channel partner program (Kalyanam & Brar 2009). Although the use of overt monitoring of partners under certification may be viewed as inconsistent with a high trust relationship (Gundlach & Cannon 2010) such formalization sets standards and routine procedures for every partner to follow and abide by, thus creating less confusion, eliminating double standards, and reducing divergent interpretations of similar activities thus increasing the level of trust between partner and supplier. In markets characterized by information asymmetry, certification operates as a signal of unobservable service or product quality (Kirmani & Rao 2000), which can lead to a greater level of customer satisfaction. In addition, the process of certification requires substantive investments on behalf of the partner, which are specific to the supplier-partner relationship and hence lead to further commitment to the supplier. Thus, we hypothesize that:

Hypothesis 4: Certification control is positively related to (a) trust (b) customer satisfaction, and (c) relationship commitment

4.5. Service Support and Partnership Performance

A lack of support is a common complaint among channel partners, leading to resentment and poor relationships (Anderson & Weitz 1989). A high level of service support is a necessary condition for strong business-to-business relationships (Crosby et al. 1990) and in particular

for trust to develop between partners (Moorman et al. 1992). Service support is likely to result in partners viewing suppliers as having high degrees of integrity from which trust is likely to develop (Moorman et al. 1992; Morgan & Hunt 1994). Service support is also an idiosyncratic investment (Goodman & Dion 2001) resulting in increasing the switching costs for partners (de Ruyter et al. 2001) and thus potentially commitment. Partners often imitate the behavior of their suppliers (McFarland et al 2008) therefore service support to partners will encourage partners to behave in a similar way towards their customers increasing customer satisfaction. Activities that support partners in delivering service to the end customer are also important because they help deliver consistent service experience to the partners' customers, which in turn positively affect customer satisfaction. Therefore, we hypothesize that:

Hypothesis 5: Service support is positively related to (a) trust, (b) customer satisfaction, and (c) relationship commitment

4.6. PRM Systems and Partnership Governance Fit

Taking a fit perspective suggests that supplier governance will moderate the effect of PRM systems on relationship performance (Drazin & Van de Ven 1985; Venkatraman & Camillus 1984). Whilst evidence suggests that this may be the case (Kohtamäki et al 2012; Lee et al. 2011) it would be wrong to assume that both governance mechanisms will work the same way. We suggest that the performance impact of the structural fulfillment capability is contingent on informal governance (i.e., service support) whilst the relationship capability is contingent on formal certification control.

As explained earlier, we expect certification control to have a positive direct effect to performance yet there have also been concerns that certification control has a downside with negative consequences on the link between a relationship capability and performance. This is due to three reasons. First, certification control, which is a heavy handed, formalized and

rule-specific means of control (Gilliland & Manning 2002) could be perceived as giving a conflicting message in comparison to the supportive environment of a relationship capability strive to create. Thus partners may become suspicious about their supplier's motivation for deploying the technology (Zablah et al. 2005). Research has found that simultaneous investment in links with suppliers and the imposition of evaluation and certification creates ambiguity in the relationship (Wagner 2010). Second, certification control can be seen as coercive governance mechanism, which can uncover discrepancies between the partners in a way that aggravates asymmetries in channel perceptions and information, causing resentment and reducing coordination (Gilliland et al. 2010). Third, a very well designed certification system can partially fulfill the role that a relationship capability has in relationships performance. A tailored, specialized certification system was one of the major building blocks of the new channel relationship framework at Cisco and enabled more seamless, tightly linked relationships (Kalyanam & Brar 2009). Thus, the following are hypothesized:

Hypothesis 6: Certification control weakens the relationship (a) between a relationship capability and customer satisfaction, and (b) between a relationship capability and relationship commitment.

In terms of service support, we would expect it to enable a more effective use of the fulfillment capability. Pentland (1995) argues that for software products, "an unsupported product is hardly considered a product at all" (p. 51). This type of support reinforces reseller sales activities (Gilliland 2004). Service support is complementary to the fulfillment capability. A fulfillment capability is focused on bringing the product to the end customer and service support focuses on the accompanying information needed to effectively use and maintain these products. Therefore when used together they can increase customer satisfaction. Anderson and Weitz (1992) argue that in a business relationship, each party's commitment is affected by the perceived commitment of the other party. Service support is

an idiosyncratic investment on behalf of the supplier signaling such a commitment. Therefore we expect it to strengthen the link between the fulfillment capability and relationship commitment. Thus:

Hypothesis 7: Service Support strengthens the relationship (a) between a fulfillment capability and customer satisfaction, and (b) between a fulfillment capability and relationship commitment.

5. Methodology

5.1. Research Instrument

Scales were taken from previous research and adapted to the PRM context except for the two aspects of PRM systems as these have not been measured before. Scales developed specifically for this research were based on the literature as outlined in the conceptual model and in-depth interviews with eleven managers from a mixture of supplier and partner firms. Pre-testing was conducted via 31 managers from partner firms. See the appendix for the complete list of measures.

