

ABSTRACT

RELATIONSHIP ATMOSPHERE:IN SEARCH OF A SOUND STRUCTURAL MODEL

This paper follows up on the results of three previous publications, all based on the data collected within the framework of the IMP2 Project in the 90s.

The first paper explored the structure of the relationship atmosphere scale in the European context. The second paper ran a similar analysis, whilst adding data from China and Thailand to the original European data base. A comparison between European and Asian relationship atmosphere structure was thus possible.

The third paper extended the second analysis in two directions (1) research into a simple relationship atmosphere structure, using second order confirmatory factor analysis, and (2) an assessment of the influence exerted by this atmosphere on the quality of the relationship, in terms of importance or value, as measured by certain of the items in the IMP2 research questionnaire.

This paper attempts to take the analysis one stage further by building on past findings with a view to focussing on the search for a sound structural model for relationship atmosphere.

In terms of relationship atmosphere structure, a two-dimensional structure is highlighted: Relationship Strength, grouping together the dimensions “commitment”, “social relations”, and “mutual interest” ; and Relationship Fluidity, grouping together the dimensions “ease of relationship”, “trust”, and “distance”. Surprisingly the identified dimensions “Power”, “Problems”, and “Dependency” are seen to be relatively external to the relationship atmosphere.

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Relationship Atmosphere: in search of a sound structural model

Introduction

Relationship atmosphere (RA) focuses on the intangible actor bonds that develop in exchange relationships and the theories in use or schema couplings that exist in the minds of the actors about each other [1] [2]. Long-term committed, mutually cooperative relationships are sometimes depicted as some ideal or mature relational form. This is not necessarily so. Firms can pursue different types of relationships depending on circumstances. This may vary from sporadic arms-length relationships to long-term committed and trust-based ones [3] [4] without necessarily excluding conflict within the latter. RA can also be considered as a process, which evolves over the life of the relationship as experience and relationship context evolves.

We define relationship atmosphere here as “a system of interconnected perceptions, emotions, beliefs and attitudes held by the parties involved. These interconnected elements evolve in the context of each other and stable relationship atmospheres are those that are reproduced through time through the actions and responses they generate. As conditions change existing atmospheres may become unstable and new forms emerge through various types of equilibration and balancing mechanisms” [5]

Many models of one or more aspects of relationship atmosphere have been proposed and tested, which seek to understand how a limited number of different dimensions of atmosphere are interrelated and how they are affected by and affect other aspects of the relationship and network. The starting point to this paper will be a review of a certain number of these.

Indeed, previous quantitative research has tended to focus on the nature of specific dimensions of hypothesized relationship atmosphere, and interrelationships with one or a few other dimensions. Our objective here is to take into consideration the total set of IMP items and all dimensions, based on previous research findings where key dimensions were identified using the IMP2 project relationship data base, and to explore and identify a sound internal structure for relationship atmosphere, thus illustrating how these different dimensions co-exist and interact. The overall structure of inter-firm relationship atmosphere is examined using a comprehensive set of relationship data gathered in Europe and Asia as part of the IMP2 research program. Using confirmatory factor analysis we examined the extent to which the data supported the expected six dimensions proposed in IMP theory.

The paper is organised as follows: first the dimensions of relationship atmosphere embodied in the IMP2 study are described briefly. These are subsequently related to other developments regarding dimensions of relationship atmosphere proposed in the literature. The main results of a previous IMP2 European-based study cumulated with results from an Asian study are discussed, highlighting findings on dimensions of RA. (the IMP2 and Asian database used is described in appendix). On the basis of the literature and of findings regarding components of relationship atmosphere derived from the study, a model of the internal structure of RA is proposed and tested. The paper closes with a discussion of how these results contribute to our understanding of relationship atmosphere and the research and management implications arising.

TOWARD AN INTEGRATED STRUCTURAL MODEL OF RA

In this section, we discuss the concept of RA and its dimensions. In line with theoretical and empirical considerations, we finally propose a theoretical model of RA structure and dynamics.

Dimensions of Relationship Atmosphere within the IMP Group and the IMP2 project

RA was conceptualised by IMP researchers as part of their original Interaction approach in terms of four basic dimensions: power/dependence, cooperation, closeness and expectations [6]. These dimensions were refined and extended as a result of subsequent research and for the purposes of the IMP2 empirical study it was defined in terms of six dimensions [2]:

- Power/dependency (Power balance),
- Co-operation/competitiveness,
- Trust/opportunism,
- Commitment/non-commitment,
- Understanding/non-understanding
- Closeness/distance.

Each of the above was considered to be two opposite extremes across a single dimension. Each is considered to be, also, a perceptual construct. In other words, real power or sources of power, commitment, trust etc. may well differ radically from those perceived by the actors involved. It is the perception forming the RA that conditions analysis and action, and not reality.

Power Balance:

- The degree of match or mismatch between the power each party has over the other in the relationship, in turn a function of how dependent they are on each other.
- Power has played an important role in many theories of inter firm relationships in marketing.
- Balance or imbalance does not imply necessary harmony or disharmony in the relationship and indeed research shows that firms in weak positions can in fact be very satisfied with their position (e.g. [7]).

Cooperativeness/competitiveness:

- Attitudes the parties have towards work they have in common.
- Cooperativeness involves taking the others interests and concerns into account and a willingness to help the other out and to seek win-win outcomes
- Competitiveness is more adversarial and self-interested in nature, and sees one parties gain at the expense of the other.
- Cooperativeness and competitiveness do not necessarily represent opposites on a single dimension but can coexist in various combinations in a relationship as parties cooperate with respect to some issues and compete over others [5].

Trust/Oppportunism:

- A longer-term attitude towards the other party and the extent to which they expect long term positive developments

- Whether they can rely on the other to act honestly and openly, and take the opposite party's interests into account.
- Opportunism is viewed as the opposite extreme and implies a short-term perspective whereby opportunities are exploited without consideration of the interests of the other party.

Understanding:

- The willingness to understand the situation of the other party and the perceived degree of mutual understanding that exists. This requires a mutual interest in and openness to each other.
- At the other extreme is when both parties have little interest in understanding each other, and do not in fact understand each other.

Closeness-Distance:

- The psychological, social and cultural closeness of the parties involved, related to the more general concept of psychic distance used to characterise managers' perception of foreign markets.
- Feelings of personal friendship and social and cultural identity. It differs from understanding, as understanding may be present even when social and cultural distances exist. However distances can be bridged by a willingness to understand and to be understood by the other party.

Commitment:

- Intention to continue the relationship over the long term
- A willingness to invest, and accept structural and other bonds, which restrict the ability to switch trading parties easily.
- Lack of commitment implies a loosely-bonded relationship based on current conditions rather than future expectations [8] .

Dimensions of Relationship Atmosphere: further conceptual developments, and inter-relationships

Many of the dimensions of relationship atmosphere described above have been the subject of further consideration by various authors, both in terms of their very nature, and in terms of interrelations between them. Moreover, the IMP2 model itself has already been subject to empirical validation. An overview is presented below.

