MEASURING BUYER ROLE BEHAVIOR IN BUYER-SUPPLIER INTERFACE

Work in progress

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ABSTRACT

The purpose of this paper is to examine buyer firm´s boundary spanning actors' behavior in buyer-supplier interface through three dimensions: relational behavior, hierarchical behavior, and market-driven behavior. A measurement instrument is developed and empirically tested. The sample consisted of 51 respondents. The results indicate that the scale developed and tested is valid and reliable measurement instrument of buyer firm's key contact persons behavior in their supplier relationships.

INTRODUCTION

Since 1980's marketing scholars have studied relational norms or behavior as one of the most important facets in relational marketing. Despite of various sub-dimensions of relationality, the discussion highlights uni-dimensional setting with transactional and relational ends of the continuum. In our recent research endeavor, we took an alternative view by assuming that buyer boundary spanning behavior is rather a multi- than a uni-dimensional phenomenon and the behavioral dimensions are independent from each other.

The lack of individual level studies has been noted by some scholars (Marchington & Vincent 2004) and our own practical experiences suggest behavioral differences between a firm's different boundary spanning actors. These differences are situational and relationship-specific. Differences are also individually driven and the position a person holds affects greatly how she or he interacts with suppliers. A sourcing director put this as follows:

> *"I am basically a cooperative man preferring collaboration rather than use of power. However, in my current position I get involved in supplier-specific issues in a phase*

where problems have already escalated and my only effective means to solve these situations usually call for the use of power and even threats"

In practice, boundary spanning actors' behavior may also reflect all the behavioral dimensions even in the same relationships. A logistics manager described her own behavior as follows:

"In my position I have almost complete freedom to choose the way I interact with the suppliers. Depending on the situation, I may use strong hierarchic power of an important customer, the power of markets and more collaborative 'care-taking' approach."

These two examples reflect behavioral differences between boundary spanning actors within the same organization. We suspect that one respondent firm level studies do not always allow us to get a realistic picture of multivoiced firms' behavior in their business relationships. The multivoiced nature of a firm may result from different levels of hierarchy and different functions the boundary spanning actors represent. Behavioral variance may also stem from differently defined task profiles for positions of similar kind, and differences in individual characteristics and competences.

The above and similar kind observations played a major role in our decision to start a research program to study organizational boundary spanning behavior at individual level of investigation. One of the first steps in that research initiative has been an attempt to develop a measure, which would allow us to study boundary spanning actors' behavior when interacting with other firms' counterparts. The measure we present in this paper approaches boundary spanning behavior of customer firm's personnel when interacting with suppliers.

The study's framework is based on well-known markets-networks-hierarchies differentiation, and we try to show that buyer firm's representatives' role behavior follows the same differentiating logic. In *market-driven behavior* buyer's personnel readily refer to 'markets out there' as a source of alternative suppliers and thereby use market pressure as a source of power ('exit strategy'). When *behaving hierarchically*, buyer's personnel refer to their position as a customer thus using various modes of power when interacting with suppliers ('voice strategy') and further, when *behaving relationally* their behavior typically underlines trust, joint activities and mutually beneficial objectives with the supplier ('collaboration strategy'). We assume these behavioral dimensions to be mutually non-exclusive.

To test the relevancy of our assumption, we have developed an individual level measurement instrument for buyer firm's boundary spanning actors' behavior, the Relational-Power-Market (RPM) scale. By using the RPM scale, we can measure the buyer representative's behavior in industrial buyer-supplier interface. Based on earlier literature and three pre-interviews, we developed several alternative measurement items whose content validity has been ensured by the judgment of 10 experts in the research area. A validation study was conducted through web-based survey with three large industrial firms. The results of the validation study suggest that buyer's role behavior is a multidimensional construct that is manifested through the three behavioral dimensions. The results suggest that the RPM scale is reliable, valid, and suitable measurement instrument for boundary spanning behavior at individual level of investigation.

