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Achieving Value Co-creation in IT Outsourcing

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ABSTRACT

Over the past few decades, information technology outsourcing has become a widely used and researched means for enterprises to enhance their performance. As future collaboration is the most desirable outcome between enterprises and IT outsourcing vendors, the purpose of this study is to construct a new model to examine: 1) whether information technology outsourcing satisfaction impact future collaboration, 2) whether value co-creation impact outsourcing satisfaction, 3) which factors influence value co-creation, and 4) whether trust influence enterprises’ commitments. This research assumes that: 1) trust predicts enterprises’ commitments; 2) customer orientation and participation, service quality, communication culture, and enterprises’ commitment predicts value co-creation; 3) value co-creation predicts information technology outsourcing satisfaction, 4) information technology outsourcing satisfaction predicts future collaboration. This model will allow enterprises and information technology outsourcing vendors to identify factors that can increase the chances for future collaboration. To achieve this goal, this research applied structural equation modelling, using Smart Partial Least Square (SmartPLS) software, as a method to empirically validate the model through a survey analysis containing 213 CEO or senior managers’ opinions obtained through valid measurements. The actual sampling yielded 207 useful questionnaires with a valid response rate of 97%. The results of this article show that trust strongly positively influences normative commitment, continuance commitment, and affective commitment; seven factors of customer behaviours and beliefs (such as: customer orientation and participation, service quality, communication culture, normative commitment, continuance commitment, and affective commitment) positively influence value co-creation; value co-creation strongly positively influences information technology outsourcing satisfaction; and information technology outsourcing satisfaction strongly positively affects future collaboration. The implications of this study and future work are also presented.

Keywords: IT Outsourcing Satisfaction, Value Co-Creation, Service Quality, Trust, Employee Commitment, Customer Behaviour
INTRODUCTION

In dynamic enterprise environment, how to adopt enterprises’ competitive advantages and create values with their information technology (IT) outsourcing vendors are important issues. IT outsourcing refers to the practice of shifting one or more organizational IT activities to an outside firm (Darmayanti & Cahyono, 2014; Dibbern et al., 2004). This process is often defined as value co-creations, because enterprises and IT outsourcing vendors all contribute to the creation of their identified core values. In recent years, the IT outsourcing market is burgeoning, but only few studies examined the relationships between enterprises and IT outsourcing vendors. However, in order to comprehend the value co-creation process, we must first understand the relationships between enterprises and IT outsourcing vendors. In this research, enterprises are deemed as the customers of IT outsourcing vendors while IT outsourcing vendors provide services for their customers. Therefore, it is valuable to examine which behaviors and beliefs of customers can contribute to their formation of values on the services they received, and what services IT outsourcing vendors can provide to customers influence the construction of their values (Kotlarsky, 2014).

It is commonly believed that, if IT outsourcing vendors try to achieve enterprises’ goals by satisfying them, encourage enterprises to discuss their needs with them, and offer the services that are best suited to enterprises’ problems (i.e., “customer orientation”; Ziggers & Henseler, 2016), it will be easier for enterprises to create values by IT outsourcing vendors. Moreover, if enterprises spend a significant amount of time sharing information about their needs and opinions with the IT outsourcing vendors during the service processes, often provide suggestions to the IT outsourcing vendors for improving the service outcome, and have a high level of participation in the service processes (i.e., “customer participation”; Chang & Taylor, 2016), enterprises probably will create values by IT outsourcing vendors. Most existing research on IT outsourcing were focused on customer-related aspects, because these aspects have a significant effect on service provider organizations, and regular communication between clients and providers is necessary. Therefore, clients are likely to discuss market developments and business needs with their service providers regularly (Liu & Deng, 2015; Plugge et al., 2013; Gonzalez et al., 2006).

When enterprises have problems, IT outsourcing vendors should be sympathetic and reassuring; IT outsourcing vendors also should have up-to-date equipment; and when they promise to do something within a certain time, they should fulfil their promises. All these aspects point to “service quality” (Quoquab, Abdullah, & Jihad, 2016). IT outsourcing vendors share ideas freely, build open communicative environments, and support enterprises’ new ideas. Enterprises possibly can create values in such a way, which is “communication culture” (Lang, Subramanian, & Mavlanova, 2015).

