Relationship Value in FM: A Customer Perspective

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ABSTRACT

Purpose – Facility management (FM) is a relationship-management discipline. The present study focuses on business-to-business (B2B) buyer-supplier relationships between FM customers and external suppliers. The research adopts the buyer’s perspective in order to identify the dimensions of relationship value. The objective is to conceptualize a relationship-value framework in the context of FM.

Theories – Relationship management and value constitute the fundamental theoretical background of this research. Value dimensions are developed based on previous research of relationship value in B2B relationships.

Design/methodology/approach – This research is conducted as a mixed method, including a qualitative literature review, workshops and discussions with FM academics, interviews with FM managers and a quantitative online survey.

Findings – Nine dimensions of relationship value were identified and a framework of relationship value for FM was established and measured. The sacrifice dimension positively correlated with relationship value in the relationship with FM suppliers, which is different from previous studies of relationship value in the context of business markets.

Originality/value – This research narrowed the gap in relationship-value studies in FM. The findings can contribute to traditional theory that customer value can be the add-on between benefits (“what you get”) and sacrifices (“what you give”), rather than just a trade-off between these two dimensions. There are some implications for practitioners. For example, FM suppliers could involve customers in their daily work, since the more effort the customers contribute to the relationship, the higher value they perceive from it.

Keywords
Facility Management, Outsourcing, Relationship value, PLS

1 INTRODUCTION

Adding value to corporations is a fairly new research trend in the facility management (FM) field (Jensen, 2010). As a relationship-management discipline, FM is the management of relationships between internal and external customers and suppliers (Coenen et al., 2012b). It is worthwhile exploring what constitutes a good relationship between FM customers and suppliers.

Relationship management, especially buyer-supplier business relationships and their value, has been an important and increasingly studied field in academic marketing literature (Dwyer, et al., 1987; Morgan & Hunt, 1994). In marketing practice, more companies than ever are investing in building good relationships with customers or suppliers (Verhoef, 2003). Therefore, it is necessary to understand customer needs and expectations in a relationship.
Business relationships are set up through delivering FM services and contact between customers and external FM suppliers. This research starts from a customer’s point of view to investigate which value dimensions can be achieved from the specific relationship with external FM suppliers. Coenen et al. (2012b) provided a deeper understanding of relationship value in FM. They discussed the customer-perceived value and illustrated value dimensions to provide a contrast to the dominating financial-value perspective in FM. The dimensions of customer-relationship value in FM have not yet been closely examined. For example, there is a lack of knowledge on the salient value dimensions (benefits/sacrifices) of the FM business relationship.

2  LITERATURE REVIEW

2.1 Facility management and key relationships

CEN (2006) defined facility management as “integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of its primary activities.” From the organisation’s point of view, there are three key stakeholders: clients, customers and end users (CEN, 2006). Therefore, the key relationships are the relationships between these three key stakeholders and FM suppliers. Since this research is focused on business buyer-supplier relationships, it is centred on the relationship between customers (defined as organizations, organizational units, or people that procure facility services and have direct relationships with the supplier) and the external FM supplier (defined as organizations that provide the customer with one or more FM services and products) (CEN, 2006).

2.2 Relationship theories

A thorough understanding of the theoretical background of relationships is necessary for this research, because different relationship values emerge from different relationship approaches. All approaches introduced below can be found in the FM field. According to Baxter (2008), relationship theories can be classified as economic-, behavioural- or social-based theories.