Trust and opportunism

Trust is perhaps the dimension of RA which has received the most attention over the last few years, and is seen by many as playing the essential role in relationship development patterns. [3] link trust and commitment as key variables encouraging managers to invest in long-term relationships, diminishing the tendency to consider short-term attractive alternatives (opportunistic behaviour).

Trust as a uni-dimensional construct has thus been contrasted with opportunism, as described in the IMP definition of atmosphere above. At the same time multi-dimensional definitions of

trust have been proposed by various authors. A 3-component model, illustrative of these, [9] comprises predictability of behaviour of (behavioural aspects), reliability of (qualities or attributes), and “faith” in the partner (emotional or affective dimensions going beyond rational, cognitive issues).

Trust is frequently associated with the notion of reduction of uncertainty, itself negatively linked with the level of perceived risk [3], a vision mirrored by Zaheer, Mc Evily and Perrone [10], for example, who see trust as composed of two elements: the belief that an actor will fulfil his obligations and; the belief an actor will act and negotiate loyally whenever opportunistic behaviour is an option. Others, similarly, see trust as both a belief, and a behavioural desire or intention [11] relative to attributes concerning on the one hand “objective” (cognitive?) elements (technical competencies of the partner enabling him to respect commitment [12], [13], and “subjective” (affective ?) elements such as the integrity of the partner, or his “goodwill” towards the counterpart [14].

Trust in the partner, then, of a multi-dimensional nature, would reduce uncertainty and perceived risk, tend to perpetuate relationships, whilst at the same time promoting cooperation (KMV Model, [3]).

Trust would also positively influence – in its role as “implicit” or “explicit” precursor – commitment in the relationship [3], [11], [15], thus again promoting a relationship’s long-term nature. Several factors figure amongst the precursors or antecedents to trust, including perceived honesty or frankness of the partner, his moral integrity [16], and affinities with him, reputation of [17] [18] and specific investments relative to him [15], similarity between partners [19] and shared values, culture, and goal congruency [17].

As regards other dimensions of relationship atmosphere, and key relationship issues, trust is seen as being positively connected to commitment [11], [3] [15] [20] [21] whilst at the same time reducing conflict [22], [3], facilitating collaboration (cooperation), increasing non-coercive sources of power, increasing resource allocation specific to the partner (investment) [23] [21] facilitation of persuasion of/influence over (power) the partner [24] [25] and reduction of transaction costs (relationship value).

Commitment and non-commitment

Considered by some as the second most critical relationship atmosphere component, and an essential ingredient for long-term relationship development [3], commitment defines a partner’s willingness to invest and demonstrates he can be counted on in the future [26]. From a vision of commitment as a uni-dimensional phenomenon, as for trust, a multi-dimensional perspective has emerged. Hence commitment is defined as a *psychological state* [20] where relatively stable attitudes and beliefs prevail with respect to the relationship under consideration, and where affective – the company likes its partner and appreciates the relationship – and calculative – linked to the potential high costs of breaking off a relationship - dimensions can co-exist. Both of these dimensions of commitment contribute to relationship continuance. Kim and Frazier [27] define commitment as the desire and intent to continue the relationship, and identify associated phenomena as the will to make short term sacrifices (in other words the rejection of recourse to *opportunism*), *trust* in the stability of the relationship, the importance of the relationship (*value* issues), and identification and internalisation of norms and values of partners (*distance* issues). This definition lines up on that of Morgan and Hunt [3] and Moorman, Deshpande and Zaltman [11] [26], where commitment is seen as a shared phenomenon between partners, and the belief that the *value* of the relationship merits that it be worked on (*investment*) to ensure it continues. This view of commitment as intent to

develop and maintain a long-term relationship is echoed by Gundlach, Achrol and Mantzer [28] who evoke the existence of the “attitudinal” intent dimension of commitment, and the “actual” commitment dimension, both conditioning future exchange and relationship continuity.

Other authors [26] consider that what was once considered a shared phenomenon, is in fact rather two-sided, and that commitment can be assessed from the supplier’s perspective and from the customer’s perspective regarding their own commitment, as well as from the perception each has of their partner’s commitment.

Sharma, Young and Wilkinson [29] discuss commitment as being composed of several dimensions. Affective commitment translates as an emotional attachment and a certain appertenance to and respect of the partner, alongside commitment of the moral kind, “obliging” an actor to continue the relationship. Two other types of commitment (cognitive) – which line up on the factors proposed in Morgan and Hunt’s KMV model are the “lock-in” effect where the need is felt to maintain the relationship due to penalties associated if broken off (cost of relationship termination), and a similar Commitment dimension arising from perceived rewards (value) to be had from the opposite act of maintaining the relationship. Finally a behavioural dimension to commitment is evoked (conative), referring to the actual efforts an individual makes to reinforce the relationship. All of these dimensions lead to the wish/will to maintain and develop the relationship and translate as goodwill towards the partner, and subsequent investment in the relationship with him.

As regards links with other atmosphere and relationship constructs, trust is considered a pre-requisite for commitment [30]; [3]; [27], and idio-synchronic investment demonstrates the will to develop commitment [26]. Good communication and prior experience with the partner would tend to stimulate commitment, as does a good reputation of the partner, and a low level of conflict in the relationship [27]

Perceived relationship value [31] would tend to result in increased commitment. Shared values by partners (closeness) would have the same effect, whereas power/dependency dissymmetry (see Power-dependency discussion) would tend to increase calculative commitment, whilst reducing commitment of the affective kind.

In a similar way, building on the “two-sided” (supplier vs customer) vision of commitment , it is suggested [28] that “balanced” commitment by both partners will reinforce participation and the basis for future exchange, consequently strengthening the relationship. Imbalance on the other hand will increase the tendency of a partner towards opportunism, and weaken the relationship.

Lastly, satisfaction – clearly associated in some way with perceived relationship value – whilst of obvious relevance, is not included as a component element of RA as it is viewed more as an outcome of it [2].

Power and dependence

A third much-discussed RA dimension in the literature is that relating to Power - the ability influence a counterpart, to influence his decision-making [32] or bring about change in his behavior [33] - and its often supposed opposite extreme, Dependence - defined as the difficulty to replace a counterpart in a relationship [34] [35] either because no alternative is available/possible, or due to high costs of replacement [22].

From a basically unidimensional perspective originally, a more nuanced vision has emerged

revolving around the idea of interdependency [36] and dependence symmetry or relative dependence.

RA can thus demonstrate a state of total dependence, on the one hand, of one of the counterparts, or at the other end of the scale a state of dependence asymmetry. Thus the degree or extent of dependence of the two parties in interaction becomes an issue, as does the structure - balance or imbalance - of dependencies [34], [37].