Even if IT outsourcing vendors are to enterprises’ advantages, enterprises do not feel IT outsourcing vendors will be right to leave them now, because IT outsourcing vendors will feel guilty, and IT outsourcing vendors can deserve enterprises’ loyalties. Enterprises maybe can create values in these cases, which is “normative commitment” (Wallace, Chernatony, & Buil, 2011). It will be very hard for IT outsourcing vendors to leave enterprises right now, even if IT outsourcing vendors wanted to, and enterprises feel that IT outsourcing vendors have too few options to consider leaving them. Enterprises maybe can create values under such conditions that
is “continuance commitment” (Wallace, Chernatony, & Buil, 2011). Enterprises will also be very happy to spend the rest of their careers with IT outsourcing vendors, IT outsourcing vendors really feel as if enterprises’ problems are their own, and they feel strong senses of belonging to enterprises. Enterprises will create values, and that is “affective commitment” (Wallace, Chernatony, & Buil, 2011). Enterprises can be sure IT outsourcing vendors will meet their commitments; if problems arise, IT outsourcing vendors are honest with enterprises; and IT outsourcing vendors are well prepared for meeting enterprises’ demands efficiently, that is trust. Trust can predict normative commitment, continuance commitment, and affective commitment (Sanchez, 2010).

Value, its creation, and its appropriation are central concepts in management research (Pitelis, 2012) as well as in the research on alliances and networks (Pitelis, 2012; Capaldo & Petruzzelli, 2011; Dhanaraj & Singh, 2006; Dyer et al., 2008; Lavie, 2006; Moller et al., 2005). Value in economics can be formally defined as the willingness to pay from the end-customer’s perspective (Huang et al., 2015). Value co-creation refers to activities required to increase the amount of such values independent of the context and level of analysis. We believe that enterprises may be able to increase their value co-creation through IT outsourcing vendors. The current study focuses on value co-creation, IT outsourcing satisfaction, and future collaboration, which are all desirable outcomes for the cooperation between enterprises and IT outsourcing vendors. The major point is to enhance customer experience through value co-creation between clients and providers. If enterprises are satisfied with the IT outsourcing services provided, IT outsourcing vendors are good businesses to do enterprises with, and IT outsourcing services meet enterprises’ expectations, that is IT outsourcing satisfaction (Chan, Yim, and Lam, 2010).

If enterprises will welcome the possibility of collaboration with IT outsourcing vendors in additional projects in the future, be willing to work with IT outsourcing vendors in projects in the future, and be willing to collaborate with IT outsourcing vendors in projects, shall the opportunities arise, that is future collaboration (Wagner, Eggert, and Lindemann, 2010). As future collaboration is the most desirable outcome between enterprises and IT outsourcing vendors, the purpose of this study is to construct a new model to examine: 1) whether information technology outsourcing satisfaction impact future collaboration, 2) whether value co-creation impact outsourcing satisfaction, 3) which factors influence value co-creation, and 4) whether trust influence enterprises’ commitments.

**THEORETICAL BACKGROUND AND RESEARCH MODEL DEVELOPMENT**

This research assumes that customer orientation and participation, service quality, communication culture, normative commitment, continuance commitment, and affective commitment impacts value co-creation; value co-creation impacts IT outsourcing satisfaction; and IT outsourcing satisfaction impacts future collaboration. This research also examines if trust impacts normative commitment, continuance commitment, and affective commitment. Figure 1 presents the nomological model of this study. The following sections present the hypotheses regarding the links between the constructs.
Customer Participation and Value Co-Creation

Customer participation may increase communication and relationship building between customers and employees (Zhang et al., 2015). According to health care literature (Wang et al., 2015), when patients work with doctors to incorporate their preferences and values, the level of care delivered is improved and empathetic, honest, and friendly interactions are encouraged, which produces relational values. From the service provider’s perspective, employees may fulfill their social need for approval, when they co-create services with customers, similar to the way their perception of being valued by the organization enable them to satisfy their social needs for approval, affiliation, and esteem (Eisenberger et al., 1986). Thus, every interaction between employees and customers represents an opportunity to co-create relational values for both parties (Fleming et al., 2005). Illustrative comments from service employees, about camaraderie and social bonding with their customers, support this assertion (Gremler & Gwinner, 2000). Based on the above statements, hypothesis 1 is proposed as follows.