The economic view of relationships is a start of classical economic theory. Transaction-cost economics (TCE) originated from Coase (1937), who stated that a company forms, is to reduce the costs of purchasing resources in a market. Williamson (1979), MacNeil (1980) and Dwyer et al. (1987) further developed TCE. The latter established models for long-term relationships between buyers and sellers to distinguish transactions and relational exchanges. TCE is a powerful tool for companies to analyse their organisation and strategy (Robins, 1987), and can explain the early stages of relationships between companies to reduce transaction costs (Baxter, 2008). However, it prohibits empirical investigation to assess value in business relationships. As Zajac and Olsen (1993) argue, cost reduction is not the only motivator in forming business relationships. Hakansson (1982) and the Industrial Marketing and Purchasing (IMP) Group, developed an interaction approach to B2B buyer-seller relationships. This interaction approach focuses on the factors that bring buyer-seller relationships closer (Metcalf et al., 1992). The IMP approach emphasised that transactions are merely episodes in on-going buyer-seller relationships. Both suppliers and customers can be actively involved in determining, developing and implementing transactions.

Taking the behavioural or social views of business relationships, the network approach was derived from the IMP approach. It included formal and informal relationships among different
actors (such as purchasers and suppliers). Companies within the network helped their counterparts develop (Baxter, 2008) because they needed resource support from each other. The value of a relationship cannot be anticipated (Ford et al., 1996). According to Homans (1958) and Bagozzi (1975), tangible and intangible goods are exchanged in a social network, such as money, products, services and reputation. People communicate and negotiate to influence others’ satisfaction of their needs. Dore (1983) adapted this social-exchange concept to business relationships. Competence is a company’s ability to allocate tangible and intangible resources in a way that helps it compete in its market (Sanchez et al., 1996). The competence theory introduced “an essential supply side dimension to industry dynamic” and recognised “important interdependencies and complementarities (Sanchez & Heene, 1997). According to Eisenhardt (1989, p. 58) “agency theory is directed at the ubiquitous agency relationship, in which one party [the principal] delegated work to another [the agent], who performs that work.”

2.3 Relationship value theories

Long-term buyer-seller relationships are formulated because the partners expect synergies, which are the values that each partner could not achieve alone (Wilson & Jantrania, 1995). Partners in this business relationship share resources, technology and knowledge to improve their competitive advantage. Borys & Jemison (1989) called this process value creation.

According to Zeithaml (1988), customer value can be defined as the trade-off between benefits and sacrifices in a market exchange. Ulaga (2003) identified four characteristics of customer-perceived value. It is subjective (Kortge & Okonkwo, 1993), it is a trade-off between benefits and sacrifices (Zeithaml, 1988), benefits and sacrifices can be multifaceted (Grisaffe & Kumar, 1988), and finally, value perceptions are relative to competition (Gale, 1994).

Relationship value consists of benefits and sacrifices (Anderson et al., 1993; Gwinner et al., 1998; Ulaga & Eggert, 2005). Therefore, higher value in relationships occurs either from increasing benefits or decreasing sacrifices (Ravald & Grönroos, 1996). Academics have investigated these two dimensions. According to Coenen et al. (2012b), these relationship issues go far beyond simply financial aspects. Berry (2009) noted that sacrifices have both monetary (economic costs) and nonmonetary forms (such as inconvenience or incompetent service).

3 METHODOLOGY

The research used a mixed-method approach. It combined a qualitative literature review, in-depth interviews, professional discussions, and a quantitative survey. Possible dimensions of relationship value and potential drivers were initially identified, based on relevant literature on relationships and relationship value in a B2B context. Interview guidelines were then developed, together with visualized cards of value dimensions (Figure 1) and drivers (Figure 2) of the relationship between FM customers and suppliers.
Figure 1 Visualization of Dimensions of Relationship Value in FM (Cui, 2013)
The second step consisted of six in-depth interviews with senior-level facility managers (Table 1) from different international companies in eastern Switzerland. The participating companies were active in various industries, such as pharmaceuticals, agriculture and financial services. They purchased various FM services from external suppliers. The participants had a direct relationship with their FM suppliers and an average 10 years’ experience in this kind of business relationship. The interviews lasted from 60 to 90 minutes.