The scales for PRM systems assess the responsiveness of these systems to the needs of the partners and represent newly developed constructs based on the findings of the convergent interviews. Relationship capability consists of four items concerning the system's user friendliness as well as its ability to help maintaining a close working relationship, responsiveness to the user's needs, and efficiency in communication. The construct for the fulfillment capability captures tools that accommodate supply-fulfillment tasks including logistical and supply management activities that are necessary to deliver quality product to end customers (Mirani et al. 2001; Osmonbekov et al. 2009). The items measure the presence of applications in supporting and servicing the customers; in integrating multiple customer "touch points" (e.g. telephone, email, etc); in delivering seamless service to the customers, and fulfillment capacities (i.e. logistics, order management tracking, delivery, etc.).

Certification control is a quality review mechanism and captures both behavior and affect. The measure consisted of 4 items covering the existence of regular reviews and the monitoring of the standards of customer service by the partner organizations, the influence of certification status in the market, the concern of maintaining the standards in the industry, and the amount of help certified partner organizations receive (Gilliland 2003; Modi & Mabert 2007). Service support captures the quality of the technical assistance offered to partners (de Ruyter et al. 2001; Wiertz et al. 2004) and measures the quality of service, the effectiveness of the technical support, the availability of up-to-date technical and service-related materials, and finally, 24 hour/365 day and real-time access to the support. Prior research has operationalized informal governance strategies as the target's perception of the quality of assistance offered by the source (Brown et al. 1995).

Relationship commitment is defined as an enduring desire to maintain a valued partnership (Moorman et al. 1992). The items measure the reseller's perceptions of its own and its supplier's continuity intentions, willingness to make further transaction specific investments and willingness to increase identification with the supplier (Anderson & Weitz 1992; Johnson et al. 2004; Kumar, et al. 1995). The scale for trust measures the degree to which a partner believes that their supplier is honest, reliable and interested in the welfare of the partner.

Trust has been used extensively in previous research (Johnson et al. 2004; Kumar et al. 1995; Morgan & Hunt 1994). Customer satisfaction is a measure of external relationship performance. This is the perceptions the partner has of its relationship with its customers.

Customer satisfaction is measured by three items assessing the perceived degree of satisfaction, positive word of mouth, and loyalty that customers have towards the partner (Wu et al. 2003).

The study included two control variables in the analysis. The tier level of the partner was measured on a 3 point scale (1st/foundation, 2nd/mid and 3rd/top tier) as this often determines

the level of support a partner receives. A dummy variable for the region was also included to control for cross-cultural differences.

5.2. The Sample

The empirical part of this study was carried out via a key informant questionnaire survey. Partners were identified from websites of the top ICT companies (listed in www.Forbes.com). As the sellers in the ICT industry are predominantly global players our empirical study includes respondents from both Europe and South-East Asia. Efforts were taken to identify the individual manager in the partner firm who had experience with the supplier for at least one year and who were responsible for dealing with the supplier organizations directly. The average experience was 3 years. 41% of partners had been in a relationship with their supplier for more than five years. 192 respondents replied to the e-mailed survey which represented a 17% response rate. Out of the completed surveys, 151 were from Europe; the remaining 41 were from South-East Asia. 61% of partners had less than 100 employees and 21% 100-500 employees.

To assess non-response bias, early and late respondents were compared (Armstrong & Overton 1977). The results of t-tests revealed that there is no significant difference on the constructs, or on demographic variables such as number of employees, between the two groups indicating that non-response bias does not pose a significant problem for our research.

6. Results

SmartPLS v2.0 (Ringle et al. 2005) was used to obtain partial least squares (PLS) estimates for both the measurement and the structural model. PLS path modeling is used extensively in marketing research (Hair et al. 2012) and was employed as it is more suitable for complex models (Chin 1998). Furthermore, Chin et al. (2003) found that PLS path modeling is superior to regression analysis and covariance-based methods for testing moderating hypotheses. To test the stability and statistical significance of the parameters' estimates (t-

values) in the structural model, a bootstrapping procedure with 500 re-samples was used (Chin 1998).

The reliability of the latent variables was assessed using Cronbach's alpha, composite reliability (CR) and average variance extracted (AVE). The results are shown in the appendix, where the values suggest high reliability and convergent validity (Chin 1998; Hair et al 2007). Discriminant validity was assessed by examining whether each construct shared more variance with its measures than with other constructs in the model. The AVEs for the constructs are all higher than their highest shared variances (HSV; Chin 1998). Checks revealed that the variance inflation factors of the latent variables to be less than 3 suggesting multicollinearity is not an issue. Table 1 shows the latent variable correlations and means.