The dependence of a partner is considered by some as being directly related to that partner's acknowledgement of power of the counterpart. A point of view which is nuanced in the literature by certain authors [22], [38] who see dependence as just one of the possible sources of power. Relative dependence of one party, then, would translate as relative power for the other in the relationship [34], and mutual dependence as balance in power.

Again, for power dependence issues, the possibility of real or actual power/dependence vs. perceived P/D emerges. Whilst study of both is of interest ultimately, for the purposes of the study of atmosphere constructs and in line with our previous definition of the nature of RA, we set aside the former to focus on the latter.

Power/dependence and associations with other constructs

On the strength of the above discussion, consideration of factors influencing the P/D situation can be considered (a) in terms of generic effects, relating to levels of P/D and (b) relating to degree of symmetry of P/D across the relationship.

Amongst the generic effects, interdependence (reciprocal dependence) is considered to be an antecedent of cooperation [30], [36]. Dependence is also seen to be generated by relationship specific investment (commitment) which makes it often difficult and costly to replace the counterpart [39]. In a similar vein, the greater the (existing or expected) results obtained, (value/satisfaction) from a relationship the greater the dependence (relative perceived value of the relationship by and to each counterpart). This depends, obviously, on the number of alternative relationships available (present or future).

As regards dependence symmetry/asymmetry issues, asymmetry is seen to generate instability and inefficiency conflict [34], [40]. The greater the asymmetry, the lower the trust and commitment [34], [26] and the lesser the strength and stability of the relationship. Greater symmetry, on the other hand, translates as increased relationship efficiency and performance (value) [41], [37], and as less conflict and a lesser use of coercive strategies (power).

The relative degree of satisfaction of a counterpart in a relationship also generates dependence asymmetry, with the more satisfied partner (value/satisfaction issues) tending to demonstrate more dependence [42].

As regards levels of P/D, high levels are associated with increased use of non-coercive (power) strategies, and higher perceived performance of the partner opposite (value/satisfaction) [36]. At the same time high levels translate as increased calculative commitment, whereas lower levels translate more as affective commitment [20].

Empirical validation of the IMP2 model

Roehrich et Spencer (2000, 2001, 2002) used the data collected within the framework of the IMP 2 project. The data collection procedure is described in appendix 1. Their objective was to check the validity of the scale developed within the IMP approach. The initial fifty items in this scale are given in appendix 2. The authors came to two key conclusions:

- The scale is a 9-dimensional structure labelled: Understanding, Supplier Dependence, Customer Dependence, Distance, Commitment, Problems, Social Bonds, Trust and Relationship Value. This structure does not confirm the IMP2 model in its entirety, but it is compatible in part. Appendix 3 shows the overall structure of the scale, resulting from confirmatory factor analysis.
- Second-order CFA reveals three higher-order dimensions: **Relationship Fluidity**, grouping the « Understanding, Distance and Trust » dimensions ; **Relationship Strength**, grouping the « Commitment, Social Bonds and Relationship Value » dimensions; **Rapport de Force**, grouping the « Problems and Customer dependence » dimensions. Finally the first-order dimension « Supplier dependence » stands alone. Appendix 4 shows this structure in diagram form.

The authors conclude that RA comprises two higher-order dimensions: **Relationship Fluidity** and **Relationship Strength**. They think that the **Rapport de Force** dimension, along with the Supplier Dependence dimension, are antecedents to RA, but are not in fact part of RA as such.

Towards the basis for a model

A certain number of issues are raised by the discussion above. It is fairly clear that most of the dimensions integrated into the original IMP framework are present in some shape or form, though often declined differently. It is also clear that whilst keeping its basic overall profile, the RA atmosphere concept has developed much further than the original model, both in terms of the definition of certain of the different constructs making it up, and especially in terms of the interrelatedness of these constructs, discussed but not explicitly investigated in a systematic manner in the original IMP model. It is the apparent complexity of this interrelatedness which provides particular food for thought here. Whilst all the pieces in the puzzle are not present, the above literature lends itself to a tentative initial proposal for a pre-model of relationship atmosphere revised as follows:

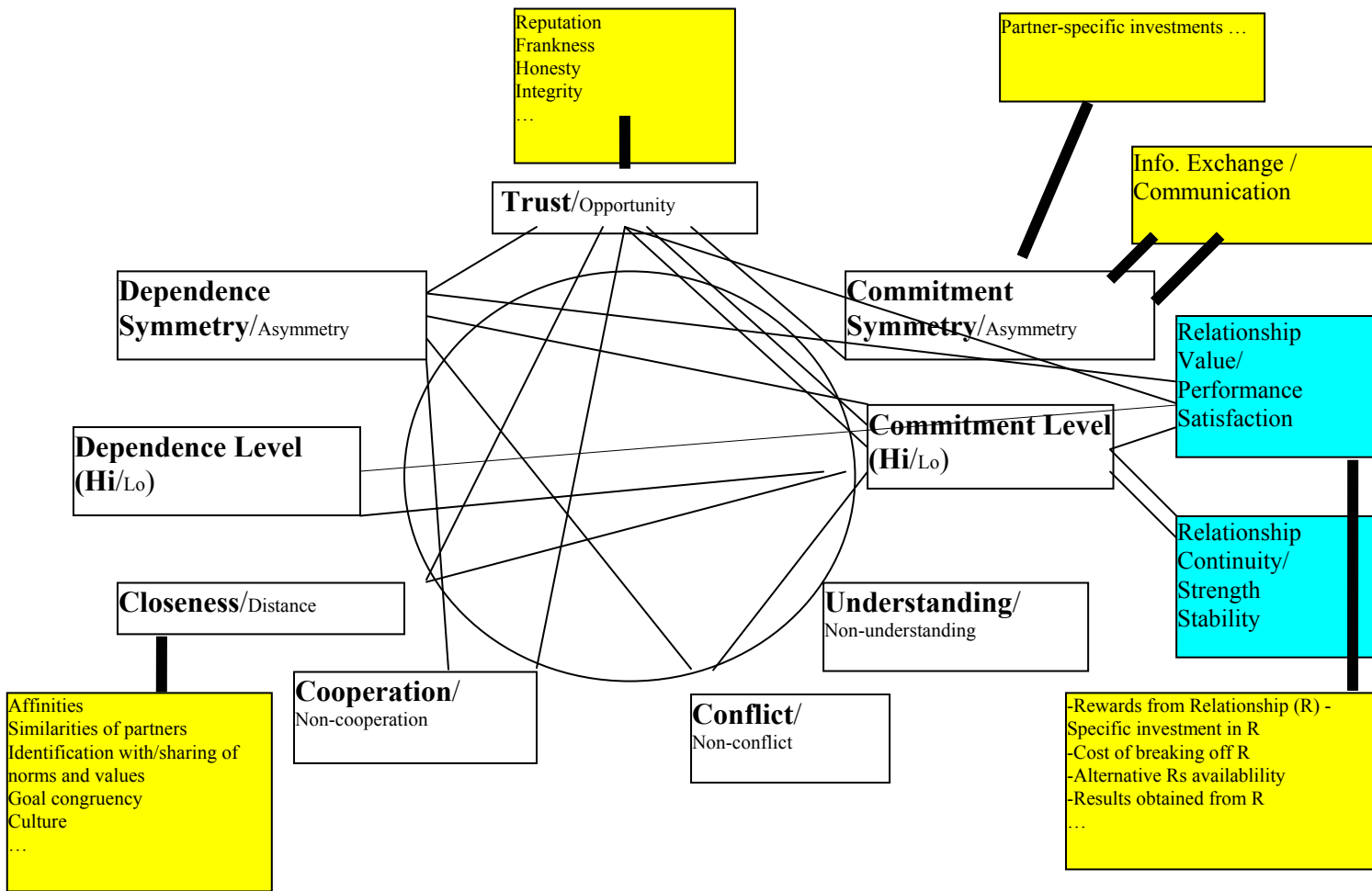


Fig. 1: Connections between dimensions of RA according to various literature sources (Dotted lines represent negative interrelationships)

This structure is rather complex however. The results obtained using the data collected in the IMP2 project suggest the internal structure shown in fig.2.

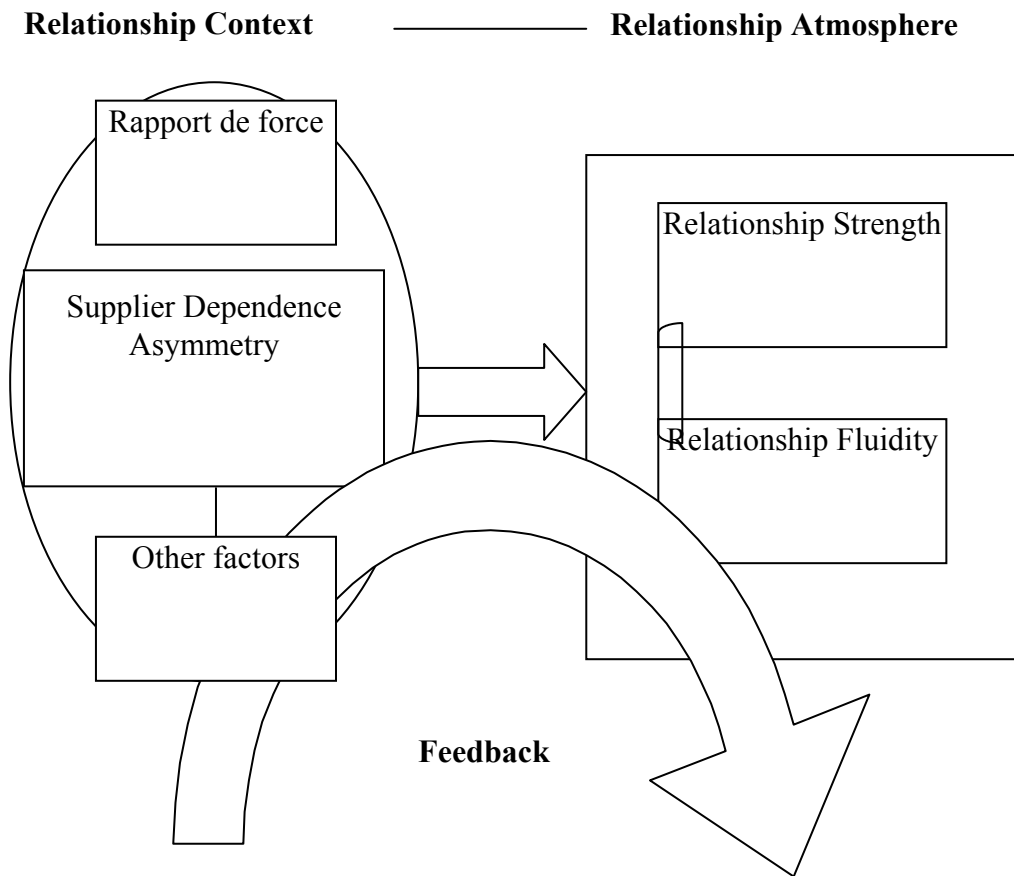


Figure 2 : Relationship atmosphere structure

The diagram in fig.2 above shows both the structure and dynamics of RA :

- structurally speaking, two sets of factors can be distinguished: Relationship Context, made up of dimensions such as Rapport de force (including Problems and Customer Dependence), and RA itself, with its two –interlinked- base dimensions: Fluidity and Strength;
- dynamically speaking, we suggest that these two sets of factors interact reciprocally : Relationship Context influences RA which, in turn, exerts an influence on the way Relationship Context evolves. This model serves as a theoretical basis for the empirical study presented below.

RESEARCH OBJECTIVES AND METHODOLOGY

Our research aims providing empirical validation for the model shown in fig.2. Basing ourselves on the IMP2 project data, the intention is to explore the relationships between the 9 RA dimensions revealed in the previous research (see appendix 3).

The empirical model proposed for testing –a simplification of the theoretical one given in fig. 2 - is shown in fig. 3.

In this simplified version, the Supplier- and Customer-dependency constructs are assumed to exert an influence on the three first-order dimensions of Relationship Fluidity (Understanding, Closeness and Trust), and on the three first order dimensions of Relationship Strength (Commitment, Social Bonds and Relationship Value). Finally, the Problems dimension is assumed to be influenced by the Customer-dependence dimension.