H 1: Customer participation has a positive impact on value co-creation.

Customer Orientation and Value Co-Creation

Customer orientation is based on customer-driven value creation (Lindblom et al., 2015; Korschun et al., 2014; Harris et al., 2014). At the firm level, Slater and Narver (1995) emphasized that market-oriented firms place the highest priority on profit creation, by maintaining superior customer value. Value creation has been defined as the customer's perspective of receiving the desired benefits from the salesperson and the company. Yeh (2015) suggested that customer orientation, at the individual employee level, is closely related to a ‘concern for others’ dimension. Therefore, highly customer-oriented salespersons are likely to
show higher concern for self and for others, whereas sales-oriented salespeople or those having low customer orientation would exhibit high concern for self, but low concern for others. Therefore, it is also likely that a customer-oriented salesperson is more likely to create value for customers, since she/he is likely to be more concerned for others (customers). Therefore, the following hypothesis is proposed.

**H 2**: Customer orientation is positively associated with value co-creation.

**Service Quality and Value Co-Creation**

Value is at the heart of what consumers pursue from a marketing exchange. While value is operationalized in different ways, the general definition of value is a consumer's perception of the subjective worth of some activity or object considering all net benefits and costs of consumption (Singh, 2015). Perceived quality will positively influence value, whereas price/cost will negatively influence value (Hellieret al., 2003). Logically, high quality is not a prerequisite for value because a reduction in quality can be offset by lower overall costs. However, research supports a positive relationship between quality and value (e.g., Choi et al., 2004; Cronin et al., 2000; Zins, 2001). Therefore, the following hypothesis is proposed.

**H3: Service quality has a significant, positive effect on value co-creation.**

**Communication Culture and Value Co-Creation**

Communication cultures and structures within the organization define what constitutes accepted communication behavior, which may facilitate or hinder the communication process (Littler, 2013; Brown, 1997; Adler, 1965). The structures of communication and integration of knowledge are essential to enhance the absorptive capacity (George & Jonathan, 2015). The communication climate is often regarded as an important factor affecting the communication process (Tsai, 2001). An open culture that views change as positive can facilitate communication and thus the learning process (Levinson & Asahi, 1995). The creation of new knowledge requires routines that simplify and facilitate communication, thus allowing employees to explore ways in which they can use existing knowledge or develop new knowledge (Zahra & George, 2000). Furthermore, structural, cognitive, behavioral, and political barriers may stifle the effective sharing and integration of knowledge. Therefore, the following hypothesis is proposed.

**H4: Communication Culture has a positive impact on value co-creation.**

**Employee Commitment and Value Co-Creation**

This study investigates the influence of employees’ commitment to the organization on their adoption of brand values. Organizational commitment is a state of psychological attachment to the workplace (Boix & Svolik, 2013; Chen et al., 2002). We identify commitment as a critical variable for exploration owing to its influence on the employees’ performance and appreciation of value adoption (Kimpakorn & Tocquer, 2009; Somers, 2009; Park & Rainey, 2007; Boyd & Sutherland, 2006). When employees are committed to the organization, they display greater social capital, where relationships are created on the basis of shared values (Park & Rainey, 2007).
The influence of the three-component model of commitment is helpful to appreciate the adoption of brand values. The three components of this model are an affective commitment or an emotional attachment to, identification with, and involvement in the organization (Demirtas & Akdogan, 2015), continuance commitment or an awareness of the costs associated with leaving the organization (McCallum & Forret, 2014), and normative commitment or a feeling of obligation to continue employment (McCallum & Forret, 2014). Employees who experience affective commitment continue to work for an organization, because they want to; those experiencing continuance commitment continue to work, because they need to; and those with a high level of normative commitment work, because they feel they ought to. Therefore, the following hypotheses are proposed.

H5: Normative Commitment is positively associated with value co-creation.
H6: Continuance Commitment is positively associated with value co-creation.
H7: Affective Commitment is positively associated with value co-creation.