THEORY DEVELOPMENT: DIMENSIONS OF BOUNDARY SPANNING BEHAVIOR

Theoretical discussion on governance modes in business relationships has been active since the 1980's. To date, it is generally accepted that various governance modes (market, hierarchy and networking) are mutually non-exclusive thus forming various mixed forms of governance and inter-organizational behavior (Bradach & Eccles 1989; Adler 2001; Ritter 2007) Research of inter-organizational relationships still mainly focuses on firm-level relationships and behavior (Marchington & Vincent 2004). However, it is commonly agreed that individuals and individual level behavior are crucial for successful firm level relationships (Mentzer et al. 2000; Sabbath & Fontanella 2002). The boundary spanning individuals (or 'key contact persons') have a role in building firm-level trust and commitment, resolving conflicts, sharing information, negotiating contracts and as overall representatives of their own employer organizations (Moss Kanter 1994; Stank et al. 2001). Firm and relationship-specific governance modes and types of inter-organizational behavior thus materialize through individual behavior at firm boundaries.

Building on the three dimensional models of independent governance modes (Adler 2001; Ritter 2007), we aim to study boundary spanning behavior of buyer firms' personnel as an individual level activity. Research of individual level boundary spanning behavior has mostly been conducted one-dimensionally by using the transactional – relational continuum. Most often scholars have measured only relational behavior leaving the other end of the behavioral continuum more or less open. By treating the three behavioral dimensions as independent it is possible to find out several different behavioral styles used by the boundary spanning actors. Moreover, by treating each dimension as an independent scale, it is (in principle)

possible to find a kind of 'laissez faire' boundary spanning style similar to what has been found in classical managerial styles research (Lewin et al. 1939).

Our research task searching for varying boundary spanning styles is explorative in nature. What we do know, is that boundary spanning actors (e.g. purchasing and sales managers) differ in their behavior in terms of relational versus transactional manner. What we do not know is whether the boundary spanning actors use various mixed styles and if there are differences concerning the intensity of behavior ranging from 'laissez faire' and extremely intensive boundary spanning behavior of one or more behavioral dimensions. Our practical experience on business relationships and a pre-study where we interviewed three purchasing managers clearly indicates that buyer firms' boundary spanning actor's behavior hardly are one-dimensional nor are they similar in terms of behavioral intensity.
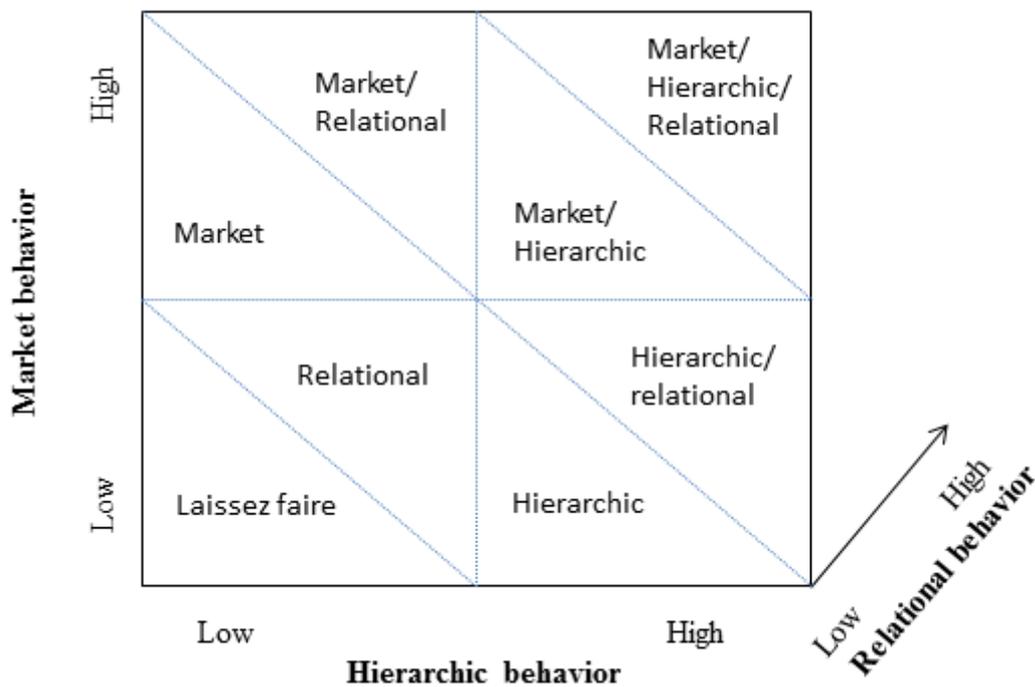