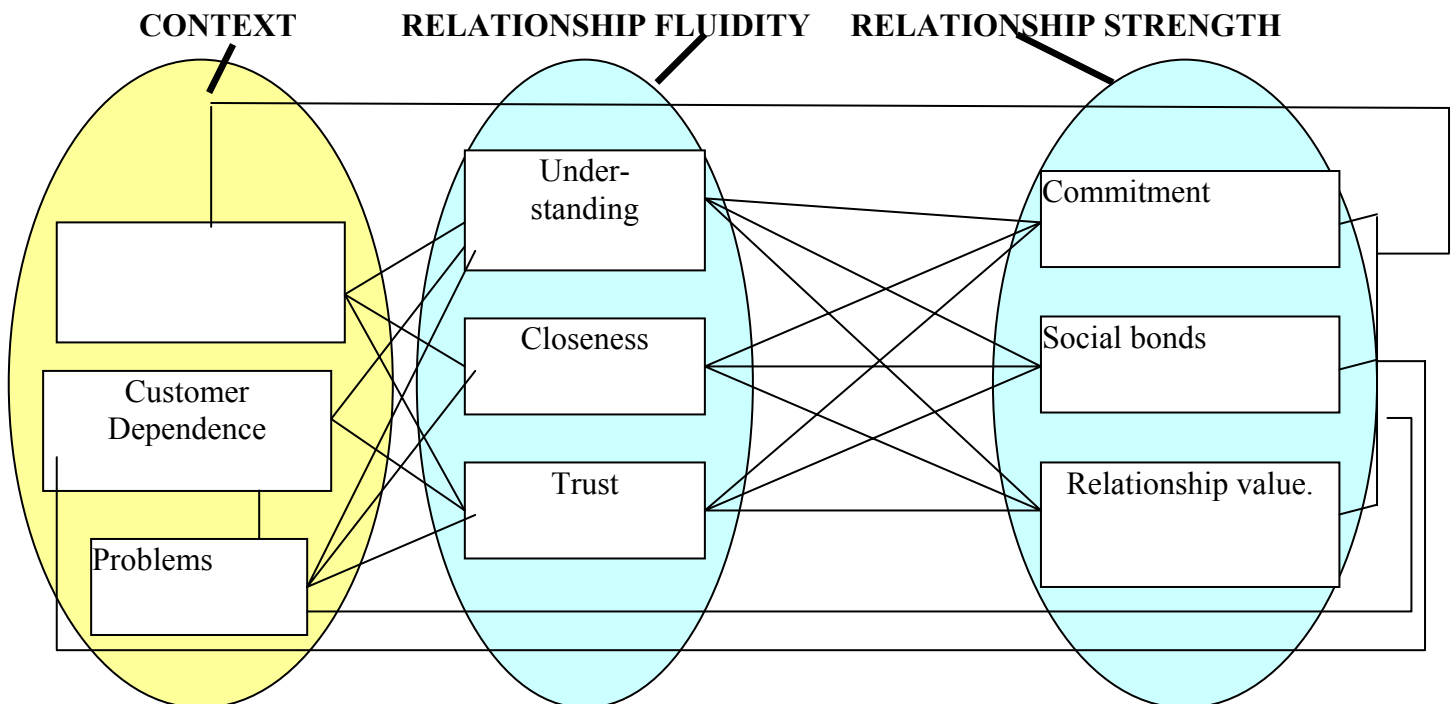


Figure 3 : A model of the internal structure of RA

Methodology

STATISTICA software and the SEPATH procedure were used to test this model. The model was stipulated using the previously updated measurement model (see appendix 3). Due to problems in the multinormality of the data, bootstrapping has been used in estimating the parameters. Moreover, intercorrelations between the items led us to authorise correlation of residuals of certain items (within items belonging to the same second-order dimension).

Table 3 displays the goodness of fit indices obtained with this model. All these indices are quite good, and allow pursuance of the analysis.

Coefficient	World
χ^2 (sig)	422 (p<.00)
χ^2 /df	422/163 = 2.59
RMS	.07 (.06 - .08)*
Γ	.92 (.90 - .94)*
Γ_{adjusted}	.89 (.87 - .92)*

* Indications in brackets refer to the minimum and maximum values of the index

Table 3 : Main goodness of fit indices for the model

Table 4 displays the value of the structural coefficients. Of the 22 coefficients, 16 are statistically significant (one being significant at the .10 level). On the whole, the exogenous variables (Supplier and Customer dependence) tend to be more strongly related to the first set of endogenous variables (understanding, distance, trust and problems) than to the second (commitment, social bonds and relationship value). Moreover, the structural coefficients tend to be low. On the other hand, each of the variables in the first set of endogenous variables is related to each variable in the second set, and the values of the coefficients tend to be higher.

Source Variable	Target Variable	Value	Source Variable	Target Variable	Value
Supplier Dependence	Understanding	.22	Understanding	Commitment	.31
	Distance	NS		Relationship Value	.52
	Trust	.32	Distance	Social Bonds	.37
	Commitment	NS		Commitment	-.37
Customer Dependence	Relationship Value	.27	Trust	Relationship Value	-.28
	Social Bonds	NS		Social Bonds	-.29
	Understanding	NS		Commitment	.26
	Distance	.15		Relationship Value	.46
	Trust	.07		Social Bonds	.30
	Commitment	NS			
	Relationship Value	NS			

	Social Bonds	.11 (<.10)			
	Problems	.32			

Table 4 : Structural coefficients

A more detailed analysis of this table leads to the following assessments:

- Understanding only depends on Supplier Dependence (.22). It exerts a strong influence on Commitment (.31), Social Bonds (.37) and Relationship Value (.52) ;
- Distance only depends on Customer Dependence (.15). It exerts a strong negative influence on Commitment (-.37), on Social Bonds (-.29) and on Relationship Value (-.28) ;
- Trust depends on both Supplier (.32) and Customer (.07) Dependence. It exerts a strong influence on Commitment (.26), Social Bonds (.30) and Relationship Value (.46) ;
- Problems significantly depends on Customer Dependence (.32) ;
- Commitment is independent from Supplier and Customer Dependence, and is approximately equally linked with Distance (-.37), Understanding (.31) and Trust (.26) ;
- Social Bonds is independent from Supplier Dependence and is only slightly related to Customer Dependence (.11). It is approximately equally linked with Distance (-.29), Understanding (.37) and Trust (.30);
- Relationship Value is dependent on Supplier Dependence (.27) and is independent of Customer Dependence. It is more strongly linked with Understanding (.52) and Trust (.46) than with Distance (-.29).

All of these observations allow us to conclude that our theoretical model is confirmed by the data.

Finally, table 5 displays the R^2 coefficients of each endogenous variable. This coefficient is an indication of the percentage of the variance of the variable which is explained by its antecedent variables.

Variable	$R^2 (1-\zeta^2)$	Variable	$R^2 (1-\zeta^2)$
Understanding	.14	Commitment	.59
Distance	.04	Social Bonds	.65
Trust	.22	Relationship Value	.98
Problems	.21		

Table 5 : Percentage of variance explained for each of the endogenous variables

An observation of table 5 leads to the following conclusions :

- The variables of the first set of endogenous variables, Understanding (.14), Distance (.04), Trust (.22) and Problems (.21) are poorly explained by their antecedent variables. Amongst these variables, Trust and Problems are better

explained by the exogenous variables (Supplier and Customer Dependence) than Understanding and Distance;

- The variables of the second set of endogenous variables, Commitment (.59), Social Bonds (.65) and Relationship Value (.98) are better explained by the model. Amongst them, Relationship Value is almost perfectly explained by its antecedents.

To sum up then, our results seem to reveal a structure where:

- the « Dependence » variables exert a weak influence on the other variables in the model
- the two sets of endogenous variables are strongly interlinked, such that those variables going to make up “Relationship fluidity” exert a strong influence on those comprising “Relationship strength”

This structure suggests that other variables must be at play upstream, to explain the value of RA.

DISCUSSION

The results presented here tend to support our theoretical model. RA comprises two basic dimensions, strongly interlinked : Relationship fluidity and Relationship strength. These two basic dimensions are influenced by a group of external variables of which Dependence – Supplier and Customer – are part. Fig. 6 demonstrates this structure in simplified diagram form, with the thickness of the arrows indicating the strength of the link.