**Trust and Employee Commitment**

Trust is expected to have a direct and positive impact on commitment, because trading relationships based on trust are usually highly appreciated by all involved parties. The fact that the parties act sincerely or credibly—and that they aim to protect, whenever possible, the interests and wellbeing of the counterpart—generally results, as shown empirically, in the generation of commitment (Hadjikhani & Thilenius, 2005). This supports the argument that, in the long term, distributors prefer to work with manufacturers they can trust and who will act sincerely and benevolently toward the relationship. This approach secures them against the risk of damages caused by the manufacturer in any actions taken (Ang et al., 2015). This leads us to suggest the following:

H8: Trust has a positive effect on the normative commitment.
H9: Trust has a positive effect on the continuance commitment.
H10: Trust has a positive effect on the affective commitment.

**Value Co-creation, Outsourcing Satisfaction, and Future Collaboration**

The concept of value co-creation was developed by Prahalad and Ramaswamy (2004). They suggested that the value of a service or product is not created by the manufacturer/supplier solely, but it is co-created by the manufacturer/supplier and consumer of the product or service.

Outsourcing has emerged as a key trend in contemporary business environments and has migrated from the procurement of non-core, support services to virtually every activity of a firm (Griffith & Yanhui, 2015). Outsourcing is also considered to be a strategic priority (Holcomb and Hitt, 2007).

H 11: Value co-creation has a positive impact on outsourcing satisfaction.

Finally, the company’s satisfaction with the collaboration influences the future of the relationship. Companies continue collaborations only if their current outsourcing experiences meet their expectations.
H12: Outsourcing satisfaction has a positive impact on future collaboration intentions.

RESEARCH METHODOLOGY AND DESIGN

Data collection and research design

This study was based on an online questionnaire and selected sample firms from the Information Management Association of R.O.C. (IMA), the International Service Industry Association of R.O.C. (CISA), and the International Trade Executives Association of R.O.C.. The survey participants were chief executive officers and senior managers of the sample firms from the following fields: Manufacturing sector (21.7%), Information Technology sector (12.6%), Food and beverage service sector (12.1%), others service sector (10.6%), Tourism sector (10.6%), Finance and insurance sector (9.2%), Medical Treatment & Health Care sector (8.2%), Logistic retailing sector (10.2%), and Trading sector (4.8%), and they evaluated selected items regarding a firm’s outsourcing (Table 1). According to the sample plan, each sample company conducted the questionnaire survey, and the total planned sampling sample was 213. The actual sampling yielded 207 useful questionnaires and a valid response rate of 97%.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Items</th>
<th>Frequency</th>
<th>Percent</th>
<th>Items</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>155</td>
<td>74.9%</td>
<td>Female</td>
<td>52</td>
<td>25.1%</td>
</tr>
<tr>
<td>IT Outsourcing Frequency (per year)</td>
<td>Under 1 (inclusive)</td>
<td>6</td>
<td>2.9%</td>
<td>3 – 6 (inclusive)</td>
<td>83</td>
<td>40.1%</td>
</tr>
<tr>
<td></td>
<td>1 – 3 (inclusive)</td>
<td>90</td>
<td>43.5%</td>
<td>6 (or more)</td>
<td>28</td>
<td>13.5%</td>
</tr>
<tr>
<td>Industry Category</td>
<td>Manufacturing sector</td>
<td>45</td>
<td>21.7%</td>
<td>Finance and insurance</td>
<td>19</td>
<td>9.2%</td>
</tr>
<tr>
<td></td>
<td>Information Technology</td>
<td>26</td>
<td>12.6%</td>
<td>Medical Treatment &amp; Health Care</td>
<td>17</td>
<td>8.2%</td>
</tr>
<tr>
<td></td>
<td>Food and beverage service</td>
<td>25</td>
<td>12.1%</td>
<td>Logistic retailing</td>
<td>21</td>
<td>10.2%</td>
</tr>
<tr>
<td></td>
<td>Others service</td>
<td>22</td>
<td>10.6%</td>
<td>Trading</td>
<td>10</td>
<td>4.8%</td>
</tr>
<tr>
<td></td>
<td>Tourism</td>
<td>22</td>
<td>10.6%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT Outsourcing Entrusted Amount (million, NT)</td>
<td>Under 5 (inclusive)</td>
<td>56</td>
<td>27.1%</td>
<td>100-500 (inclusive)</td>
<td>23</td>
<td>11.1%</td>
</tr>
<tr>
<td></td>
<td>5-10 (inclusive)</td>
<td>50</td>
<td>24.2%</td>
<td>500-1000 (inclusive)</td>
<td>19</td>
<td>9.2%</td>
</tr>
<tr>
<td></td>
<td>10-50 (inclusive)</td>
<td>18</td>
<td>8.7%</td>
<td>1000 (or more)</td>
<td>9</td>
<td>4.2%</td>
</tr>
<tr>
<td></td>
<td>50-100 (inclusive)</td>
<td>32</td>
<td>15.5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover of Enterprise (Hundred million, NT, nearly 1 year)</td>
<td>Under 1 (inclusive)</td>
<td>35</td>
<td>16.9%</td>
<td>10-15 (inclusive)</td>
<td>36</td>
<td>17.4%</td>
</tr>
<tr>
<td></td>
<td>1.5 (inclusive)</td>
<td>60</td>
<td>29.0%</td>
<td>15-20 (inclusive)</td>
<td>23</td>
<td>11.1%</td>
</tr>
<tr>
<td></td>
<td>5-10 (inclusive)</td>
<td>34</td>
<td>16.4%</td>
<td>20 (or more)</td>
<td>19</td>
<td>9.2%</td>
</tr>
<tr>
<td>IT Outsourcing Entrusted Item (Complex topics) (N=535).</td>
<td>Network</td>
<td>182</td>
<td>34.0%</td>
<td>Hardware Maintenance</td>
<td>90</td>
<td>16.8%</td>
</tr>
<tr>
<td></td>
<td>Software (such as information systems, etc.)</td>
<td>179</td>
<td>33.5%</td>
<td>Cloud</td>
<td>84</td>
<td>15.7%</td>
</tr>
</tbody>
</table>