Place Table 1 here

To further assess the measurement model an exploratory factor analysis on all items in the study was conducted. It resulted in a seven factor solution that corresponded to the hypothesized model. The factor patterns revealed that the items load cleanly on their intended constructs providing evidence of discriminant validity. In addition, the first factor accounted for only 35% of the total variance (78%) and as result, it was decided that common method bias does not appear to be a significant problem (Podsakoff & Organ 1986).

6.1. Direct Effects Model

As shown above, the analysis of the psychometric properties of the measurement scales indicates that they are reliable and demonstrate high levels of validity. Therefore, the PLS model could be used further to test the hypotheses. The results are shown in Table 2. The R² values of the endogenous variables were investigated to assess the quality of the model (Cohen 1988), and showed acceptable quality. In addition, a goodness-of-fit (GOF) measure

$(\sqrt{\text{average } R^2 * \text{average AVE}})$ was calculated for the model, which was 0.52 for the direct effects model. Assuming a large average effect size for R^2 (0.26) and a cut-off value of AVE of 0.70, a comparison GOF value of 0.43 was obtained, providing support for this model (Hair et al. 2012). In addition Q^2 was calculated for each dependent variable to assess predictive validity (Hair et al. 2012). Q^2 ranged from 0.14 to 0.38 suggesting the model has predictive relevance.

Place Table 2 here

The results of the hypothesis tests showed the following: The relationship capability had a significant positive direct effect on both trust ($\beta = 0.51, t = 7.77, p < 0.01$) and relationship commitment ($\beta = 0.12, t = 1.75, p < 0.05$). The fulfillment capability failed to have an impact on customer satisfaction ($\beta = -0.02, t = 0.38, n.s.$) and surprisingly had a negative relationship with relationship commitment ($\beta = -0.18, t = 2.21, p < 0.05$). These results together provide mixed support for Hypothesis 1-3 (see Table 2). Certification control was positively linked with trust ($\beta = 0.17, t = 2.56, p < 0.01$), relationship commitment ($\beta = 0.34, t = 4.54, p < 0.01$) and marginally customer satisfaction ($\beta = 0.10, t = 1.33, p < 0.10$). Service support, was also positively linked with all 3 performance dimensions - trust ($\beta = 0.18, t = 2.59, p < 0.01$), customer satisfaction ($\beta = 0.23, t = 2.31, p < 0.05$) and relationship commitment ($\beta = 0.24, t = 2.86, p < 0.01$). Thus providing support for Hypothesis 4 and 5.

6.2. Interaction Effects

Interaction terms were developed using the product indicator approach (Chin et al. 2003). Adding the interaction terms to the direct effects model (see Table 2), R^2 for trust significantly increased from 0.496 to 0.519 ($\Delta F 8.85; p < 0.01$). Similarly the increases in R^2 for customer support ($\Delta R^2 = 0.026; \Delta F = 6.01; p < 0.05$) and relationship commitment ($\Delta R^2 =$

0.059; ΔF 6.65; $p < 0.01$) were both significant. These results supported the use of a moderated model. The results suggested that certification control negatively moderated the links between a relationship capability and both trust ($\beta = -0.15$, $t = 2.32$, $p < 0.05$) and relationship commitment ($\beta = -0.16$, $t = 2.48$, $p < 0.01$). Service support, on the other hand, had a positive moderating effect on the relationship between a fulfillment system and both customer satisfaction ($\beta = 0.17$, $t = 1.87$, $p < 0.05$) and commitment ($\beta = 0.20$, $t = 2.15$, $p < 0.05$). The results therefore provided support for Hypothesis 6 and 7.

The interaction effects were further examined by splitting the sample according to the moderating variable – either certification control or service support, being either high, i.e. 1 σ above the mean, or low, i.e. 1 σ below the mean. The results are graphed in Figure 2. It can be seen that the impact of certification control and service support can be elaborated further: Whilst certification control dampens the positive association between a relationship capability and performance; service support actually reverses the negative link between a fulfillment capability and performance.

Place Figure 2 here

7. Discussion

This research addresses a significant predicament, particularly in the ICT industry where PRM systems are prevalent yet both suppliers and partners have reported dissatisfaction with the performance of these systems (Baptie & Elbaum 2008; DeSisto 2003). This research addresses two questions have been left unanswered by the literature: One, the acknowledgement that PRM systems serve more than one purpose and to identify the implications of the corresponding different capabilities on performance and two, recognition

that partner relationships are managed via different levers, i.e. governance mechanisms, and that their impact on PRM systems is not the same.

Accordingly, we make two main contributions: First, we consider the two main capabilities of PRM systems - captured via the relationship capabilities and functional capabilities, and consider the impact of each on performance individually. Our results show that their impact on individual performance measures is substantially different. Second, we investigate exactly how different partner governance mechanisms affect the relationship between PRM systems and performance. The notion of adaptive governance implies that the effectiveness of governance mechanism depends on what is being governed (Gilliland 2003). Consequently, this research brings together the formal mechanism of certification control and the informal positive reinforcement mechanism of service support and examines the specific role of each in PRM based supplier-partner relationships. In addition, taking a multidimensional view of performance to capture the multifaceted expectations from these relationships the results suggest that how performance is measured in these relationships is important as internal and external performance have very different drivers.

