Relationship Value Dimensions: Identifying a Viable Model

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Abstract

This paper describes alternative models of intangible value, in business to business buyer-seller relationships, to the one reported by Baxter and Matear (2004). The perspective is that of the seller. Using Baxter and Matear's dimensions, it provides theoretical arguments, based on the resource based view, the intellectual capital literature, and other conceptual bases, for the model as compared with three rival models. The empirical evidence to date in support of the original model is discussed.

Introduction

Given the calls in recent years for the development of better quantification and better measures in marketing (Day and Montgomery, 1999; Srivastava, Shervani, and Fahey, 1998), and generally increased interest in value from a marketing perspective (Lindgreen and Wynstra, 2005), it is not surprising that there is increasing interest in the study of the value of buyer-seller relationships. Value is seen as a prime driver of relationship management, from both the buyer's and the supplier's perspective (Anderson and Narus, 1999; Lindgreen *et al.*, 2006), and of competitive advantage (Woodruff, 1997).

A distinction can be made between two major streams of research on buyer-seller relationship value. The first stream is the "customer lifetime value" approach (Fader, Hardie, and Lee, 2005; Gupta, Lehmann, and Stuart, 2004; Venkatesan and Kumar, 2004), which in principle extrapolates aggregated information from the past. The second stream attempts to understand the drivers and/or dimensions of relationship value in some detail at the level of the individual relationship, and is particularly applicable in the business to business context, where it is viable to consider individual relationships (e.g. Baxter and Matear, 2004; Ulaga and Eggert, 2005; Walter, Ritter, and Gemunden, 2001). Of the examples cited, Ulaga and Eggert's (2005) perspective is of the value delivered to the customer, whereas the perspective of the Walter and Ritter (2003) and the Baxter and Matear (2004) studies is of the value to the seller provided by the buyer in a business to business context, as it is for this paper.

Value can be seen at its most fundamental level as the trade-off between benefits and sacrifices (Woodruff, 1997), and will ultimately be "reflected in superior financial performance" (Srivastava, Fahey, and Christensen, 2001). Taking a financial perspective, value is the discounted sum of future cash flows (Brealey and Myers, 1988). But for these concepts to be meaningful in the management of relationships, managers need to know what it is they should manage. This means that an understanding of the drivers and/or dimensions of value is required. Thus Walter and Ritter (2003) study the drivers or causes of relationship value and Baxter and Matear (2004) study the dimensions or outcomes of relationships. The dimensions of value as proposed and tested by Baxter and Matear are the subjects of this paper, in order to further clarify their conceptualisation. In particular, it discusses the modelling of their dimensions, after discussing research on relationship value more broadly.

The value that flows through relationships can be both tangible and intangible. Customer profitability analysis techniques to assess the more tangible resources are well known (Bellis-Jones, 1989; Howell and Soucy, 1990). They are applied by extrapolating revenues and costs and then discounting to present value (O'Guin, 1991; Turney, 1996; Wallis, 1997), preferably using activity based costing. However, effective assessment of the value of a relationship requires that its less intangible aspects are also assessed. Vargo and Lusch (2004) note the importance of the intangible, service-based, aspects of value in marketing endeavours. Among these intangible aspects, the human aspects of a relationship are of critical importance. Varey (2002, page 39) has pointed out that relationship-based marketing "thrives on insight, constant change, creativity, and humanistic values". This paper therefore focuses on the intangible value aspects, including the human aspects, of relationships.

If quantitative tools for intangible relationship value assessment are to be developed, the first step is to identify value dimensions. Varey (2002, page 57) has made a point that in relationship marketing, "we must consider relational process and outcome indicators", so it is necessary to identify constructs that express processes and outcomes when looking for dimensions that will represent the provision of value. This is in contrast to those constructs that are expressions of inputs to, or drivers of, value as expressed in Walter and Ritter's study (2001). The relationship is therefore conceptualised as a conduit (Ambler and Styles, 2000) and the unit of analysis is the relationship and its capabilities for provision of value to the seller, rather than the unit of analysis being value itself.