There were three sections of the interview. Respondents were initially asked to describe what kind of relationship they had with their external FM suppliers. Based on this key question, participants answered further questions regarding the specific relationship, such as what kind of activities did they share with their supplier and what reasons would they have for changing their current supplier. In the second part, respondents were asked to describe the benefits and sacrifices of the relationship. To facilitate the process, participants were asked to rank the cards (Figure 1) to evaluate whether these dimensions were important. Participants were also asked to add other elements they considered important in terms of the supplier relationship. Finally, with the help of prepared potential drivers (Figure 2), participants were invited to assess whether these drivers were relevant.
Table 1 Qualitative Study Sample

<table>
<thead>
<tr>
<th>Name</th>
<th>Participant Background</th>
<th>Company Activity and Size</th>
<th>FM Service and Supplier Context</th>
</tr>
</thead>
</table>
| A      | Service Contract Manager, Five years in this position | Agriculture  
Sales: approx. $11 billion  
Scale: global  
Employees: more than 20,000 | Almost everything except core business  
Multiple FM suppliers |
| B      | Facility Manager, 24 years in supportive services, three years in FM | Financial services  
Sales: approx. $1.5 million  
Scale: global  
Employees: more than 3,000 | Operational services  
Multiple FM suppliers |
| C      | Facility Manager, four years in supportive position, eight years as FM manager | Pharmaceuticals  
Sales: approx. $36 billion  
Scale: global  
Employees: more than 111,000 | Almost everything at an operational level  
Multiple FM suppliers |
| D      | Project Manager, 12 years in FM | Pharmaceuticals  
Sales: approx. $58 billion  
Scale: global  
Employees: more than 119,000 | Almost everything from production equipment to FM services  
Multiple FM suppliers |
| E      | Head of Facility Management, six months in position | Pharmaceuticals  
Sales: approx. $43 billion  
Scale: global  
Employees: more than 80,000 | Almost all services  
Multiple FM suppliers |
| F      | Director of Property Management, 10 years in position | Banking, Finance  
Sales: approx. $30 billion  
Scale: global  
Employees: more than 63,000 | Almost all FM services except core business  
Single FM supplier |

After the interview session, workshops and discussions with FM academics were set up to formulate the quantitative measurement tool. To ensure the content validity of the measures (Gilbert & Churchill, 1979; De Vellis & Robert, 2003), several steps were taken. Nine dimensions of relationship value and 34 drivers were developed (Figure 3) on the basis of the qualitative study and the discussion with FM academics. The questionnaire was developed based on these value dimensions and drivers. The questionnaire comprised three parts. In the first part, participants provided general information about their companies. The second part contained items for evaluating the relationship value and a list of items tapping the relationship constructs. All items used seven-point rating scales (1 = “strongly disagree”; 7 = “strongly agree”). In the third part, participants responded to a set of questions describing themselves and what makes a FM-supplier relationship valuable for them.

After the pre-test by three facility managers, the online questionnaire was sent to companies in Denmark, Germany, the UK and Switzerland that outsourced FM services. The participants were selected from members of IFMA, FM Alumni Switzerland, CFM Denmark, and personal contacts. The targeted participants were in senior positions, and all of them had direct relationships with FM suppliers. A total of 478 e-mails with the questionnaire were sent.
5 ANALYSIS AND RESULTS

5.1 Dimensions of relationship value in FM

The nine dimensions of relationship value, together with drivers (Figure 3), were identified based on relevant literature, interviews and discussions with FM academics. The meaning of each value dimension was as follows.

**Relationship value dimension 1: FM Service Quality**

According to CEN (2011), service quality is fundamental, since the quality of the support processes may considerably influence the primary activities and organizations objectives of the client. In business buyer-supplier relationships, product quality is a critical dimension of relationship value from suppliers (Ulaga, 2003; Lapierre, 2000). The quality of certain FM services is the extent to which the supplier’s services meet the customer’s specifications. Key aspects are performance, reliability and consistency over time.

**Relationship value dimension 2: Service Delivery**

Delivery performance is also an important dimension in value provision by external suppliers. As Ulaga & Eggert (2006b) described, suppliers create value in this area by consistently meeting delivery schedules, adjusting to changes in delivery schedules and consistently delivering the correct FM services. Therefore, this value dimension is influential to value provision in the relationship between customers and FM suppliers.