Whilst the links between a relationship capability and trust as well as relationship commitment were positive and significant, the results for the relationships between a fulfillment capability with customer satisfaction and relationship commitment were mixed. There was no relationship between a fulfillment capability and customer satisfaction. Given that a fulfillment capability is directly related to the delivery of products to the end customer a strong positive link would have been expected. While this result warrants further attention, one plausible explanation is as follows: In the ICT sector what is being sold to the customer is a product-service bundle. Moreover, it is very likely that the product itself is the order qualifier, but it is other factors, such as the value the partner brings to the customer via service support that tips the balance in the direction of a particular supplier's product

(Kalyanam & Brar 2009). In addition, a fulfillment capability is transaction-oriented. While their failure creates strong customer dissatisfaction, when they are working seamlessly they are barely recognized by the customer. This mirrors findings in ecommerce where it has been found that that functionality is a satisfaction maintenance driver rather than a satisfaction enhancer (Finn 2011).

An unexpected result is that, contrary to expectations, the link between a fulfillment capability and relationship commitment was significantly negative. At best a fulfillment capability does not enhance, and at worst they may reduce, the commitment of partners. One explanation might be related to how commitment was operationalized. Research has distinguished between affective and calculative commitment (de Ruyter et al. 2010). The measure employed may be biased towards affective commitment which expresses the extent to which partners would like to maintain their relationship with their supplier. However partners may also feel trapped if they have already invested time and effort in a supplier's PRM system and cannot easily replace this investment. This represents the partner's calculative commitment. Calculative and affective commitment may negatively interact. This result requires further exploration, as it potentially can have significant implications for suppliers.

Both governance mechanisms, namely certification control and service support, were found to have a positive association with partnership performance, although the relationship between certification and customer satisfaction was marginal. These results confirm the importance of partnership governance for performance (Jap & Ganessen 2000; Li et al. 2010). Overall the results suggest that it is not solely formal control based or solely informal positive reinforcement based mechanisms that matter. This is supportive of a multi-dimensional perspective of governance mechanisms and the unique role of each.

As shown in Figure 2, significant effects were found for all interaction effects, thus supporting a fit perspective. While the relationship between a relationship capability and trust was positive, the strength of this relationship weakened as one moves from a low certification to a high certification environment. This was even more evident when the link between the relationship capability and relationship commitment was considered. While under low levels of certification, relationship commitment seems to strengthen with an increased relationship capability, the introduction of high levels of certification seems to negate this link. These results bring up the question as to whether certification captures the same expected benefits from a relationship capability. It may be that, as explained by Gilliland (2003), the preferential engagements under certification already create the perception of responsiveness and helpfulness of the supplier. Accepting this points to certification and a relationship capability attending similar goals. As such they weaken each other's perceived value when compared to situations where there is only one or the other. Results also suggest a non-monotonic effect, which has been an issue raised in previous contingency and fit studies (Schoonhoven 1981). When certification is low a positive relationship is observed between a fulfillment capability and customer commitment, yet under high levels of certification no relationship is observed.

As for the impact of the fulfillment capability on both customer satisfaction and relationship commitment, the results suggest that without the use of service support, these systems do not bring the expected benefits. Again, this could be due to the fact that these systems cover hygiene factors rather than performance drivers or excitors (Kano et al. 1996) and therefore do not increase satisfaction. Even worse, the fulfillment capability tends to have a negative relationship with performance under low levels of service support. Without a governance mechanism to encourage and support such capabilities, they are unlikely to be fully utilized and hence performance gains fail to be realized. This mirrors recent findings that has shown

that without existing relationship support structural links with customers will not lead to relationship performance improvement (Kohtamäki et al. 2012)

8. Managerial Implications

PRM systems have been introduced to help suppliers manage their relationships with partners more effectively and efficiently. However the results cast doubts on simple and straightforward effects, suggesting suppliers have to be meticulous in their PRM system adoption plans.

Suppliers should be particularly alert to issues around the fulfillment capability, since (1) it did not show a direct link to customer satisfaction and even worse (2) had a negative impact on the relationship commitment of the partners. With respect to commitment, suppliers must carefully manage how this capability is perceived by partners. Otherwise, partners may feel locked-in, held hostage, hence reducing their affection towards the supplier. Given this challenge, it is encouraging to see that with the use of appropriate service support, this negative impact of fulfillment capabilities on commitment can be avoided, yet unfortunately not reversed.