Identification of a conceptual model

The search for dimensions of intangible relationship value led Baxter and Matear (2004) to identify two distinct value aspects. The first of these comprises resources that are available from a buyer that will have value for a seller, the subject firm in this paper, and are described in the competence literature (e.g. Sanchez and Heene, 1997) as "addressable resources". They do not "belong" to the seller, but are usable by the seller. They can be conceptualised as operand resources (Vargo and Lusch, 2004) because they are processed by transmission through the relationship to the seller. As dimensions of relationship value, they will be Varey's (2002) "outcome indicators" because they will represent the outcomes that are available through the relationship. The second of these aspects of relationship value represents Varey's (2002) "process indicators", which can be seen as operant resources (Vargo and Lusch, 2004) because they facilitate the flow of the operand resources and represent processes that facilitate access to the seller, through the relationship, of the addressable resources in the buyer.

Identification of intangible relationship value dimensions requires a suitable conceptual framework. Morgan and Hunt (1999) provide useful descriptions of the resources that are available to one firm through a relationship with another firm in terms of the resource based view of the firm (Barney, 1991). These descriptions can be categorised as tangible resources and intangible resources. The intangible resources can be further categorised into (i) the knowledge-based resources that can be accessed through the relationship and (ii) the human aspects of the relationship, which can be interpreted as facilitation capabilities specific to that relationship. This classification is a conceptual starting point for a set of dimensions of intangible relationship value, but the dimensions need to be operationalised.

The intellectual capital (IC) literature (e.g. Roos *et al.*, 1997), which has a similar grounding to the resource based view in the work of Penrose (1959), suggests a way to operationalise these dimensions. The basis of the IC concepts is that the capital in a company comprises both financial (tangible) capital, comprising physical capital and monetary capital, and intellectual (intangible) capital, characterised as human capital and structural capital. It provides descriptions of the domains of a set of constructs that are very closely related to the relationship resources categorised by Morgan and Hunt (1999). It also clearly distinguishes between tangible and intangible resources on one hand, and then between human and other aspects within the intangible set of resources. On the basis of an operationalisation that synthesises the IC representation of intangible value, Baxter and Matear (2004) tested a model of intangible relationship value that comprises a set of first and second order dimensions, as illustrated in Fig. 1. The model also includes a future financial performance construct as a test of nomological validity.
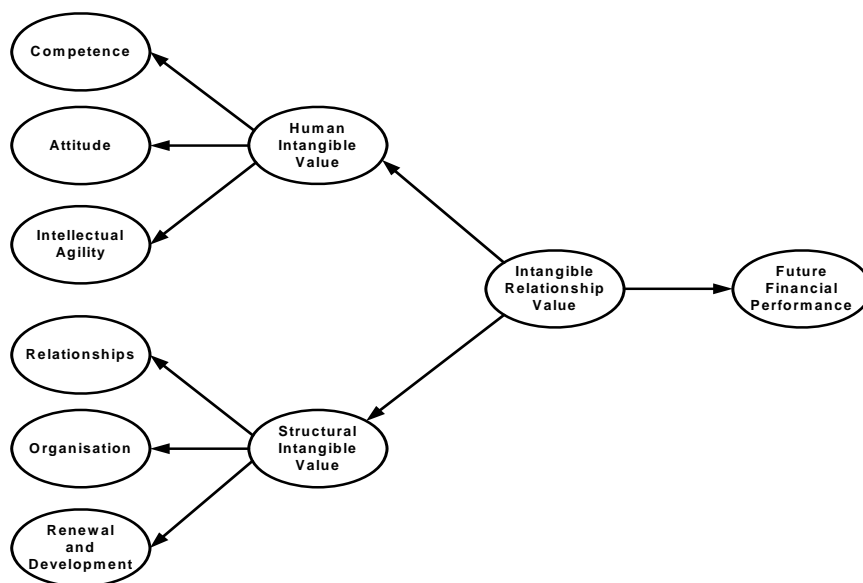