**Relationship value dimension 3: Supplier Know-how**

In many industries, companies turn to suppliers to help them achieve a stronger competitive position (Ganesan, 1994). Research in relationship management suggests that the buyer-supplier relationships represent a strategic resource to gain competitive advantages (Wernerfelt, 1984; Jap, 1999; Hogan & Armstrong, 2001). Customers seek to access the critical resources in a supplier relationship. Kalwani and Narayandas (1995) stated that companies search for access to suppliers’ resources, skills and strength in long-term buyer-supplier relationships.

Suppliers may hold a specific technical expertise, which the customer may not have in-house or may not want to acquire. Therefore, customers may benefit from their suppliers’ know-how in multiple ways (Ulaga, 2003). FM suppliers provide value to their customers by offering access to knowledge from a supply market standpoint, assisting the customer in improving existing services and developing new services. In the interviews, the managers confirmed this value dimension, in which they expect to gain more professional knowledge from external partners.

**Relationship value dimension 4: Core Business Support**

As defined by CEN (2006), FM provides services to support customers’ primary activities. Therefore, whether customers can get support for their core business from external FM suppliers is an important dimension to evaluate the buyer-supplier relationship. From studies in the FM field, suppliers can add potential value in this dimension by improving employees’ productivity, increasing user satisfaction and innovating customer’s business process.

**Relationship value dimension 5: Troubleshooting Support**

This dimension was originally defined as *service support*, which was identified from relevant literature. After the interviews with facility managers and discussions with FM academics, the dimension was modified to *troubleshooting support*, which fits the character of FM. CEN (2011)
proposed that the company’s primary activity required that FM suppliers identify and analyse the potential risks/criticality of the product and services delivered to the primary activities in case of unavailability or non-performance. FM suppliers can create value by supporting customers with solutions to problems and taking responsibility when the problem is their fault.

**Relationship value dimension 6: Personal Interaction**

Although business relationships are established between organisations, they are actually managed by individuals (Ulaga, 2003). People make relationships work or fail (Wilson & Jantrania, 1995). Personal relationships are part of the relational exchange, and buyers consider personal relationships as one important aspect of purchasing (Dwyer et al., 1987; Dwyer & Tanner, 2002).

The FM managers emphasised this value dimension in the interviews, since they preferred partnership relationships with FM suppliers. Therefore, personal interaction is an important aspect that can benefit customers from cooperation with FM suppliers. As shown in Figure 3, there are several benefits in this dimension that customers seek to get from their external suppliers.

**Relationship value dimension 7: Sustainability**

Sustainability is an important issue for FM, having an important position in facility managers’ agenda (Cotts et al., 2010). After the interviews, workshops and discussions with FM academics, the final drivers in this dimension were modified, as shown in Figure 3, to assess sustainability of relationships between customers and FM suppliers.

**Relationship value dimension 8: Price**

In the research of customer company’s costs in buyer-supplier relationships, Cannon and Homburg (2001) mentioned direct product cost, which is the actual price suppliers charged. Price as sacrifice was the most easily identified dimension (Ulaga, 2003). The price of FM services was an important consideration when selecting suppliers. Managers mentioned that the price of FM service was their top focus when considering purchasing services. They looked at whether the price was above, below or at a competition level, and whether the supplier had annual price decreases and cost-reduction programs.