This should not be taken as a sign that a fulfillment capability does not provide any direct benefits to the partnership performance. A fulfillment capability can have considerable positive effects on customer satisfaction, but it is important to recognize that this only happens when it is reinforced by service support. Given that the aim of suppliers will always be to increase their end users' (i.e. customers) satisfaction, as this tends to increase chances of repeat sales and thus strengthen the bottom line, then channel partners have to be willing to integrate closely with the fulfillment capability of the supplier. However in return suppliers must place an emphasis on the supporting service offered. Thus, a word of caution is advised for suppliers introducing PRM systems with the intention that they will replace more expensive forms of service support. In short, on a standalone basis, the benefit of the

fulfillment capability is unclear, but with the reinforcement of service support, it can help companies increase their partner's commitment to the relationship and improve customer satisfaction.

It is also interesting to note the consequences of the use of certification programs in the ICT sector, where it is an industry norm. The results suggest that while managers should expect a positive direct impact of certification control on the partnership, both in terms of trust and partner commitment to the relationship, it has an unintended negative consequence, in that it seems to weaken the value of the relationship capability. Similarly, at the moment, certification control is not aiding customer satisfaction. While it is unclear exactly why these effects happen, suppliers must take care to design their certification programs to clearly develop their partners' capabilities rather than from a purely operational view.

The results suggest that managers need to be clear about performance expectations when implementing PRM systems as separate aspects have very different performance implications. Recognizing how fulfillment and relationship capabilities drive distinct measures of performance will allow appropriate performance goals to be set and also allow a better understanding of how to balance investment in different capabilities of PRM systems.

The results suggest that it is advisable to prioritize the relationship capability before the fulfillment capability. If investment in the fulfillment capability is without the appropriate supporting mechanisms the return is at best likely to be negligible and at worse negative. This may cause the premature abandonment of PRM systems. However building up the relationship capability can help gain the trust and commitment of the partner. This relational capital can act as a reservoir of goodwill during the implementation of the fulfillment capability.

9. Conclusion

This study sought to explore the relationship between PRM systems and performance. Within this context three goals were pursued: (1) Taking a more multifaceted perspective of PRM systems by considering relationship and fulfillment capabilities separately; (2) understanding the relationship between PRM systems and performance within the context of the existing partnership governance mechanisms suppliers employ, and (3) considering the fit between the two PRM systems and formal control vs. informal reinforcement based governance mechanisms.

The relationship capability increased trust yet, surprisingly, the fulfillment capability reduced commitment. In terms of moderating effects, certification control weakened the positive link between the relationship capability and performance. Service support, on the other hand, negated some of the detrimental impact of the fulfillment capability on performance.

There are some limitations to this study that open up possibilities for future research. First, based on the research context two governance mechanisms were considered. Additional governance mechanisms, such as social control, have been identified in the literature and future research could consider a wider portfolio of governance mechanisms. This research takes a cross-sectional approach. However effective governance mechanism may need to evolve as PRM systems, and their use, develop over time suggesting longitudinal research would add further insight. Finally, the effectiveness of PRM systems is considered from the perspective of the partner, and customer satisfaction is only measured from the perceptions of the partner. An extension of the research would be to collect data from the supplier, the partner and the customer, as part of the triadic relationship. This would also overcome the limitation of a single respondent survey.

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Appendix. Items and Loadings of Constructs in the Model

Constructs and component variables ^a	Standardized loadings
<u>Relationship Capability</u> ($\alpha = 0.97$, CR = 0.92; AVE = 0.92, HSV = 0.43) ^b	λ
We find our supplier's PRM systems to be very responsive to our needs	0.97
Our supplier's PRM systems help us maintain a close working relationship	0.94
We find our supplier's PRM systems to be very user-friendly	0.96
<u>Fulfillment Capability</u> ($\alpha = 0.82$, CR = 0.89; AVE = 0.73, HSV = 0.40)	
Our supplier's PRM systems are very important in enabling us to effectively support/service our customers	0.88
Our supplier's PRM systems help us integrate multiple customer "touch points" thus delivering a seamless service to our customers	0.88
Our supplier provides effective fulfillment systems (i.e. logistics, tracking, delivery, etc.) to help us deliver a better service to our customers	0.80
<u>Certification Control</u> ($\alpha = 0.72$, CR = 0.83; AVE = 0.55, HSV = 0.17)	
Certification level is a key influence amongst customers in our market	0.84
Certification helps maintain standards in the industry	0.85
The certification level of status affects the amount of support we receive from our supplier	0.62
Our supplier regularly monitors the quality of service we deliver to our customers	0.62
<u>Service Support</u> ($\alpha = 0.88$, CR = 0.91; AVE = 0.68, HSV = 0.27)	
Our supplier provides a high quality technical support that exceeds our expectations	0.86
We are able to access help 24 hours a day 365 days a year	0.76
We can access real-time support for solving technical problems	0.80
Our supplier's technical and service-related reference materials are always 'up-to-date'	0.83
Our supplier provides effective systems for technical support (e.g. self-help, FAQ, knowledgebase, etc.)	0.87
<u>Trust</u> ($\alpha = 0.87$, CR = 0.92; AVE = 0.79, HSV = 0.43)	
We trust that the supplier keeps the promises they make to our firm	0.91
Whenever the supplier gives us advice on our business operations, we know they are sharing their best judgment	0.88
When making important decisions, we can count on the supplier to consider how its decision and actions will affect us	0.87
<u>Customer Satisfaction</u> ($\alpha = 0.89$, CR = 0.93; AVE = 0.84, HSV = 0.29)	
Overall, we believe that our customers are satisfied with our company	.90
If our customers had the opportunity, we believe that they would recommend other companies to do business with us	.94
Our customers show a high degree of loyalty to us	.87
<u>Relationship Commitment</u> ($\alpha = 0.94$, CR = 0.95; AVE = 0.85, HSV = 0.29)	
We are committed to this relationship and remaining part of the supplier's network	.92
We are willing to make further investment in our business with this supplier	.91
We are willing to put more effort in building our relationship with this supplier	.92
We expect our relationship with this supplier to be long lasting	.93