Fig. 1: Model of intangible relationship value provision (Model A)

As noted above, in order to assess the value of a relationship to a seller, it is necessary to assess the value of what is available to the seller, through the relationship, from the buyer, and how well the value flows. The model is therefore conceptualised as formative: the relationship is the unit of analysis and is the conduit that provides resources of value in the two primary forms that are seen in Fig. 1. These resources are, firstly, the structural knowledge-based operand resources that are resident in the buyer's organisation, but are "addressable" by the seller (Sanchez and Heene, 1997). These appear in the model as three dimensions of structural intangible value. The second set of three resources comprises the human attributes of the buyer's personnel who work in the relationship and these attributes are seen as operant resources, which provide value by facilitating the flow of the operand resources. They appear in the model as three dimensions of human intangible value and are a useful addition to the literature, as human aspects are not well represented in extant models of relationship value.

The Fig. 1 model is based on the work of Roos *et al.* (1997). However, it is always possible that alternative models may provide an acceptable conceptual framework and explain a set of data and it is necessary to test those that are theoretically viable (e.g. Bollen and Long, 1992;

Morgan and Hunt, 1994). The purpose of this paper is to consider such models, with reference to the relevant literature, which it will now do.

Alternative Models

The model in Fig. 1, denoted as model A in Table 1, is the preferred model on theoretical grounds, because it corresponds to a grouping of, and separation between, the human and structural dimensions of the relationship. But rival models, constructed by removal of the second-order value dimensions as mediators from paths in Model A in the fashion of Morgan and Hunt (1994) are described below, are drawn with abbreviations in Fig. 2, and their fit statistics are noted in Table 1.

It is possible that there is no mediation of the paths in Fig. 1 (Model A) by second-order value dimensions: Morgan and Hunt (1999) do not discuss such mediation. It is therefore prudent to consider a model without these mediators, labelled as Model D in Table 1 and Fig. 2. Bontis (1998; 2000) utilises a structure in the IC literature that differs from Fig. 1 in having a path directly between (i) intangible relationship value ("intellectual capital" in his model), and (ii) the "relationships" construct ("relational capital" in his model), without mediation by a second order construct as in Fig.1. His other paths, to his equivalents to the constructs "organisation" and "renewal and development" in Fig. 1, are the same as in Fig. 1. This is a similar structure to the one also used by Skandia (Anonymous, 1998; Roos *et al*., 1997, page 29). It is labelled model B in Table 1 and Fig. 2. A third rival model (model C in Table 1 and Fig. 2), in which the paths completely bypass the "structural" mediating variable, is suggested by the work of Brooking (1997). She uses a "human-centred assets" construct and three other constructs that roughly correspond to the relationships, organisational, and renewal and development dimensions of Baxter and Matear (2004).
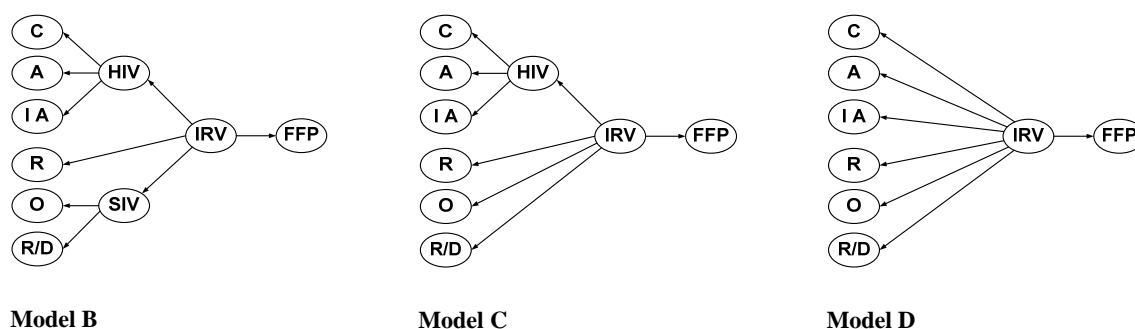