**Relationship value dimension 9: Process Costs**

According to Ulaga (2003), companies collaborate in relationships to achieve improvements in overall operations, not just price reductions. Other costs occur in the process of acquiring, operating and monitoring. Particularly in FM, costs take monetary and non-monetary forms, such as time or effort. FM suppliers can find multiple ways of adding value through this dimension.
5.2 Quantitative analysis and results

As described, 478 emails with a questionnaire were sent to targeted participants. Within six weeks, 60 respondents completed the questionnaire (response rate: 12.55 %). Six responses came from Denmark, three from Germany, two from UK, 47 from Switzerland and two from other countries. The respondents were from different industries and held senior positions in their companies. They had an average of eight year experience in this position and an average of 6.9 years in a relationship with their FM suppliers. Considering the fact that there was no pre-notification of the participants, only partial follow-up contacts, a rather low issue salience for an average participant and a medium length of the questionnaire, this response rate still can be considered as satisfactory.
All 60 respondents were taken into the quantitative analysis, although 11 of them from other countries. Because they are all European countries and the 11 companies are international and most of them have branch offices in Switzerland.

Firstly, reliability analysis was conducted to test whether the different items, which represented the measure of one variable, could indeed be combined within one scale (Field, 2010). With the help of SPSS, Cronbach’s alpha indicated overall high reliability of the questionnaire. Values were approximately 0.69 – 0.95 (Field, 2010).

Before testing the framework of relationship value (Figure 4), confirmatory factor analysis was applied by using SmartPLS 2.0. Partial least squares (PLS) analysis was conducted because of the formative nature of the higher-order value construct. This estimation procedure accommodated both reflective and formative measures (Fornell & Bookstein, 1982). The framework of relationship value was measured on the basis of the higher-order formative dimensions, which were identified from literature and exploratory study, and several reflective items that captured these dimensions as a uni-dimensional concept.

An overall goodness-of-fit cannot be reported for the relationship value framework because the objective of PLS analysis is prediction versus fit (Fornell & Cha, 1994). The scale properties of the framework are shown in Table 2. Factor loadings, t-values, average variance extracted (AVE) and coefficient alpha indicated that the framework of relationship value had an acceptable level of convergent validity (Chin et al., 2003).

<table>
<thead>
<tr>
<th>Item</th>
<th>Dimension</th>
<th>Factor Loading</th>
<th>T value</th>
<th>AVE</th>
<th>Coefficient Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMQuality1</td>
<td>Benefits</td>
<td>0.91</td>
<td>19.09</td>
<td></td>
<td>88%</td>
</tr>
<tr>
<td>FMQuality2</td>
<td>Benefits</td>
<td>0.96</td>
<td>69.88</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>FMQuality3</td>
<td>Benefits</td>
<td>0.95</td>
<td>49.82</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Delivery1</td>
<td>Benefits</td>
<td>0.81</td>
<td>10.26</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Delivery2</td>
<td>Benefits</td>
<td>0.92</td>
<td>27.68</td>
<td>77%</td>
<td>90%</td>
</tr>
<tr>
<td>Delivery3</td>
<td>Benefits</td>
<td>0.91</td>
<td>32.56</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Delivery4</td>
<td>Benefits</td>
<td>0.87</td>
<td>13.97</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Know-how1</td>
<td>Benefits</td>
<td>0.92</td>
<td>23.71</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Know-how2</td>
<td>Benefits</td>
<td>0.96</td>
<td>106.18</td>
<td>91%</td>
<td>97%</td>
</tr>
<tr>
<td>Know-how3</td>
<td>Benefits</td>
<td>0.96</td>
<td>110.58</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Know-how4</td>
<td>Benefits</td>
<td>0.96</td>
<td>83.70</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Core Support1</td>
<td>Benefits</td>
<td>0.93</td>
<td>57.36</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Core Support2</td>
<td>Benefits</td>
<td>0.93</td>
<td>33.94</td>
<td>78%</td>
<td>90%</td>
</tr>
<tr>
<td>Core Support3</td>
<td>Benefits</td>
<td>0.78</td>
<td>10.19</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Troubleshooting1</td>
<td>Benefits</td>
<td>0.83</td>
<td>12.78</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Troubleshooting2</td>
<td></td>
<td>0.87</td>
<td>18.05</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Troubleshooting3</td>
<td></td>
<td>0.84</td>
<td>15.12</td>
<td>76%</td>
<td>90%</td>
</tr>
<tr>
<td>Troubleshooting4</td>
<td></td>
<td>0.92</td>
<td>39.88</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Troubleshooting5</td>
<td></td>
<td>0.91</td>
<td>25.47</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Interaction1</td>
<td>Benefits</td>
<td>0.92</td>
<td>22.90</td>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Interaction2</td>
<td>Benefits</td>
<td>0.95</td>
<td>42.02</td>
<td>85%</td>
<td>90%</td>
</tr>
<tr>
<td>Interaction3</td>
<td>Benefits</td>
<td>0.92</td>
<td>28.33</td>
<td></td>
<td>90%</td>
</tr>
</tbody>
</table>
After summing up the scale of each value dimension, correlations between the dimensions in the first order construct were computed by SPSS, as shown in Table 3. They provided an initial indication that the data matched the pattern shown in the proposed framework (Figure 4) and that the correlation patterns showed that the constructs in the framework had convergent and discriminant validity. FM quality, delivery, know-how, core support, troubleshooting, interaction and sustainability correlated very well with the benefits dimension (all above 0.79). They correlated well with each other within the benefits dimension (all above 0.56). The price and process costs correlated with the sacrifices dimension at 0.84 and 0.87 respectively, suggesting convergent validity.

