



NURIA RODRÍGUEZ-LÓPEZ*, M. EVA DIZ-COMESAÑA**, ADRIÁN E. CORONADO MONDRAGÓN**

Exploring quality generating factors in customer-supplier relationships

Introduction

Despite the importance of the management of supply relationships in business competitiveness (Ryu et al. 2007), there are no important studies regarding this area in the mineral products industry. However, this industrial sector has particularities that make the study of buyer-supplier relationships and their implications for business competitiveness worthwhile. In this sense, the mining and minerals sector supply chain has a diverse range of suppliers (Azapagic 2004).

A lot of these buyers are vertically integrated and source their own raw materials; thereby, they reduce their company's dependence on third-party suppliers. However, backward integration by buyers is difficult as it requires huge startup costs and specialized knowledge. Suppliers can more easily integrate forward, but their power is weakened by the importance of the quality and availability of the raw materials and the high specialization of industry's assets (MarketLine, a Datamonitor business 2012). Hence, the distribution of power between suppliers and buyers requires safeguard mechanisms to stay balanced.

From an organizational perspective, the main contributions to interorganizational relationships have been made by studies on the economy of transaction costs, later comple-

* Ph.D., Associate Professor at the University of Vigo, Faculty of Business Sciences and Tourism, Ourense, Spain; e-mail: nrl@uvigo.es

** Ph.D., Associate Professor at the University of Vigo, Faculty of Economics and Business Sciences, Vigo, Spain; e-mail: evadiz@uvigo.es

*** Ph.D., Senior Lecturer at the School of Management, Royal Holloway University of London, Egham, Surrey, England; e-mail: adrian.coronado@rhul.ac.uk

mented by the relational contracting literature (Granovetter 1985; Macneil 1980) and its consideration of the social and relational exchanges.

Here, it is possible to differentiate between the antecedents of the relationship, the characteristics of exchange and the achieved results. However, the significance and the direction of the effect between variables cannot be generalized (Fink et al. 2008) because it depends on the context (Reinartz and Kumar 2003). Therefore, not only does the evaluation of relations between variables considered independently become less important, but so does the necessity proposed by Cannon and Perrault Jr. (1999) to adopt an inclusive approach to jointly collect the antecedents of the relationship, their characteristics and the obtained results.

This study aims to deepen the analysis of interorganizational relationships and their influence on business results, focusing on the mining and minerals sector. The implications of the study are threefold. Firstly, this study follows an integrative approach, which proposes a model that jointly collects antecedents, characteristics and outcomes; secondly, social characteristics are incorporated into all groups of model variables, enabling a thorough analysis parallel to other forms of governance and transactional features; and thirdly, the study deals with the stability of the relationship as an essential component of business competitiveness and as a consequence of both the development of the business relationship (Spekman et al. 1998) and the result derived from the choice of the form of governance.

1. Theoretical foundation

1.1. Characteristics of the relationship

The kind of relationship that the organization upholds with suppliers has been measured through various modes of materialization of the form of governance because it involves access to different levels of formality, control, incentives and monitoring (Crocker 1983; Imai and Itami 1984; Palay 1984; Williamson 1983, 1991, 1998). The antecedents condition the efficiency of each kind of relationship; in particular, the social aspect influences the characterization of the form of governance, pushing its members to lower levels of formalization, control or monitoring. It can be said that there is an association between types of transactions and forms of governance, so that business results depend separately on each of these sets of variables and the fit between them.

Within the antecedents of the governance form, the reasoning has involved the transaction costs theory and the adoption of one or another form of government depending on the efficiency achieved. Here, the paper addresses the variables that reflect the characteristics of the relationships maintained between an organization and its key suppliers, in particular, the length of the relationship, the transmission of information and the dependencies between the agents that may influence the future circumstances of the company.

Almost all authors reviewed confirm the existence of a positive relationship between the frequency and the duration of the relationship and the integration of the activity because the

frequency can generate specificities regarding whose protection would lead to the integration of the activity (Subramani and Venkatraman 2003), hence, the importance of length to recover the costs of specialized governance structures (Williamson 1998).