^a All scales were assessed on seven-point Likert scales

^b α = Scale reliability coefficient; CR = Composite reliability; AVE = Average variance extracted, HSV = Highest shared variance.

Table 1. Latent Variable Correlations

Latent Variable	A	B	C	D	E	F	G
A. Relationship Capability	0.96 ^a						
B. Fulfillment Capability	0.63**	0.85					
C. Certification Control	0.36**	0.37**	0.74				
D. Service Support	0.51**	0.51**	0.36**	0.82			
E. Customer Satisfaction	0.08	0.06	0.16*	0.24**	0.92		
F. Trust	0.65**	0.51**	0.42**	0.48**	0.26**	0.89	
G. Relationship Commitment	0.25**	0.13	0.42**	0.34**	0.53**	0.46**	0.92
Mean (s.d.)	4.1 (1.41)	4.1 (1.27)	5.2 (1.07)	4.8 (1.15)	5.7 (1.07)	4.7 (1.23)	5.8 (1.08)

* Correlation is significant at the 0.05 level; ** Correlation is significant at the 0.01 level.

^a The diagonals represent \sqrt{AVE}

Table 2. Summary of test results for structural model

Path	Direct Effects Model		Interaction Effects Model		Hypothesis supported?
	Path Coef.	t-value	Path Coef.	t-value	
Relationship Capability → Trust	0.51**	7.77	0.50**	8.27	1: Yes
Fulfillment Capability → Customer Satisfaction	-0.02	0.38	-0.04	0.57	2: No
Relationship Capability → Relationship Commitment	0.12*	1.75	0.13*	1.84	3a: Yes
Fulfillment Capability → Relationship Commitment	-0.18*	2.21	-0.20**	2.52	3b: No
Certification Control → Trust	0.17**	2.56	0.15**	2.35	4a: Yes
Certification Control → Customer Satisfaction	0.10+	1.33	0.09+	1.28	4b: No
Certification Control → Relationship Commitment	0.34**	4.54	0.30**	4.34	4c: Yes
Service Support → Trust	0.18**	2.59	0.17**	2.49	5a: Yes
Service Support → Customer Satisfaction	0.23*	2.31	0.25**	2.58	5b: Yes
Service Support → Relationship Commitment	0.24**	2.86	0.29**	3.06	5c: Yes
<u>Controls</u>					
Tier Level → Trust	-0.03	0.84	-0.02	0.44	
Tier Level → Customer Satisfaction	0.13*	2.07	0.14*	2.27	
Tier Level → Relationship Commitment	-0.17**	2.81	-0.14**	2.61	
Region (Europe) → Trust	0.05	1.15	0.05	1.25	
Region (Europe) → Customer Satisfaction	0.27**	3.75	0.25**	3.85	
Region (Europe) → Relationship Commitment	0.15*	2.12	0.14*	2.32	
<u>Interaction Effects</u>					
Relationship Cap. * Certification Control → Trust			-0.15*	2.32	6a: Yes
Relationship Cap. * Certification Control → Relationship Comm.			-0.16**	2.48	6b: Yes
Fulfillment Cap. * Service Support → Customer Satisfaction			0.17*	1.87	7a: Yes
Fulfillment Cap. * Service Support → Relationship Comm.			0.20*	2.15	7b: Yes
<u>Variance Explained (R²)</u>					
	<u>R²</u>		<u>R²</u>	<u>Δ R²</u>	<u>F change (sig)</u>
Trust	0.496		0.519	0.023	8.85 (0.003)
Customer Satisfaction	0.174		0.200	0.026	6.01 (0.015)
Relationship Commitment	0.277		0.326	0.059	6.65 (0.002)

+ Path significant at p < 0.10; * Path significant at p < 0.05; ** Path significant at p < 0.01.