Table 1: Demographic information about the respondents.
The questionnaire was designed considering related works and experts’ views. After the first draft was completed, a pre-test was undertaken with established leaders in outsourcing value co-creation in the IT industries to amend any part perceived to have a dubious presentation. Therefore, questionnaire recipients could understand the questions in the official survey, and a satisfactory completion of the questionnaire was ensured. All aspects were assessed using a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree.

Analytical method

The data were analysed through the structural equations method, using the partial least squares (PLS) technique. This technique is designed to reflect the theoretical and empirical characteristics of social sciences and behavioral characteristics, wherein we often find theories with insufficient support or little information available. More specifically, we used Smart PLS 2.0 M3.

RESEARCH RESULTS

The structural equation modelling technique was used to test the hypotheses. SmartPLS software was used to analyse the data. We first examined the instrument (measurement model) to assess reliability and validity before testing the structural model using the level of significance of the path coefficients and variance explained (R-squared measures), as shown in Table 2.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>AVE</th>
<th>Composite Reliability</th>
<th>R Square</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective Commitment</td>
<td>0.938</td>
<td>0.979</td>
<td>0.776</td>
<td>0.967</td>
</tr>
<tr>
<td>Communication Culture</td>
<td>0.927</td>
<td>0.974</td>
<td>0.960</td>
<td></td>
</tr>
<tr>
<td>Continuance Commitment</td>
<td>0.909</td>
<td>0.968</td>
<td>0.649</td>
<td>0.950</td>
</tr>
<tr>
<td>Customer Orientation</td>
<td>0.941</td>
<td>0.979</td>
<td>0.968</td>
<td></td>
</tr>
<tr>
<td>Customer Participation</td>
<td>0.936</td>
<td>0.978</td>
<td>0.966</td>
<td></td>
</tr>
<tr>
<td>Future Collaboration</td>
<td>0.962</td>
<td>0.987</td>
<td>0.823</td>
<td>0.980</td>
</tr>
<tr>
<td>Normative Commitment</td>
<td>0.885</td>
<td>0.959</td>
<td>0.816</td>
<td>0.935</td>
</tr>
<tr>
<td>Outsourcing Satisfaction</td>
<td>0.948</td>
<td>0.982</td>
<td>0.739</td>
<td>0.973</td>
</tr>
<tr>
<td>Service Quality</td>
<td>0.969</td>
<td>0.989</td>
<td>0.984</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.924</td>
<td>0.973</td>
<td>0.959</td>
<td></td>
</tr>
<tr>
<td>Value Co-Creation</td>
<td>0.875</td>
<td>0.954</td>
<td>0.973</td>
<td>0.928</td>
</tr>
</tbody>
</table>