On the other hand, frequency has also been associated with future commitment to continue the relationship (Bonner and Calantone 2005; Goodman and Dion 2001; Hoetker et al. 2007; Lusch and Brown 1996; Sharfman and Dean Jr 1997), and the importance of frequency has been highlighted in the relationships between agents and the generation of such trust (Levin et al. 2006; Wang et al. 2006).

Thus, we propose Hypothesis 1 and Hypothesis 2.

Hypothesis 1: The older the relationship the greater the level of integration in the form of governance.

Hypothesis 2: The older the relationship the greater the trust between partners.

In the case of information transmitted between economic agents, the findings are similar to those of relationship age. The transmission of information predisposes the adoption of more integrated forms. In this regard, Caves and Bradburd (1988) justify that the transmission of information is more efficient through the vertical integration of its best qualities of coordination. However, on the other hand, the transmission of information enhances the relational environment (Brush and Rexha 2007; Mukherji and Francis 2003; Patnayakuni et al. 2006; Rodríguez del Bosque Rodríguez et al. 2006), the commitment between parties (Kent and Mentzer 2003) and the generation of trust (Achim 2003; Hartmann and Apaolaza Ibáñez 2007; Levin et al. 2006; Wang et al. 2006; Yang et al. 2008).

Hypotheses 3 and 4 are shown next.

Hypothesis 3: The higher the transmission of information the greater the level of integration in the form of governance adopted.

Hypothesis 4: The higher the transmission of information the greater the trust between the partners.

Regarding dependencies, we have included two elements concerning the characteristics of transactions: specificities and number of players. One of the main causes of the dependence of one agent on those located in earlier or later stages of the value chain is the absence of a large number of competitors who can perform the activity when an oligopoly or monopoly in these stages is produced either by the existence of specificities or structural features of the sector. It is likely that companies in these contexts tend to integrate all stages of the value chain in one or very few organizations (Caves and Bradburd 1988). This is different from the point of view of the organization with more power, justifying greater formalization with clauses in favor of the dominant partner in order to protect its higher reputation (Arruñada et al. 2001) and from the perspective of other buyers and sellers to prevent excesses in prices set by the agent in a privileged position or lower levels of contract formalization (Caves and Bradburd 1988; Lyons 1994).

As for the presence of specificities, most of the studies have tested the existence of a causal relationship between the various types of specificities and vertical integration, formulated from the idea that market relations do not work well when specific assets that generate

appropriable quasi-rents are used. This relationship has been contrasted with the physical specificities (Caves and Bradburd 1988; MacDonald 1985; Stuckey 1983), the human specificities (Anderson and Schmittlein 1984; Armour and Teece 1980; John and Weitz 1988; Levy 1985), location (Joskow 1985; Masten 1984; Stuckey 1983) and the temporary specificities (Masten et al. 1991).

Showing opposite results, the work by Dyer (1997) justifies reducing the need for authority and the level of vertical integration when past adaptations have been made between the parties because these adaptations serve as generating elements of trust and credible commitments that reduce transaction costs. Furthermore, the existence of a negative association between specificity and contractual structure has also been tested, so that the existence of specific assets that bind the parties and prevent changes in relationships acts as a safeguard, increasing the likelihood of future continuity and credibility of commitments (Lyons 1994). Based on the above statements, hypotheses 5 and 6 are shown next.

Hypothesis 5: The greater the dependence of the provider the greater the level of integration in the form of governance adopted.

Hypothesis 6: The greater the dependence of the provider the greater the trust between the partners.

In most of the academic literature, the social dimension of the history of relationships is reflected through the trust variable. The positive influence of trust on the attenuation of the need for the adoption of integrated forms is contrasted unanimously in the academic literature (Roy and Dugal 1998; Selnes 1998). Thus, Hypothesis 7 is presented next.