Table 3 Pearson Correlations between Value Constructs

<table>
<thead>
<tr>
<th>Construct</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 FM Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Delivery</td>
<td>0.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Know-how</td>
<td>0.63</td>
<td>0.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Core support</td>
<td>0.69</td>
<td>0.76</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Troubleshooting</td>
<td>0.56</td>
<td>0.67</td>
<td>0.74</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Interaction</td>
<td>0.80</td>
<td>0.79</td>
<td>0.64</td>
<td>0.69</td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Sustainability</td>
<td>0.68</td>
<td>0.64</td>
<td>0.79</td>
<td>0.67</td>
<td>0.58</td>
<td>0.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Price</td>
<td>0.27</td>
<td>0.25</td>
<td>0.38</td>
<td>0.23</td>
<td>0.07</td>
<td>0.26</td>
<td>0.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Process Costs</td>
<td>0.15</td>
<td>0.20</td>
<td>0.27</td>
<td>0.14</td>
<td>0.08</td>
<td>0.20</td>
<td>0.29</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Benefits</td>
<td>0.87</td>
<td>0.90</td>
<td>0.86</td>
<td>0.88</td>
<td>0.79</td>
<td>0.85</td>
<td>0.80</td>
<td>0.27</td>
<td>0.19</td>
<td></td>
</tr>
<tr>
<td>11 Sacrifices</td>
<td>0.16</td>
<td>0.22</td>
<td>0.34</td>
<td>0.22</td>
<td>0.13</td>
<td>0.18</td>
<td>0.33</td>
<td>0.84</td>
<td>0.87</td>
<td>0.23</td>
</tr>
</tbody>
</table>

Note: Correlations were between the summed scales of the constructs; minimum significance of correlation was 0.05 (two-tailed); most were at 0.01.

Estimation of measurement and structural models that more rigorously assessed validity of constructs in relationship value were analysed by AMOS. Higher-order measurement models assessed convergent and discriminant validity of the lower-order constructs and discriminant validity of the higher-order constructs modelled in Figure 4.

Table 4 shows information for judgment of convergent validity of the first-order value dimensions. The first column indicates the paths in the measurement framework corresponding...
to the paths on the left of Figure 4. The next columns show the regression weight and its standard error for each of these paths. The critical ratio that follows these is the ratio of the regression weight to the standard error. The p-value then gives the probability of such a critical ratio occurring. The last column provides the correlation between the constructs as calculated in SPSS. The information in Table 4 shows that the regression weights for the paths from the second-order to the first-order constructs were all good. Most of them were significant at $p < 0.001$ (Anderson & Gerbing, 1988), except in the path sacrifices to price ($p = 0.002$), which was acceptable.