Table 2. Descriptive statistics for the constructs

Measurement model

We assess the following parameters to test convergent validity: Cronbach’s alpha, the composite reliability of constructs, average variance extracted (AVE), and R-square. As shown in Table 2, the Cronbach’s alpha values of all constructs range from 0.928 to 0.984. Composite reliability values range from 0.954 to 0.989 and are above the benchmark value of 0.70, suggesting the acceptable degrees for the internal consistency of each construct. AVE values range from 0.875
to 0.969. The model explains most of the variation for these variables.

The square root of AVE must be greater than the correlations between the constructs. Thus, the square roots of AVEs (diagonal elements) are higher than the correlation between the constructs (off-diagonal elements), as shown in Table 3. These results support the discriminant validity of the scale used and indicate that the measurement model has satisfactory convergent validity.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>AC</th>
<th>CC</th>
<th>CCT</th>
<th>CO</th>
<th>CP</th>
<th>FC</th>
<th>NC</th>
<th>OS</th>
<th>SQ</th>
<th>TR</th>
<th>VC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective Commitment</td>
<td>AC</td>
<td>0.969</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Culture</td>
<td>CC</td>
<td>0.856</td>
<td>0.963</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuance Commitment</td>
<td>CCT</td>
<td>0.864</td>
<td>0.775</td>
<td>0.953</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Orientation</td>
<td>CO</td>
<td>0.843</td>
<td>0.917</td>
<td>0.795</td>
<td>0.970</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Participation</td>
<td>CP</td>
<td>0.659</td>
<td>0.629</td>
<td>0.688</td>
<td>0.662</td>
<td>0.967</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Collaboration</td>
<td>FC</td>
<td>0.844</td>
<td>0.859</td>
<td>0.747</td>
<td>0.800</td>
<td>0.555</td>
<td>0.981</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative Commitment</td>
<td>NC</td>
<td>0.885</td>
<td>0.851</td>
<td>0.888</td>
<td>0.864</td>
<td>0.694</td>
<td>0.804</td>
<td>0.941</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outsourcing Satisfaction</td>
<td>OS</td>
<td>0.905</td>
<td>0.864</td>
<td>0.773</td>
<td>0.863</td>
<td>0.588</td>
<td>0.907</td>
<td>0.852</td>
<td>0.974</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Quality</td>
<td>SQ</td>
<td>0.623</td>
<td>0.655</td>
<td>0.686</td>
<td>0.663</td>
<td>0.719</td>
<td>0.549</td>
<td>0.656</td>
<td>0.555</td>
<td>0.984</td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>TR</td>
<td>0.881</td>
<td>0.922</td>
<td>0.805</td>
<td>0.898</td>
<td>0.644</td>
<td>0.836</td>
<td>0.904</td>
<td>0.889</td>
<td>0.661</td>
<td>0.961</td>
</tr>
<tr>
<td>Value Co-Creation</td>
<td>VC</td>
<td>0.936</td>
<td>0.917</td>
<td>0.929</td>
<td>0.902</td>
<td>0.680</td>
<td>0.836</td>
<td>0.936</td>
<td>0.859</td>
<td>0.695</td>
<td>0.904</td>
</tr>
</tbody>
</table>

Table 3. Correlation among constructs and the square root of the AVE on Diagonals

**Structural model**

The structural model is assessed using the variance explained (R-squared measures) and the level of significance of the $\beta$ and T values (Table 2). The R-squared results for the six dependent variables are high, particularly for affective commitment (0.776), continuance commitment (0.649), normative commitment (0.816), outsourcing satisfaction (0.739), future collaboration (0.823), and value co-creation (0.973), thus suggesting that the model has a high explanatory power and explaining 77.6%, 64.9%, 81.6%, 73.9%, 82.3%, and 97.3% of the variance in these dependent variables, respectively.