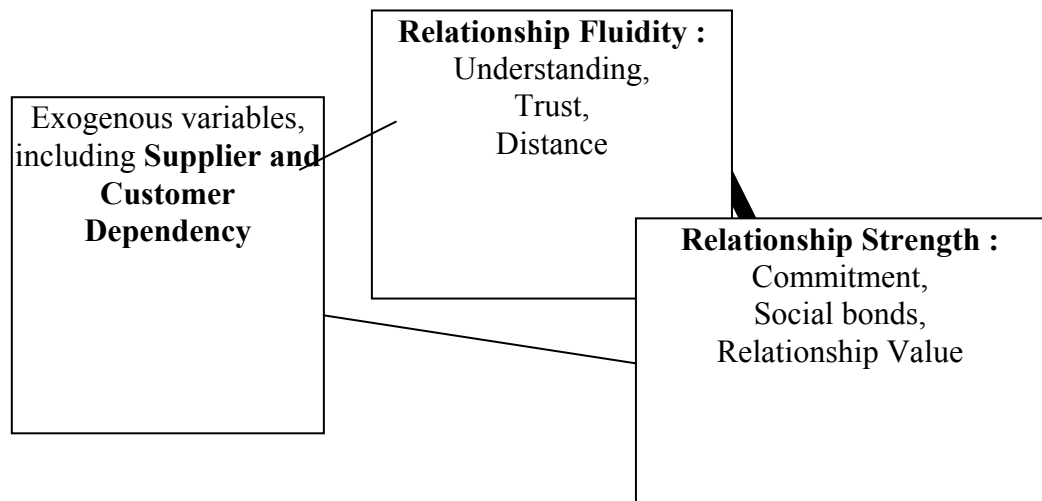


Figure 6 : Structure of the validated theoretical model

Before discussing the results further, it is important to outline the limits to our study. The main limit is of the methodological kind, and relates to the measurement of RA. The dimensions of RA are in fact only captured using a small number of items : five for the «Understanding » dimension, and only two for each of the 8 others. This situation raises the question of the quality of measurement of each dimension, and in particular its exhaustiveness.

Taking « Trust » as an example, certain measurement scales for this construct comprise three dimensions, each with several items. With only two items, our measure of trust may seem inadequate. In our view it is acceptable, however, given the content validity of the two items. Content validity, the value of which has for a long time now been underestimated, seems today to emerge as the main criterion for validity of a measure (***) . Simply reading the items provides confirmation that they effectively measure the trust phenomenon. This same reasoning leads us to consider that if the dimensions of RA can be captured by a small number of items, then the measures carried out in that way provide an acceptable indication of each dimension.

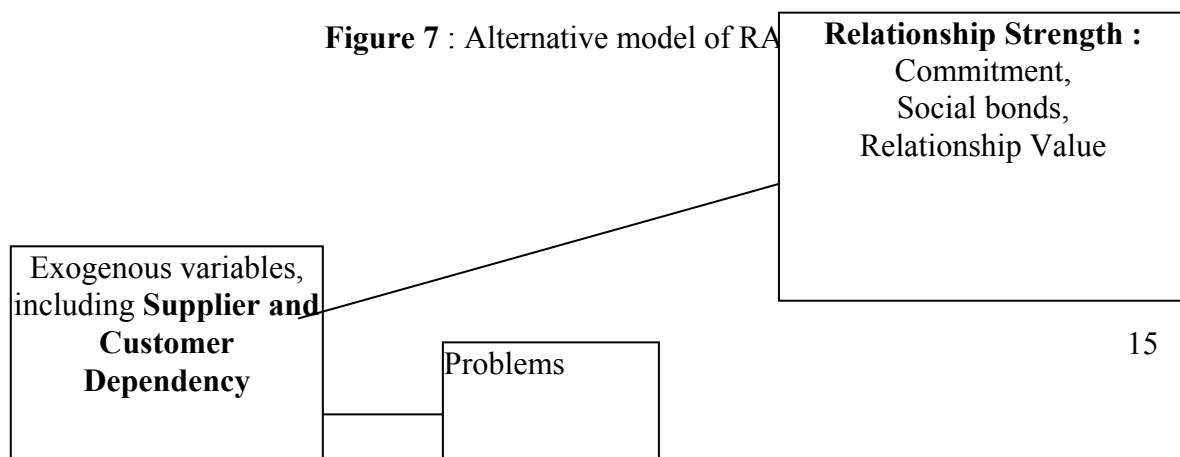
A closer look at fig. 6 brings us to ask ourselves two questions: (1) Which are the other exogenous variables likely to influence the dimensions « Relationship fluidity » and Relationship strength » ? (2) Is not the relationship which links these Relationship fluidity and Strength dimensions symmetrical, rather than univocal.

The most likely front-line source of variation in RA is the actual functional aspects of the Supplier-Customer trading relationship. If the key criteria for supply (quality, keeping deadlines, service guarantees, etc.) are respected by the supplier, and if the customer respects payment commitments (amount, timing etc.), the relationship stands a good chance of developing within a favorable atmosphere.

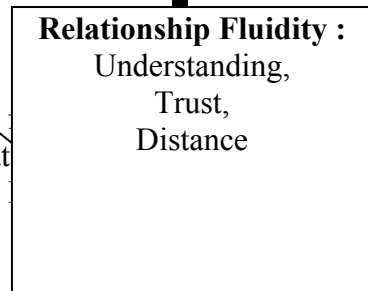
This consideration is supported by our results concerning the Problems variable. This variable may be perceived as an indicator of how the commercial relationship between both parties is performing, as perceived by the supplier in this instance here. This variable proves to significantly influence all the other RA variables. This question certainly merits further attention, with a view to identifying those variables which strongly influence the evolution of RA. Alongside these variables relative to the functioning of the relationship itself, will undoubtedly exist a certain number relative to the relationship network context, of course. This also opens perspectives for further study.

It is also highly likely that the two higher dimensions of RA, and consequently the variables which they comprise, exert mutual influence. This means, as observed, that Understanding, Distance and Trust influence Commitment, Social Bonds and Relationship Value, but that the reverse is also no doubt true. We tested this hypothesis by stipulating a model where variables from Relationship Strength were antecedents of those of Relationship Fluidity. Figure 7 illustrates this model. This new model is not nested in the original model we tested. It is therefore not possible to compare the fit to the data of both on a statistical basis. However, some indices suggest that this second model matches the data less well than the first one :

- The χ^2 statistics is higher (344 vs. 322) , and the other indices of fit slightly lower;
- The standard errors of many coefficients, as provided by the bootstrap procedure, tended to be high, indicating a great instability of certain parameters;
- In the bootstrap procedure a greater number of the replications failed to reach convergence or gave unsatisfactory results.



These considerations lead us to conclude that our initial model is an alternative model. This is evidence, in other words, that Relationship Fluidity influences Relationship Strength more than Relationship Strength influences Relationship Fluidity.