Hypothesis 7: The greater the trust the lower the level of integration in the form of governance adopted.

1.2. Influence on business results

To analyze the influence of forms of governance on business performance, we propose the consideration of three kinds of results: economic, social and relational quality outcomes.

Regarding economic performance, the predominant line in the literature is to contrast the existence of positive relationships between the closeness of the relationship and the results achieved. On this matter, it is noteworthy to mention that evaluated relationships imply the selection of the form of governance best suited to each particular case, and in this way, a relationship based on non-coercive power promotes economic performance (Geyskens and Steenkamp 2000; Rodríguez del Bosque Rodríguez et al. 2006), just like the relationship that develops from specialized assets (Dikolli et al. 2007). Also, the greater the involvement of partners in the relationship, the better their technical performance (Fynes et al. 2005; Wang et al. 2006). Hypotheses 8, 9 and 10 are shown next.

Hypothesis 8: The greater the dependence on the supplier the better the economic performance.

Hypothesis 9: The higher the trust the better the economic performance.

Hypothesis 10: The higher the level of integration in the form of governance adopted the better the economic performance.

In terms of social outcomes, both interdependencies (Chang 2005) and trust (Vázquez et al. 2005) may encourage the satisfaction of the parties. On the other hand, it has been stated that the existence of alternative partners promotes satisfaction (Rutherford et al. 2006), and control, understood as authority, diminishes satisfaction (Gençtürk and Aulakh 2007; Mayer et al. 1995). According to these studies, the level of satisfaction would be the balance between the positive effect of trust between partners and the negative effect of the authority associated with the most integrated forms. Hypotheses 11 and 12 are shown next.

Hypothesis 11: The greater the trust the greater the satisfaction.

Hypothesis 12: The higher the level of integration in the form of governance the lower the satisfaction.

Finally, we have distinguished relational commitment from previous kinds of outcomes; relational commitment is understood as the interest that trading parties have in maintaining the relationship. In this regard, and based on the studies carried out by Kingshott (2006), commitment would be equivalent to relational quality because it would represent the importance of the relationship to each party.

The stability of the relationship as a result is identified by the long-term orientation or relational quality, understood as the importance given by the buyer to maintaining the relationship or relational commitment (Kingshott 2006), resulting from the enhancement of long-term results derived from the relationship (Celuch et al. 2006). The long-term results of the relationship depend on the present and future benefits that the parties obtain (Chang 2005) in terms of technical-economic and socio-relational aspects (Celuch et al. 2006).

Many authors contrast the positive influence of satisfaction (Bharadwaj and Matsuno 2006; Chang 2005; Ganesan 1994; Geyskens and Steenkamp 2000; Hartmann and Apaolaza Ibáñez 2007; Rutherford et al. 2006; Vázquez et al. 2005) and economic performance (Bharadwaj and Matsuno 2006; Geyskens and Steenkamp 2000; Goodman and Dion 2001; Joshi and Stump 1999; Lusch and Brown 1996; Rutherford et al. 2006; Skarneas et al. 2002; Vázquez et al. 2005) on commitment. Hypotheses 13 and 14 are shown next.

Hypothesis 13: The greater the satisfaction the higher the quality of the relationship.

Hypothesis 14: The better the economic performance the better the quality of the relationship.

In addition, the increase in trust should also be reflected in a less formal contract, offset by a mutual commitment to long-term continuity and willingness to share strategic information and make adjustments with the goal of future mutual benefits (Arruñada et al. 2001; Lyons 1994; Roy and Dugal 1998; Selnes 1998). Relational trust positively affects the long-term orientation of the relationship (Ryu et al. 2007), relational stability and, consequently, business results (Yang et al. 2008). The positive influence of trust on the partners' commitment and continuity of the relationship is contrasted unanimously in the academic literature (Achim 2003; Ganesan 1994; Kent and Mentzer 2003; Levin et al. 2006; Yang et al. 2008). Hypothesis 15 is presented next.

Hypothesis 15: The greater the trust the greater the quality of the relationship.