The results support H1, linking customer participation to value co-creation ($\beta$-Value = 0.007). Consistent with this, customer orientation is also positively correlated with value co-creation (H2; $\beta$-Value = 0.080). Service quality to value co-creation (H3) is supported ($\beta$-Value = 0.146, $p < 0.01$), as does communication culture to value co-creation (H4; $\beta$-Value = 0.268, $p < 0.001$). Normative commitment to value co-creation (H5) is supported ($\beta$-Value = 0.146, $p < 0.01$). Continuance commitment to value co-creation (H6) is supported ($\beta$-Value = 0.282, $p < 0.001$). Affective commitment to value co-creation (H7) is supported ($\beta$-Value = 0.089). Trust to normative commitment (H8) is supported ($\beta$-Value = 0.836, $p < 0.001$). Trust to continuance commitment (H9) is supported ($\beta$-Value = 0.806, $p < 0.001$). Trust to affective commitment (H10) is supported ($\beta$-Value = 0.851, $p < 0.001$).

Value co-creation positively impacts IT outsourcing satisfaction (H11; $\beta$-Value = 0.877, $p < 0.001$). IT outsourcing satisfaction positively impacts future collaboration (H12; $\beta$-Value = 0.907,
p < 0.001). These results can provide valuable reference information for managing and improving the performance of IT outsourcing. The main effect model is presented in Figure 2.

![Figure 2. Interaction Effect Model](image)

**DISCUSSION AND CONCLUSION**

Our goal in this research was to develop a new research model to investigate the associations among IT outsourcing satisfaction, value co-creation, and future collaboration. We found that 1) value co-creation has a strong impact on IT outsourcing satisfaction; 2) IT outsourcing satisfaction has a strong impact on future collaboration. Therefore, managers should adopt appropriate practices for leveraging IT outsourcing, as part of a value-creating strategy for the enterprise. Managing customer relationships is very important for IT outsourcing vendors and can be instrumental in creating enterprise value. The direct effects of the seven variables of customer behaviours and beliefs, such as customer participation, customer orientation, service quality, communication culture, affective commitment, continuance commitment, normative commitment, significantly influence value co-creation, IT outsourcing satisfaction, and future collaboration are revealed. Overall, based on the results of this study, a relational view in the study of the relational outsourcing vendors is developed. In addition, the role of value-based relationships is highlighted from the economic and relational perspective of enterprises and IT outsourcing vendors.

The implications of this study, we found that all the seven factors of customer behaviours and beliefs have a significant influence on inter-organizational value creation by studying IT outsourcing vendors. Furthermore, we determine the relationships between IT outsourcing vendors and enterprises on value co-creation, IT outsourcing satisfaction, and future collaboration. Indeed, customer participation, customer orientation, service quality,
communication culture, affective commitment, continuance commitment, and normative commitment enhance value co-creation; value co-creation enhance IT outsourcing satisfaction; and IT outsourcing satisfaction enhance future collaboration between IT outsourcing vendors and enterprises.

FUTURE WORK
This research provided empirical evidence that seven factors (customer participation, customer orientation, service quality, communication culture, affective commitment, continuance commitment, and normative commitment) affect value co-creation. We understand corporate top management values monitoring new opportunities which can enhance the enterprise’s ability to solve social problems, the corporation believes in performing in a manner consistent with the philanthropic and charitable expectations of society, and the policies of the enterprise emphasize that its philanthropic behavior is a useful measure of corporate performance. That is social responsibility orientation. There are several studies indicating that it can impact value co-creation (cite). Top management is convinced of the long-term strategic importance of adopting participative decision making at both middle and senior management levels, the enterprise’s philosophy emphasizes participative consensus building decision making based on consensus, followed by feedback of results of change for group evaluation and further action, and the enterprise’s philosophy emphasizes reliance on responsible executives to make all product or service-related decisions concerning level of operations, marketing, etc. That is progressive decision making orientation, and there are several studies indicating that it can impact value co-creation. Enterprise has a definite plan for the development of social initiatives, measures the results of its social initiatives, and enables employees to dedicate part of their work time to participate in social initiatives. That is social planning, and there are several studies indicating that it can impact value co-creation. Enterprises are usually among the first in adapting their corporate practices which exceed current regulatory norms to changing social expectations. That is social position, and there are several studies indicating that it can impact value co-creation. It would be interesting for future research to examine if social responsibility orientation, progressive decision making orientation, social planning, and social position impact value co-creation, IT outsourcing satisfaction, and future collaboration.