Fig. 2: Rival models of intangible relationship value provision

Empirical evidence

The Baxter and Matear (2004) study estimated model A in Fig. 1 in Amos structural equation modelling software on the basis of 314 surveys of manufacturers, with good fit statistics and sound support for convergent, discriminant and nomological validity, but their data also allows estimation of the rival models B, C and D as described above. The comparison of fit statistics for all four models is seen in Table 1. The theoretically preferred model A has very good fit statistics, which suggest that it is a good representation of the data. Model B fit

statistics suggest that it is, as is model A, a good representation of the data. It has the same number of degrees of freedom as model A, so can not strictly be compared in a chi-square test, but it has a higher CAIC statistic, which suggests that model A is superior in explaining the data. Model C also has good fit statistics, but a chi-square difference test against model A shows that model A has a significantly better fit. Model D fit statistics are not good enough to regard it as a good fit to the data.

Table 1: Goodness of fit statistics for structural models of value in Amos

Structural model name	CMIN	Df	CMIN/Df	SRMR	RMSEA	TLI	GFI	CAIC
Model A (preferred)	398	266	1.495	0.0474	0.04	0.963	0.913	796
Model B	404	266	1.520	0.0527	0.041	0.961	0.912	803
Model C	405	267	1.516	0.0531	0.041	0.961	0.912	796
Model D	610	268	2.278	0.1117	0.064	0.904	0.864	995

Note: All models have p-value 0.000

Discussion

The analysis above of rival model testing thus supports the Baxter and Matear (2004) conceptualisation, with its distinct human and non-human value aspects. The three non-human dimensions in the model in Fig. 1, which describe what is available to ("addressable by") the seller from the buyer's structure and organisation, are conceptualised as a set of resources whose flow is facilitated by the attributes of the buyer's boundary personnel, expressed as three human dimensions. Two second-order dimensions mediate the paths between the intangible relationship value construct and (i) the three non-human ("structural") intangible value dimensions and (ii) the three human intangible value dimensions. The important point for this paper is that the model that has the best fit to the data is the one, Model A, which most clearly groups the two forms of resource, and distinguishes between them.

The research is thus a clear illustration of the need, expressed by Varey (2002) and noted above, to consider relationships in terms of both "outcome indicators" and "process indicators". The three structural dimensions can be seen as representing outcome indicators. They comprise: the network of relationships of the buyer, to which the seller may gain access through the relationship, as described by Baxter and Matear (2004); intangible resources in the buyer's organisation, measured in terms of such indicators as its databases and brands; and the buyer's skills in renewing and developing products and processes. They can be classified as operand resources (Vargo and Lusch, 2004) because they are acted on by the people in the relationship to enable their value to flow to the seller. The three human dimensions can be seen as process indicators in Varey's (2002) terms and operant resources (Vargo and Lusch, 2004) because they are attributes of the buyer's people who facilitate the flow of their firm's resources to the seller. They are the competence, attitude, and intellectual agility of the buyer's people who act as boundary personnel in the relationship.

The distinction between the two types of relationship resource is an important indicator for the path of future research, which can build on this empirical illustration of the resource-based conceptualisation of Morgan and Hunt (1999). The distinction is also important for managerial strategies, which need to be based on assessment and careful management of two distinct intangible relationship aspects: the information available through a relationship and the people who facilitate its flow. With respect to future research, it is noted that the differences between model A and models B and C, though significant, are not large and do require further validation. Studies by Zhang (2004) and Yang (2006) provide such validation.

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