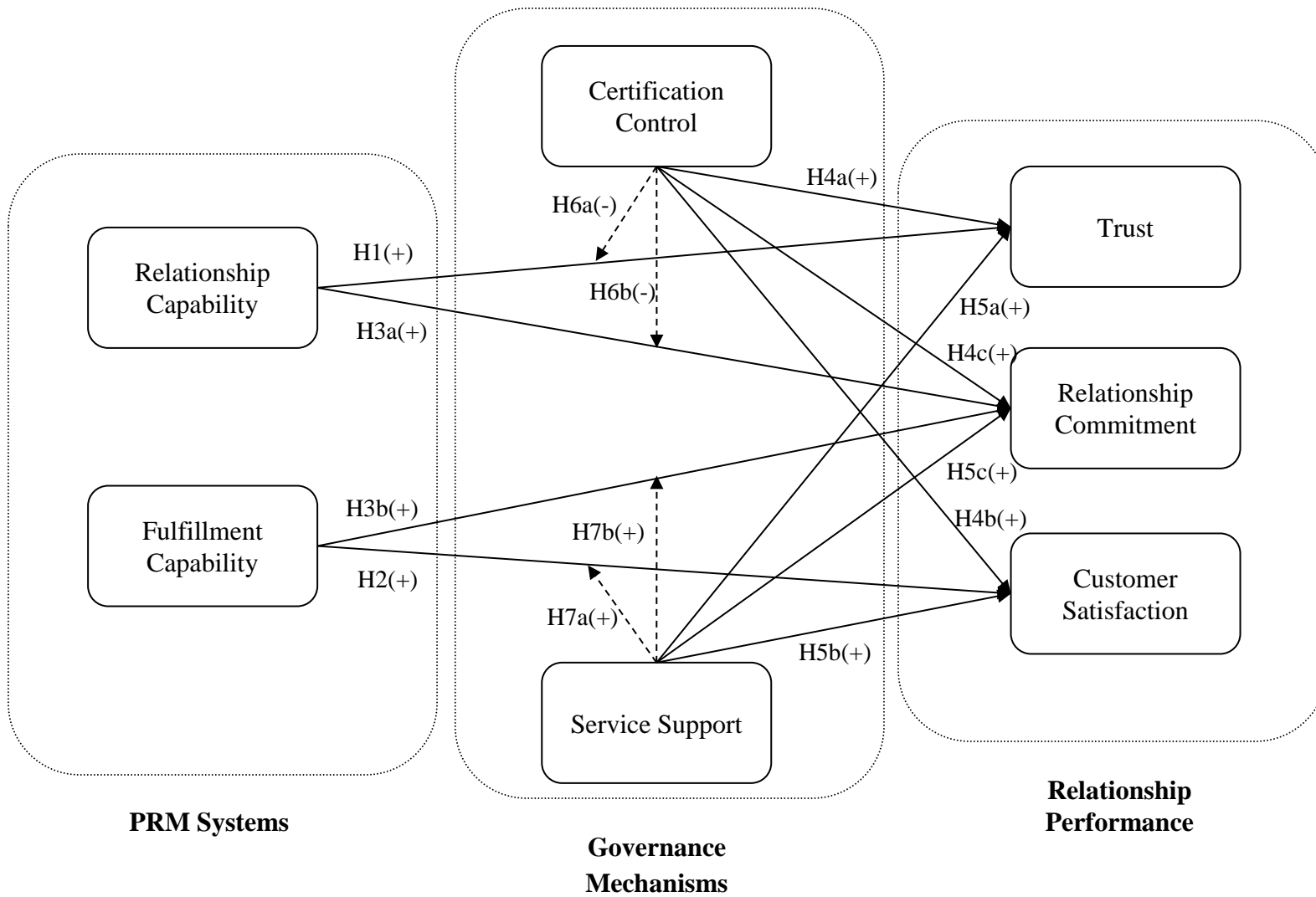
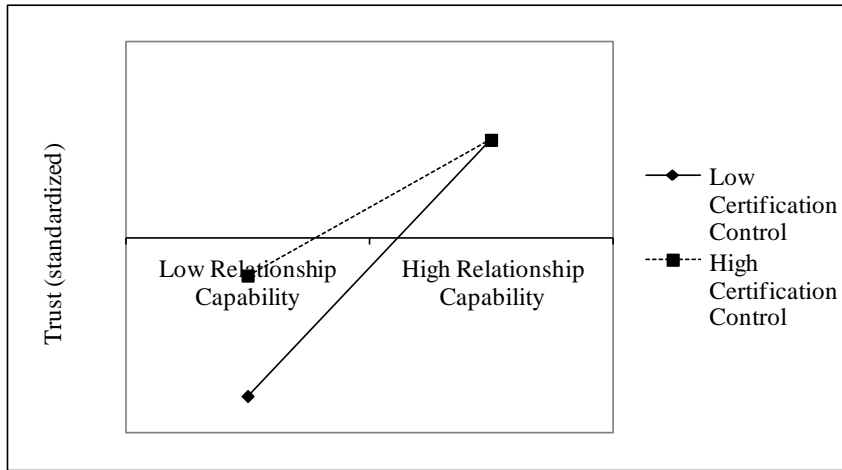
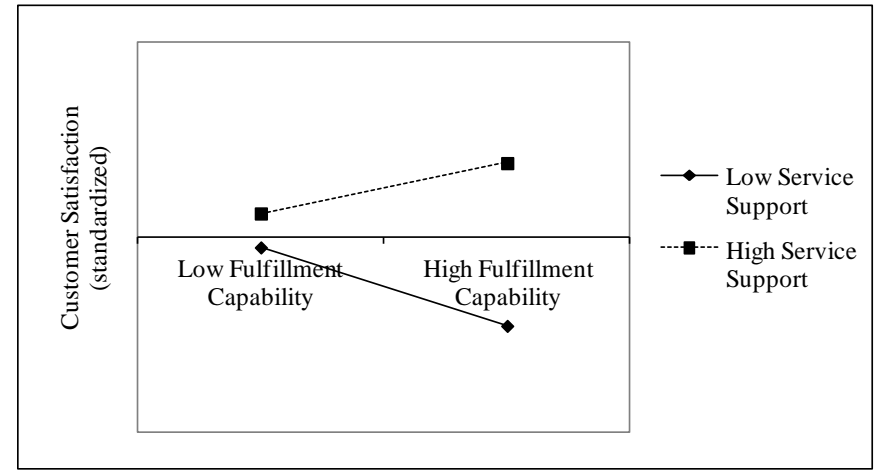