Conclusions and Research implications

Our results lead to a certain number of conclusions of both the theoretical and practical kind, and potential for future research emerges from these.

From a theoretical point of view, the necessity to precisely define the notion of RA is clearly confirmed. On the basis of our results, we propose that RA as such be limited to the two composite dimensions : Relationship fluidity and Relationship strength. This thus limits RA to six base dimensions: Understanding, Closeness, Trust and Commitment, Social Bonds and Relationship value.

From a practical point of view, a reminder is worthwhile here as to the importance of the role played by RA in the development of business relationships between suppliers and customers. RA thus becomes a variable which managers need to control so as to optimise on efficiency. This research suggests that some levers for this control are the relationship dependency factor, and the existence of problems.

Confirmation is provided, in particular, of the fact that firstly, whilst it may not be realistic to eliminate problems in a relationship altogether, it is crucial that these problems be effectively managed so as to avoid a too serious deterioration of RA. At the same time awareness of the consequences of perceived dependency by and of the supplier and customer, for example, become critical issues to be managed. As does the influence third parties (network actors) may have in terms of operating a shift in respective visions of dependency.

These conclusions are based on the testing of a model which is simplified relative to the theoretical model. Further research is thus needed to identify which Context variables are likely to exert a positive or negative influence on RA. It would also be useful to further explore the relationships observed between the two composite RA dimensions: Fluidity and Strength. Finally, longitudinal research should enable observation of reciprocal influence patterns between RA and Relationship Context. This was not possible here, as the data used is cross-sectional.

To our knowledge this is the first time that an – ambitious, perhaps, but modest by intention – has been made to develop an integral model of Supplier-Customer relationship atmosphere based on statistical analysis of extensive empirical data. Their findings in our view are promising. They take in many of the dimensions of the initial conceptual framework suggested by the IMP group and place them in a configuration rather different perhaps to that originally imagined. A redefinition of the core elements composing RA provide scope for further research to better understand the phenomena at play. As does more explicitly identifying distinctions between RA itself, and RA Context.

Other questions raised relate to the possible double perspective (double-vision !?) attached to RA: Customer and Supplier perceptions may well vary (match and mis-match issues), of

course, but a same phenomenon may also well have different consequences for a supplier as compared to a customer in terms of action and future relationship development. And the symmetry/asymmetry issue also merits further attention. This has been shown to be pertinent for the dependency construct here. The same may well be true for other constructs such as commitment ...

Future work will be directed at addressing these issues.

APPENDIX 1

The IMP2 Data Base

Measures of the six dimensions of RA were collected as part of the second Industrial Marketing and Purchasing (IMP) group international research project (IMP2). This study comprised an initial study of industrial supplier-customer relations carried out by teams of researchers for a number of universities in Europe that was later extended to various Asian countries using the same questionnaire. The overall purpose of the project was to develop an understanding of suppliers and customers in industrial markets in a variety of international contexts and to examine how single relations are connected to and influenced by other relations. A comprehensive questionnaire was developed to examine all major aspects of a relation including its history, the nature of the interactions taking place, the relationship atmosphere, performance, the connections with other relations and the characteristics of the parties involved. Personal interviews were conducted with executives responsible for and involved in the operations of a relationship and, using mirror-versions of the questionnaire, interviews were conducted with suppliers, customers and intermediaries about the given focal relation. The focal relationship was selected by the respondent to represent an important foreign customer (or supplier). Only the results of supplier interviews are used as the basis for the analysis reported here.

a) European Sample

Altogether, 230 supplier interviews were carried out with French, British, Italian, German, Dutch, and Swedish organizations. Questionnaires with a large number of missing answers for the atmosphere questions were excluded from the analysis. One item that generated substantially greater a number of non-responses than the other items was also excluded from the analysis. Finally, in order to eliminate variation from national samples with too few observations, data from Italy, Great Britain and France were dropped from the analysis. The resulted in a sample of 201 suppliers spread over seven customer countries (Germany, 52 interviews; Sweden, 85 and Holland, 64). The companies belong to a spread of different industries, ranging from raw materials to equipment.

b) Asian Sample

In Thailand the interviewer's personal network was utilised as well as industry lists to identify and recruit a sample of 100 industrial suppliers. The English version of the questionnaire was used.

In China the IMP2 questionnaire was translated into Chinese and back-translated by independent native bilingual Chinese speakers. A sample of 100 suppliers comprised 50% state owned firms, 35% joint ventures, 4% Chinese owned and 3% foreign owned. The sample of international relations was spread over 32 different countries. Forty-nine percent of customers were from the Asian region, 37% from Western countries (including 19% from Europe), 6% were from South America and 8% were not specified.

APPENDIX 2

Full Set of Atmosphere Items from IMP2 Instrument

Power-Dependency

1. alter Considering everything, we actually have no alternatives to this relationship.
2. stop It is very unlikely that this customer would stop purchasing from us in the near future.
3. conce If necessary we would go quite far in making concessions to this customer.
4. imp We are more important to this customer than he is to us
5. dep We feel dependent on this customer
6. uhand We have the upper hand in this relationship.
7. mudep We have a feeling of mutual dependence in our relationship with this customer.
8. adapt Adaptations are more frequently made by us than by this customer.
9. obt-i Our relationship with this customer is instrumental for obtaining information necessary for our other activities in this market.
10. repla It would be very difficult for us to find a replacement for this customer.

Cooperation-Competitiveness

11. lackc Lack of cooperation has caused problems in our relationship.
12. u-per Unsatisfactory performance (e.g. late deliveries, delayed payment) has caused problems in our relationship
13. profi The customer puts cooperation with us before his short-term profit.
14. tec-i Necessary technical or commercial information is easily obtainable from this customer.
15. coocl We cooperate closely with this customer.
16. goals Our goals are basically compatible with the goals of this customer.

Trust-Opportunism

17. tru-c We feel we can trust this customer completely.
18. mutru Business with this customer is usually based on mutual trust rather than legal agreements.
19. confi We have full confidence in the information provided to us from this customer.
20. probl Our relations with other companies have caused problems in our relationship with this customer.
21. expl This customer tries to exploit the advantage of our cooperation for his own sake.
22. handi We are convinced that this customer can handle confidential information from us.
23. withi This customer withholds important information from us.

Understanding-Misunderstanding

- 24. liked We like dealing with this customer.
- 25. atten We are satisfied with the level of attention we receive from this customer.
- 26. under The customer has a good understanding of our problems as a supplier.
- 27. easya It is easy to agree about how to handle the various issues that arise in this relationship.
- 28. misun Misunderstandings between our two companies are quite rare.
- 29. motiv The customer's motives are generally clear to us.
- 30. aware We are well aware of this customer's relations with other firms in this market.
- 31. agr-c Agreements on contract terms are usually reached easily.
- 32. criti We can criticise the customer face-to-face when we consider it justified without jeopardising the relationship.