Figure 1. Hypothetical styles of boundary spanning behavior (inspired by Adler, 2001)

On the basis of the role theory, boundary spanning actors' behavior is a function of personality and the position held at any particular time. Role theory suggests that an actor should be seen as a collection of roles which are evoked by particular situations (Story et al. 2011; Knight & Harland 2005; Montgomery 1998). The role theory consists of two alternative perspectives: one focused on structure, and the other focused on action and interaction (Knight & Harland 2005; Heikkinen et al. 2007; Callero 1994; Baker & Faulkner

1991). The structural view presumes that roles are given in formal social structures and individuals must in some way or another adapt the roles (Knight & Harland 2005). The other perspective views individuals as active rather than passive role actors; individuals do not only encounter the role expectations, but they also interpret, organize, modify and create them (Knight & Harland 2005; Heikkinen et al. 2007). For the purposes of this research, the role theory offers an interesting point of view as it highlights both organization and work role (position) as well as personal determinants for boundary spanning behavior.

Relational behavior

The relational exchange school is based on an assumption that contracts are agreements that are intentionally left incomplete in order to retain the actors´ flexibility to adapt to changes in its environment (Ivens 2006). Relational behavior consists of trust and behavioral norms, and it has a future orientation (Ivens 2004; Ganesan 1994; Claro & Claro 2011).

According to Macneil´s theory of social contracts, exchange partners develop joint values and expectations about the appropriate behavior (Ivens 2004). Ivens (2004) identifies ten norms/behaviors in the literature of relational exchange as the aspects of relational behavior. Norms are defined as expectations that are directed at behaviors the exchange partner might show (Ivens 2004). These norms are long-term orientation, role integrity, relational planning, mutuality, solidarity, flexibility, information exchange, conflict resolution, restraint in the use of power, and monitoring behavior.

Long-term orientation refers to the desire and benefit of a supplier or buyer of having a long-term relationship with a specific exchange partner (Ganesan 1994; Ivens 2004). *Role integrity* is defined as "maintenance of complex multidimensional roles forming a network of relationships" (Ivens 2004). In other words, role integrity means that individuals believe that they are dealing with others who they can assume that will behave properly in all circumstances (Blois & Ivens 2007). *Relational planning* means proactive and bilateral goal setting for future joint actions. *Mutuality* refers to the attitude that one´s own success comes through common success of partnership. *Solidarity* emerges particularly in situations in which one partner is in difficulties, because it includes the expectation that joint rather than individual outcomes are highly valued (Ivens 2004; Stephen & Coote 2007). *Flexibility* refers

to the one´s readiness to adapt an existing agreement to the new environmental conditions and the changing needs of customer (Cannon & Homburg 2001; Stephen & Coote 2007; Ivens 2004). Relationship parties´ willingness to proactively provide all information that could be useful to the partner is defined as *information exchange* (Ivens 2004; Stephen & Coote 2007). *Conflict resolution* refers to informal and personal mechanisms that it is used to resolving conflicts. Expectations that actors will not apply their legitimate power against the partner´s interest includes in the norm of *restraint in the use of power*. *Monitoring behavior* means the control or supervisory actions in business relationships. (Ivens 2004) Even though conflict resolution, power use and monitoring behavior are defined as relational behavior, Ivens (2006) has classified them as power behavior and that it is why in RPM scale monitoring behavior is measured as a part of hierarchical behavior.

Hierarchical behavior

Authority is related to the decision-making and influencing role that a firm can have in a relationship (Teegen 1998). Authority gives a firm the ability to make decisions directly or indirectly through its influence over the partner (Teegen 1998). Detailed and formal contract drafting is a typical form of authority relationship (Wuyts & Geyskens 2005). Formal contracts represent commitments and obligations to perform particular actions in the future (Poppo & Zenger 2002). To gain an authoritarian position, a firm needs to have some power over the partner firms.

Power has been defined as the ability of one firm (the source) to influence the intentions and actions of another firm (the target) (Maloni & Benton 2000; Handley & Benton 2012). Firms with the power of bargaining have little, if any, reason to yield control or not to use such power (Benton & Maloni 2005). The logic of hierarchies is seen to be based on dominance and power, but Ritter (2007) emphasized that it is also the matter of dependence. Dependency can be seen as a relational dimension of a relationship or an authoritarian aspect of a relationship. As a relational factor, dependency emerges as commitment and dedication between relationship parties (Biong & Selnes 1995). As an authoritarian factor, dependency emerges through power; if the performance of a firm is significantly dependent upon the relationship, the effect of power is remarkable (Maloni & Benton 2000).