Table 4 Convergent Validity of First-Order Value Dimensions

<table>
<thead>
<tr>
<th>Path</th>
<th>Regression Weights</th>
<th>Standard Error</th>
<th>Critical Ratio</th>
<th>P Value</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM Quality &lt;-&gt; Benefits</td>
<td>1.17</td>
<td>0.15</td>
<td>7.75</td>
<td>***</td>
<td>0.87</td>
</tr>
<tr>
<td>Delivery &lt;-&gt; Benefits</td>
<td>1.11</td>
<td>0.14</td>
<td>7.99</td>
<td>***</td>
<td>0.90</td>
</tr>
<tr>
<td>Know-how &lt;-&gt; Benefits</td>
<td>1.04</td>
<td>0.17</td>
<td>6.29</td>
<td>***</td>
<td>0.86</td>
</tr>
<tr>
<td>Core Support &lt;-&gt; Benefits</td>
<td>1.00</td>
<td>0.15</td>
<td>6.82</td>
<td>***</td>
<td>0.88</td>
</tr>
<tr>
<td>Troubleshooting &lt;-&gt; Benefits</td>
<td>0.83</td>
<td>0.14</td>
<td>5.84</td>
<td>***</td>
<td>0.79</td>
</tr>
<tr>
<td>Interaction &lt;-&gt; Benefits</td>
<td>1.08</td>
<td>0.15</td>
<td>7.00</td>
<td>***</td>
<td>0.85</td>
</tr>
<tr>
<td>Sustainability &lt;-&gt; Benefits</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td>0.80</td>
</tr>
<tr>
<td>Process Costs &lt;-&gt; Sacrifices</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td>0.87</td>
</tr>
<tr>
<td>Price &lt;-&gt; Sacrifices</td>
<td>1.47</td>
<td>0.48</td>
<td>3.04</td>
<td>0.002</td>
<td>0.84</td>
</tr>
</tbody>
</table>

Note: Regression weight of 1.00 indicates that this path was fixed at 1. *** indicates the probability of occurrence of the critical ratio was less than 0.001.

Bootstrapping in SmartPLS assessed discriminant validity. Two-hundred replications calculated the correlations between the constructs of relationship value, as shown in Table 5. The last two columns show the mean ± 2 x standard errors (SEs) for each pair of constructs, at both the lower and upper level of the relationship value framework. None of these value ranges overlapped the value of 1, supporting discriminant validity of the constructs in the framework (Anderson & Gerbing, 1988).

Table 5 Discriminant Validity of Value Dimensions

<table>
<thead>
<tr>
<th>Bootstrapped Correlation between</th>
<th>Mean of bootstrapped correlation</th>
<th>Standard error (SE)</th>
<th>T statistics</th>
<th>Mean Plus 2xSE</th>
<th>Mean Minus 2xSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefit &lt;-&gt; Relationship value</td>
<td>0.69</td>
<td>0.09</td>
<td>7.74</td>
<td>0.87</td>
<td>0.51</td>
</tr>
<tr>
<td>FM Quality &lt;-&gt; Benefits</td>
<td>0.15</td>
<td>0.01</td>
<td>15.40</td>
<td>0.17</td>
<td>0.13</td>
</tr>
<tr>
<td>Delivery &lt;-&gt; Benefits</td>
<td>0.17</td>
<td>0.01</td>
<td>13.92</td>
<td>0.19</td>
<td>0.15</td>
</tr>
<tr>
<td>Know-how &lt;-&gt; Benefits</td>
<td>0.19</td>
<td>0.02</td>
<td>11.94</td>
<td>0.23</td>
<td>0.15</td>
</tr>
<tr>
<td>Core support &lt;-&gt; Benefits</td>
<td>0.13</td>
<td>0.01</td>
<td>13.51</td>
<td>0.15</td>
<td>0.11</td>
</tr>
<tr>
<td>Troubleshooting &lt;-&gt; Benefits</td>
<td>0.21</td>
<td>0.01</td>
<td>18.07</td>
<td>0.23</td>
<td>0.19</td>
</tr>
</tbody>
</table>
Summated scales were developed for each value dimension. They operated as formative indicators for the higher-order dimensions of relationship values: Benefits and sacrifices (Zeithaml, 1988). The relationship value was addressed by three reflective items. Figure 4 summarizes the conceptualization of relationship value in FM as a multidimensional, higher-order, formative construct, and reports the parameter estimates based on PLS analysis. Relationship benefits are positively correlated with relationship value (r = 0.68). Relationship sacrifices are also positively correlated (r = 0.08), although the effect size is small. Overall, the value dimensions scale shared 50 percent of variances with the relationship value.
6 CONCLUSION