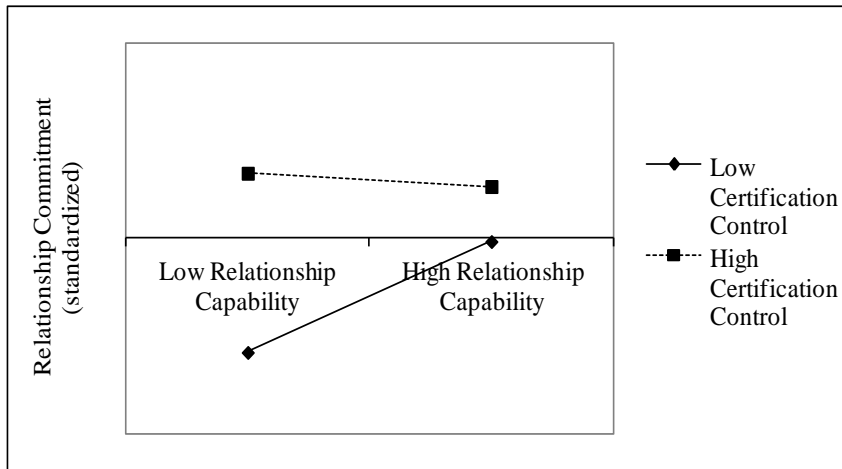
Figure 1. Conceptual Model



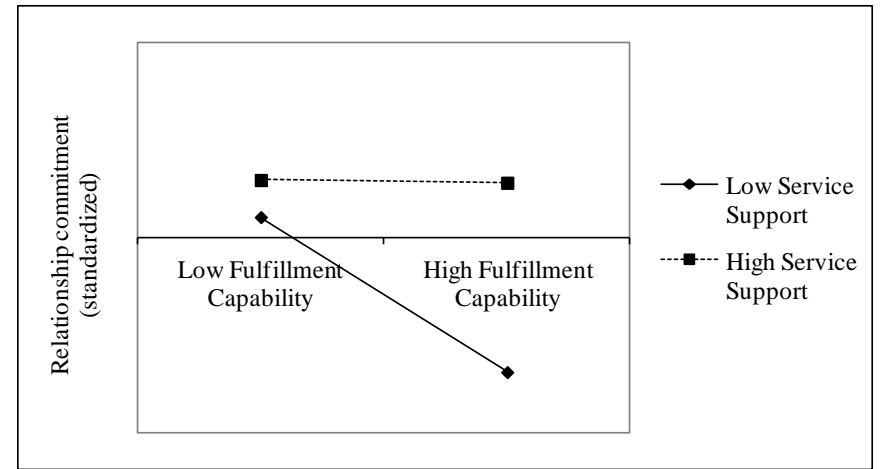
a. Relationship Capability and Certification Control on Trust



c. Fulfillment Capability and Service Support on Customer Satisfaction



b. Relationship Capability and Certification Control on Relationship Commitment



d. Fulfillment Capability and Service Support on Relationship Commitment

Figure 2. Interaction Effects