The literature identifies five bases of inter-firm power: reward, coercion, expert, referent, and legitimate power. The most obvious and widely recognized bases of power are reward and coercion. *Reward* means that the source firm has ability to mediate reward to the target firm, for example the buyer firm can provide additional business to supplier. *Coercion* power base refers to the source firm´s ability to mediate punishment to the target firm, for instance the buyer firm can cancel businesses or reduce the volume of business with supplier. *Expert* power can be used when the source firm has an access to knowledge and skills that are desired by the target firm. *Referent* power refers to the situation where the target firm values the identification with the source firm. *Legitimate* power can be used when the target firm believes that the source firm has the right to request and expect things to be done according to its requirements as a part of the relationship. (Maloni & Benton 2000; Zhao et al. 2008)

The bases of power have been classified into two categories: mediated and non-mediated power. Mediated power is associated with both negative and competitive uses of power. Reward and coercion are classified as mediated power. Non-mediated power is more positive and relational in nature, and occurs as a natural part of buyer-supplier business activities without demanding intention from the source firm. Expert, referent and legitimate power represent non-mediated power. (Handley & Benton 2012; Benton & Maloni 2005)

Market behavior

Markets have been described as "systems of anonymous actors on both sides that are equilibrium when price and quantity match" (Ritter 2007, p.196). However, Ritter (2007) suggest that markets could be seen as the place of exchange and interaction. This point of view allows all three governance mechanisms to occur, even simultaneously (Ritter 2007).

Market governance "describes the rules of arm´s-length market exchanges" (Ghosh & John 1999, p.133). Buyers are supposed to optimize price in every single transaction while the market governance is dominant. The unique feature of market governance is that the materialization can be done only in the help of market mechanism as competitive bidding can be organized only if there are various capable suppliers in the markets.

Arm's-length relationships are typical when practicing market behavior, because a buying firm usually applies the competitive force of the market by requesting competitive bids from

multiple suppliers (Krause et al. 2000; Dyer & Ouchi 1993). A buying firm may take advantage of fully developed bidding specifications and short-term contracts to achieve a low purchase price (Krause et al. 2000; Stuart 1993). In some cases, there could be other factors, such as quality, delivery, and various service elements, that may override the price factor and also makes broader the stream of supplier selection criteria (Stuart 1993).

Traditionally, customers try to avoid situations where they are dependent on a single supplier. Industrial markets are more price-driven than they were a decade ago because of increasing globalization (Voeth & Herbst 2006). At the same time, the interest of collaborative buyer-supplier relationships has increased; but still the importance of price and competitive bidding is in major role of everyday tasks of buyer representatives. Thus market-driven behavior is based on the threat of alternative suppliers.

SCALE DEVELOPMENT PROCESS

The scale development process includes three stages: item generation, scale development, and scale evaluation (Hinkin 1995). In the item generation phase it is crucial to ensure content validity of items generated (Hinkin 1995; Hensley 1999). The scale development stage consist of three steps: designing the developmental study, scale construction, and reliability assessment. At this stage, potential sets of items for constructs are identified, and it is tested how well they confirm the expectations of the measurement structure. In the third stage the validity and reliability of the scale is tested through empirical data. The previous stages in the scale development process aimed to create measures that demonstrates validity and reliability (e.g. factor analysis provides evidence of construct validity), but in the third stage construct validity is tested further, for instance, by testing model fit of competing models.

We generated a great amount of alternative behavioral items based on the three modes of behavior identified in the prior literature. The items of each scale are, thus, developed as deductive guided by the various behavioral sub-dimensions in each dimension. The items were worded to reflect anticipated individual-level behavior within these three dimensions. Multi-item scales for each dimension are developed. Altogether, 25 items were developed through literature review. The clarity and practical relevance of the items was tested by

letting three practitioners working in managerial sourcing positions to proof-read the first version of the item package. Some minor wording corrections were made after these tests. Table 1 lists the components of the three dimensions.