The framework of relationship value in FM with nine dimensions (Figure 4) from a customer’s perspective was established and tested, based on a formative measurement model by PLS. This approach was adapted from Ulaga (2003) and Ulaga and Eggert (2003, 2006a), who investigated relationship values from the buyer’s perspective in business contexts and measured how these value components influenced the relationship values.

6.1 Value dimensions

The results in Figure 4 indicate that the relationship benefits dimension positively correlated with relationship value, which was consistent with past relationship-value research in business contexts (e.g., Lapierre, 2000; Ulaga and Eggert 2006b, 2009). However, the results of the relationship sacrifice dimension were distinct from Ulaga and Eggert (2006b, 2009). As shown in Figure 4, the relationship sacrifice was positively correlated with relationship value (path...
coefficient $r = 0.08$, although not significant). These results could be explained by the fact that services are intangible, and customers need to contribute time and effort in discussion with FM suppliers to make sure that services are performed correctly and on time. Customers also need to inform their FM suppliers when some core strategies change, because certain FM services also need to be modified to fit the new requirements. By doing this, customers may perceive the relationship value as greater, even if they sacrifice more in the relationship with external FM suppliers. This finding also supports the idea of value co-creation between customers and suppliers (Coenen et al., 2012a; Alexander 2012). These findings are different from goods-related buyer-supplier relationships, where customers have concrete products as the final point to evaluate the relationship with their suppliers.

6.2 Theoretical Implications

New trends, such as globalisation and outsourcing, are emerging. Single-approach relationships may not be sufficient in business relationships. A mix of economic- and behavioural- or social-based relationships are needed in daily business. Especially in the FM field, it depends on the core business and what types of FM services are required from external suppliers. Customers may combine several approaches to manage the relationship with their FM suppliers.

This study provides another possibility for customer-perceived value, which was traditionally defined as the trade-off between benefits and sacrifices (Zeithaml, 1988). The sacrifice can be a driver that positively influences the buyer-supplier relationship, meaning customer value can be the add-on between benefits and sacrifices.

6.3 Managerial Implications

For FM suppliers, the nine described dimensions of relationship value and drivers (Figure 3) can be seen as references to understand customer expectations regarding a successful relationship. Since certain types of customer sacrifices may increase their perceived value, FM suppliers could consider involving the customers more in their relationship, and therefore co-creating value.

For FM customers, the study provides a set of dimensions that can be used as assessment tool for judging what value can be added from an external FM supplier. Customers emphasize relationship benefits, whereas suppliers mainly focus on relationship sacrifices (Lyons et al., 1990). However, in a mutually beneficial relationship, which may bring more value to both sides, customers could also consider contributing more in the relationship with suppliers.

6.4 Future Research

This research opens up opportunities for further understanding of value creation in buyer-supplier relationships in the FM context. Each value dimension is worthwhile to investigate more deeply. For example, the FM service-quality dimension can be examined according to the customer’s needs and how to assess and guarantee that quality is consistent over time. It is also important to evaluate the relationship from a FM supplier perspective, as Ford and Hakansson (2006) recommended. This study also offers evidence for the research of value co-creation with customers, since customer sacrifices may increase their perceived value in the relationship.
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