REFERENCE


**ACKNOWLEDGMENTS**

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# APPENDICES

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Measures</th>
<th>References</th>
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<tbody>
<tr>
<td>Customer Participation</td>
<td>I spend a lot of time sharing information about my needs and opinions with IT outsourcing vendor during the service process.</td>
<td>Chan, et al., 2010.</td>
</tr>
<tr>
<td></td>
<td>I always provide suggestions to IT outsourcing vendor for improving the service outcome.</td>
<td></td>
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<tr>
<td></td>
<td>I have a high level of participation in the service process.</td>
<td></td>
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<tr>
<td></td>
<td>IT outsourcing vendor tries to get me to discuss my needs with him/her</td>
<td></td>
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<tr>
<td></td>
<td>IT outsourcing vendor offers the service that is best suited to my problems.</td>
<td></td>
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<tr>
<td>Service Quality</td>
<td>When I have problems, IT outsourcing vendor should be sympathetic and reassuring.</td>
<td>Lai, et al., 2009.</td>
</tr>
<tr>
<td></td>
<td>IT outsourcing vendor should have up-to-date equipment.</td>
<td>Parasuraman, et al., 1988.</td>
</tr>
<tr>
<td></td>
<td>When IT outsourcing vendor promises to do something by a certain time, he/she would do so.</td>
<td></td>
</tr>
<tr>
<td>Communication Culture</td>
<td>IT outsourcing vendor shares the ideas freely.</td>
<td>Valentina, N., and Passiante, G. 2009</td>
</tr>
<tr>
<td></td>
<td>IT outsourcing vendor shares a very open communicative environment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IT outsourcing vendor supports my new ideas.</td>
<td></td>
</tr>
</tbody>
</table>
### Questionnaire

| Trust | I can be sure IT outsourcing vendor will meet his/her commitments.  
|       | Is honest with me if IT outsourcing vendor’s problems arise.  
|       | IT outsourcing vendor is well prepared for meeting my demands efficiently.  | Sanchez, 2010 |
| Normative Commitment | Even if IT outsourcing vendor is to my advantage, I do not feel he/she will be right to leave me now.  | Wallace, et al., 2011 |
|       | IT outsourcing vendor will feel guilty if he/she leaves me now.  
|       | IT outsourcing vendor deserves my loyalty.  | Wallace, et al., 2011 |
| Continuance Commitment | It will be very hard for IT outsourcing vendor to leave my organisation right now, even if he/she wants to.  | Wallace, et al., 2011 |
|       | IT outsourcing vendor feels that he/she has too few options to consider leaving me.  | Wallace, et al., 2011 |
| Affective Commitment | I would be very happy to spend the rest of my career with IT outsourcing vendor.  | Wallace, et al., 2011 |
|       | I really feel as if my problems are IT outsourcing vendor’s own.  
|       | I feel a strong sense of belonging to my organisation.  | Wallace, et al., 2011 |
| Value co-creation | I will create my values, if IT outsourcing vendor services well.  | Kunsoo, et al., 2012 |
|       | IT outsourcing vendor will create his/her values, if he/she services well.  
|       | I and IT outsourcing vendor will create values, if we believe each other.  | Kunsoo, et al., 2012 |

### Questionnaire

| Outsourcing Satisfaction | I am satisfied with the services provided.  
|                         | This IT outsourcing vendor is a good business.  
|                         | The service of this IT outsourcing vendor meets my expectations.  | Chan, et al., 2010 |
| Future Collaboration | We would welcome the possibility of collaboration with this IT outsourcing vendor in additional projects in the future.  | Wagner, et al., 2010 |
|                         | We would be willing to work with this IT outsourcing vendor in projects in the future.  
|                         | We would be willing to collaborate with this IT outsourcing vendor in projects should the opportunity arise.  | Wagner, et al., 2010 |
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