Table 1. Dimensions of buyer firm's boundary spanning individuals' behavior

Dimensions	Components
Relational	long-term orientation (1 item)
	relational planning (1 item)
	mutuality (4 items)
	solidarity (1 item)
	information exchange (1 item)
	restraint in the use of power (1 item)
	flexibility (1 item)
Hierarchical	monitoring behavior (2 items)
	legitimate power (2 items)
	expert power (1 item)
	referent power (1 item)
	legal legitimate power (1 item)
	reward power (1 item)
	coercive power (1 item)
Market	threat of alternative suppliers (3 items)
	threat of lower price/cost level suppliers (3 items)

Next the validity of the chosen scale items was confirmed by an item-sorting process (Hinkin 1995; Hensley 1999). In the item-sorting process ten academic experts reviewed and sorted randomly sorted items into the proposed three dimensions and "other" category. Of the experts one was professor, four were assistant professors and five were doctoral students. The item-sorting was conducted by a web-based survey. The standard procedure suggests that item-wise sorting should exceed 80 % of 'right' choices made by the experts. Otherwise an item should be reframed or deleted. According to the item-sorting process one item was deleted. The deleted item was: "I aim to motivate the supplier by telling them that they will get an excellent reference with us".

To further ensure the validity of the scale items, content validity index (CVI) was measured. Content validity refers to the degree that the instrument covers the content that it should measure (Hinkin 1995; Yaghmale 2009). A CVI can be calculated to both item level (I-CVI)

and overall scale level (S-CVI) (Polit et al. 2007). In a content validity test, experts are asked to rate the relevance of each item on a 4-point scale, *1=not relevant, 2=somewhat relevant, 3=quite relevant, 4=highly relevant* (Polit et al. 2007). Content validity of the RPM scale was measured by asking ten academic experts to assess if the item measures what it is supposed to measure (Yaghmale 2009). The content validity index (Average I-CVI) of the RPM scale was calculated and the value was compared to the threshold value 0.8 (Polit et al. 2007). The I-CVI (also referred as S-CVI/Ave) was computed as the number of experts giving a rating of 3 or 4, divided by the number of experts. The Average I-CVI value was 0.94 which exceeded the threshold value of 0.8.

In the third stage, scale evaluation, the validity and reliability of the measurement instrument was tested with quantitative survey data collected from the three Finnish technology companies. The invitation to participate to the study was sent to quality, R&D, procurement and procurement development personnel of the three chosen companies. In the test survey, respondents were asked to reflect their behavior in supplier interface. The variables were measured on a seven-point Likert scale (1=hardly ever, 7=very often). The data collection was conducted using web-based survey. The final sample consisted of 51 respondents (14 working at operational level, 24 expert level, 11 middle-management level, and 2 top management level).

SCALE TESTING

Exploratory factor analysis

Exploratory factor analysis (EFA) is one of the most used method assessing whether a set of questions form a single scale (Hensley 1999). Exploratory factor analysis was used to reduce the number of items and refine the RPM scale. The maximum likelihood method with promax rotation was used to explore the underlying factor structure of the chosen items. Items that had communalities lower than 0.3 should be deleted; according to this criterion one item was deleted. The deleted item was "I aim to avoid direct exercise of power or referring to it". In addition, ten items were deleted because of problematic main or side-loadings. These ten items are presented in the table 2. It seems that due to the multi-dimensional nature of both relational and hierarchical behaviors, these dimensions were difficult to compress in

one general dimension only. However, by omitting unfit items a general three-dimensional structure for all the main dimensions was found.

Table 2. Deleted items.

Dimension	Item
Relational	"I emphasize in various situations the importance of long and continuous business relationships"
	"Together with the supplier, I search for cost savings based on open information"
	"I do my best in order for the supplier to have at their disposal all the relevant information about resource planning and operational development in our business relationship"
	"I am open to various points of view and solutions"
	"I aim to avoid direct exercise of power or referring to it"
Hierarchical	"I aim to influence the supplier by referring to the know-how of our own company about how operations should be developed"
	"I require that we as a client have an opportunity to monitor the realization of mutual decisions"
	"I aim to motivate the supplier by highlighting the possibility of their gaining increased responsibility in our supplier network"
	"I demand and monitor the reduction of delivery prices with annual % objectives"
Market	"I emphasize that the supplier in question has the chance at this moment to demonstrate their competitiveness in relation to other suppliers"