Closeness-Distance

- 33. cl-ni The customer's organisation is rather closed to us when we want to obtain non-routine information.
- 34. per-c We usually make an effort to establish personal contacts with people in the customer's company.
- 35. solev We have excellent personal relations on a social level with people from the customer.
- 36. cult Cultural differences have caused crises in the relationship.
- 37. folev When we visit the customer, we interact on a formal level.
- 38. think It is often difficult to understand the customer's behaviour and ways of thinking.
- 39. cl-us This customer is as close to us as any equally important customer in our domestic market.
- 40. langu Language differences create problems in discussions with this customer.
- 41. frien It is difficult to make friends with purchasers and technicians in this firm.
- 42. fam-m We are quite familiar with the market in which the customer operates
- 43. waydo It is difficult to understand the customer's way of doing business.
- 44. majin We have made a major investment in this relationship.

Commitment

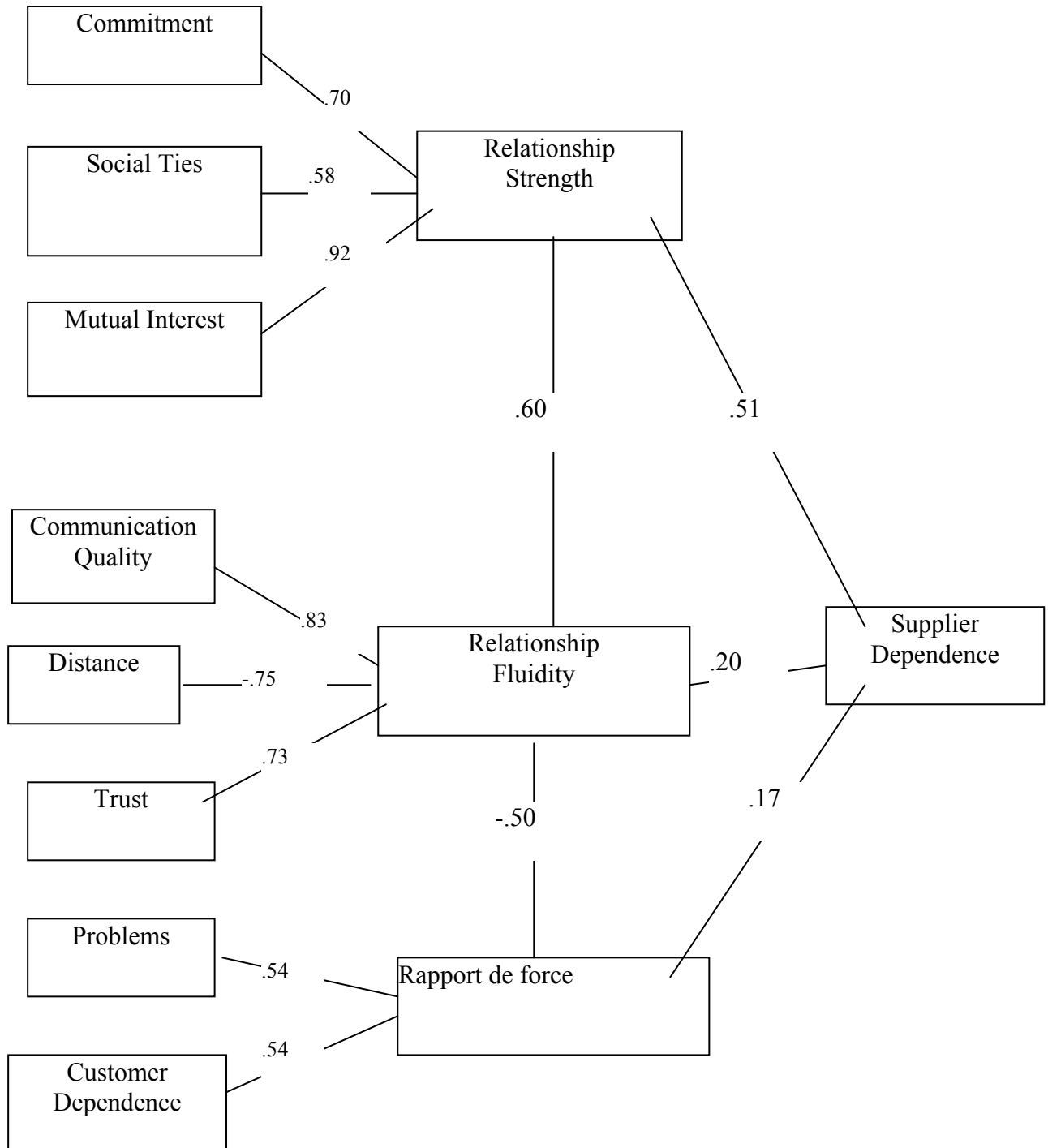
- 45. ltreel This customer is committed to a long-term relationship with us.
- 46. stron We are strongly committed to this customer.
- 47. not We would not supply another customer at the expense of this current customer.
- 48. w-rel We consider the exchange of this product to be a part of a wider relationship with this customer.
- 49. us-co The customer considers us to be committed to this relationship.
- 50. money This customer is prepared to invest time and money in developing the relationship between our two firms.

APPENDIX 3
Structure of the RA scale

	Value
Understanding	
24. We like dealing with this customer	597
25. We are satisfied with the level of attention we receive from this customer	599
27. It is easy to agree about how to handle the various issues that arise in this relationship	710
28. Misunderstandings between our two companies are quite rare	618
31. Agreements on contracts terms are usually reached easily	589
Supplier-dependence asymmetry	
01. Considering everything, we actually have no alternatives to this relationship	616
10. It would be very difficult for us to find a replacement for this customer	700
Customer -dependence asymmetry	
04. We are more important to this customer than he is for us	880
06. We have the upper hand in this relationship	501
Distance	
38. It is often difficult to understand the customer's behaviour and ways of thinking	726
41. It is difficult to make friends with purchasers and technicians in this firm	538
Commitment	
45. This customer is committed to a long term relationship with us	714
46. We are strongly committed to this customer	811
Problems	
11. Lack of cooperation has caused problems in our relationship	840
12. Unsatisfactory performance (eg late deliveries, delayed payment) has caused problems in our relationship	625
Social bonds	
34. We usually make an effort to establish personal contacts with people in the customer's company	579
35. We have excellent personal relations on a social level with people from the customer	785
Trust	
19. We have full confidence in the information provided to us from this customer	687
22. We are convinced that this customer can handle confidential information from us	585
Relationship value	
47. We would not supply an other customer at the expense of this current customer	576
48. We consider the exchange of this product to be a part of a wider relationship with this customer	505

APPENDIX 4

Second order structure of the RA scale



- One sided arrows denote a loading between first order and second order dimensions
- Two sided arrows denote a correlation coefficient between 2^o order dimensions

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