The final solution consisted of 14 of the original 25 items. Three factors emerge from the factor analysis, each with an eigenvalue over one that accounted for 73 percent of the total variance. The final items are considered to be satisfactory because their main loadings range from 0.542 to 0.969, while side loadings were below 0.3. Table 3 shows the pattern matrix with a final list of items. Internal consistency was verified by calculating Cronbach´s alpha values for each of the three dimensions. All dimensions show satisfactory Cronbach´s alpha values (0.91, 0.89 and 0.85) that exceeded the acceptable limit of 0.7 (Hinkin 1995). Thus, the reliability of the scale is satisfactory.

Table 3. Exploratory factor analysis of the RPM scale

Scale items		Factor loadings		
		1	2	3
Factor 1: Relational behavior (α: 0.91)				
RE1	I make it known that objectives and means are planned together with suppliers	0.778		
RE2	I aim to see things also from the supplier's point of view and thus search for a mutual solution	0.941		
RE3	I aim to discover mutually beneficial solutions	0.726		
RE4	I avoid searching for the reasons for problems only from the supplier's point of view and aim to examine the situation as a whole	0.818		
RE5	I convince the supplier that they will be given all the necessary support for the development of their operations	0.817		

Factor 3: Market behavior (α: 0.89)

MA1	I stress that we are continuously searching the markets for suppliers operating new and innovative ways	0.656
MA2	I explain the importance of continuous cost savings with the tight competitive situation of my company	0.784
MA3	I emphasize that we have alternative suppliers from which the best possible partners are selected	0.542
MA4	I make it known that we are continuously searching for new accomplished low-cost suppliers to our network	0.945
MA5	I highlight that there are low-cost suppliers available on the market	0.789

Factor 2: Hierarchical behavior (α: 0.85)

HI1	I appeal to our official agreements and the sanctions defined in them	0.685
HI2	I make it clear to the supplier that neglecting our demands will have consequences	0.739
HI3	I emphasize that we as a client have a right to receive all the relevant information about the supplier's behavior related to this client relationship	0.604
HI4	I emphasize that we as a client have a right to demand that things are carried out the way we prefer	0.969

Extraction Method: Maximum Likelihood

Rotation Method: Promax with Kaiser Normalization

Rotation converged in five iterations

Confirmatory factor analysis

To confirm the three dimensions of buyer behavior, a CFA was conducted using IBM SPSS Amos 20.0.0. Also confirmatory factor analysis of competing models, with each model having different factors, was conducted. A total of five models were analyzed to validate the structure of buyer´s behavior. The analysis of fit used the generalized least square estimation. The best fit to the data was offered by the three factor model (model 5). The tested models are presented in the table 4.

Table 4. Summary of results of confirmatory factor analysis

Models	df	x^2	p-value	x^2/df	RMSEA	GFI	CFI	IFI	TLI
M1: one dimensional	77	93,06	0,103	1,21	0,065	0,73	0,37	0,60	0,26
M2: two dimensions (HI-RE) MA	76	85,78	0,208	1,13	0,051	0,62	0,62	0,76	0,54
M3: two dimensions (RE-MA) HI	76	82,38	0,289	1,08	0,041	0,77	0,75	0,84	0,70
M4: two dimensions (MA-HI) RE	76	83,35	0,264	1,10	0,044	0,76	0,71	0,82	0,66
M5: three dimensions	74	74,66	0,457	1,01	0,013	0,79	0,97	0,99	0,97

The three factor model gave the best fit to the data (x^2/df=1,01, RMSEA=0,013, GFI=0,79, IFI=0,99). The GFI is under the acceptable level of 0.90 but because of the small sample size and satisfactory RMSEA (0,013), CFI (0.97), IFI (0.99) and TLI (0.97) the model fit is seen overall satisfactory.
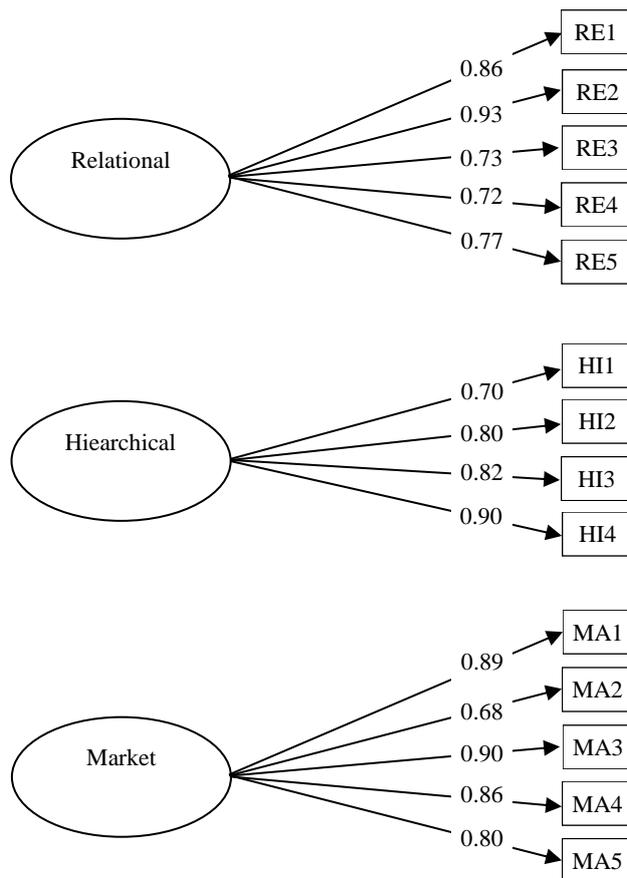

Figure 1. The final measurement model (standardized loadings).

DISCUSSION

In this study, we made an attempt to develop a research instrument for boundary spanning behavior of buyer firms' contact persons working in connection with suppliers. The main theoretical premise of this explorative study was the non-exclusiveness of the dimensions of behavior. The argument is in line with the prevailing general understanding of behavioral

multi-dimensionality at firm level analysis (Bradach & Eccles, 1989; Adler, 2001; Ritter, 2007). Our purpose was, however, to change the unit of analysis from firm to individual level of investigation.

We followed the scale development and testing process defined by Hinkin (1995). The results show that buyer firm's boundary spanning actors' behavior is manifested through market-driven, hierarchical and relational behavior. These dimensions seem to be mutually non-exclusive as the CFA showed best fit for the three dimensional model. The results also demonstrate that the reliability of the developed buyer behavior measurement model, RPM scale, is satisfactory.

LIMITATIONS

The analyses reported in this paper used a test data with only 51 observations. For a profound testing of a measure a bigger data is needed. Data was also collected from three organizations only, which may cause certain bias.

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Appendix 1. Descriptive statistics and correlation matrix.

Item	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
HI1	4,10	1,60	1													
HI2	4,08	1,47	0,585**	1												
HI3	5,18	1,40	0,493**	0,631**	1											
HI4	4,65	1,48	0,588**	0,684**	0,592**	1										
MA1	4,18	1,71	0,608**	0,581**	0,533**	0,477**	1									
MA2	4,69	1,63	0,341*	0,366**	0,385**	0,301*	0,646**	1								
MA3	4,22	1,50	0,365**	0,554**	0,316*	0,566**	0,665**	0,494**	1							
MA4	3,71	1,76	0,486**	0,449**	0,364**	0,359**	0,671**	0,616**	0,616**	1						
MA5	3,78	1,54	0,317*	0,484**	0,446**	0,378**	0,609**	0,625**	0,626*	0,685**	1					
RE1	5,33	1,21	0,282*	0,363**	0,308*	0,335*	0,436**	0,358**	0,411*	0,197**	0,340*	1				
RE2	5,39	1,30	0,145	0,282*	0,414**	0,271	0,221	0,229	0,243	-0,001*	0,273**	0,755	1			
RE3	6,67	0,99	0,247	0,434**	0,404**	0,258	0,378**	0,391**	0,358	0,195**	0,527**	0,643	0,709**	1		
RE4	5,61	1,06	0,000	0,258**	0,332**	0,088**	0,349**	0,275*	0,23	0,055**	0,302**	0,603**	0,667**	0,557*	1	
RE5	5,31	1,03	0,175**	0,332	0,323**	0,271**	0,401**	0,203**	0,395**	0,063	0,321**	0,701**	0,715**	0,613**	0,683**	1