Figure 1 depicts the hypotheses proposed.

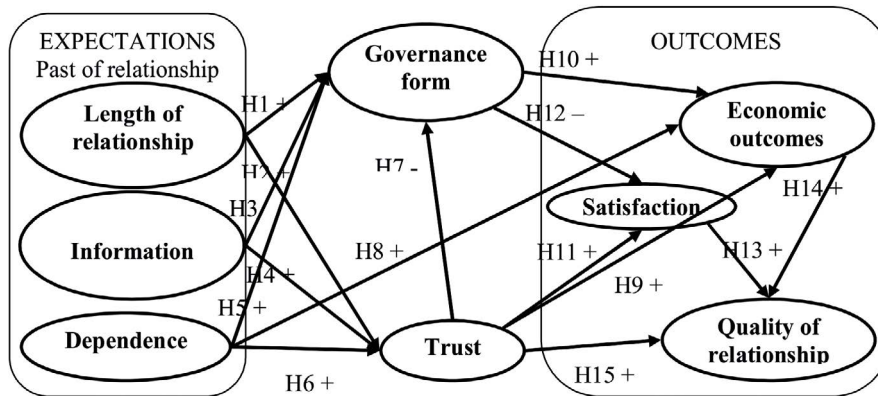


Fig. 1. Proposed model to be tested

Rys. 1. Proponowany model do przetestowania

The non-metallic mineral products mining and manufacturing industry has particularities that make it suitable for testing the hypotheses formulated for the management of buyer-supplier relationships and its implications to business competitiveness. Previously mentioned in the introduction section, the mining and minerals sector supply chain has a diverse number of suppliers, including energy providers, chemicals and other materials. In the life cycle of mineral products, it is possible to find key activities such as extraction or primary resources, processing, product use and post-use waste management while the mine and production facility life cycle includes the stages of design, operation, decommissioning and rehabilitation (Azapagic 2004).

In regard to industry structure, the distribution of power between suppliers and buyers is balanced through safeguard mechanisms, such as integration, that enable the protection of profits. Backward integration by buyers is difficult as it requires huge startup costs and specialized knowledge. A lot of these firms are vertically integrated and source their own raw materials; thereby, they reduce their company's dependence on third-party suppliers. On the other hand, suppliers can more easily integrate forward, although this power is weakened by the importance of the quality and availability of the raw materials and the high specialization of its assets. For this reason, manufacturers find it difficult to sell to any customer outside the industry. Many suppliers who are leading players are using alternative safeguarding procedures, like looking for mining investments that can help them to retain benefits (MarketLine, a Datamonitor business 2012).

2. Sample

This study has chosen the non-metallic mineral products mining and manufacturing industry in Spain. In the European Union, the mining and minerals sector employs directly about 190,000 people while the industrial minerals sector alone contributes to about 5 billion Euro to Europe's GDP (Azapagic 2004). According to data from 2011, Spain accounts for 3.6% of the European mining industry value and is the third largest European producer behind Germany and France (MarketLine, a Datamonitor business 2012). In spite the fact that production output started to decline in 2007 as a consequence of the international economic crisis (Vintró et al. 2012) -according to the General Directorate of Mining the value of mineral output decreased by 27% from 2007 to 2011-, it is forecasted an annual growth rate of the industry of 4.8% for the period 2011–2016 (MarketLine, a Datamonitor business 2012).

The empirical test was carried out in the Spanish non-metallic mineral products mining and manufacturing industry, codes 14 and 26 respectively – according to list published by the Spanish National Classification of Economic Activities NCEA 93 Rev. 1 (these codes are equivalent to codes 08-Other mining and quarrying, and 23-Manufacture of other non-metallic mineral products, NCEA Rev 2). This selection has enabled us start from a population with a large number of companies with the client NCEA (8,030 firms with main code 26) and many companies with the two NCEA simultaneously (148 firms). Contact details of companies (names, NIFs, telephone, fax and postal address) were obtained through the SABI

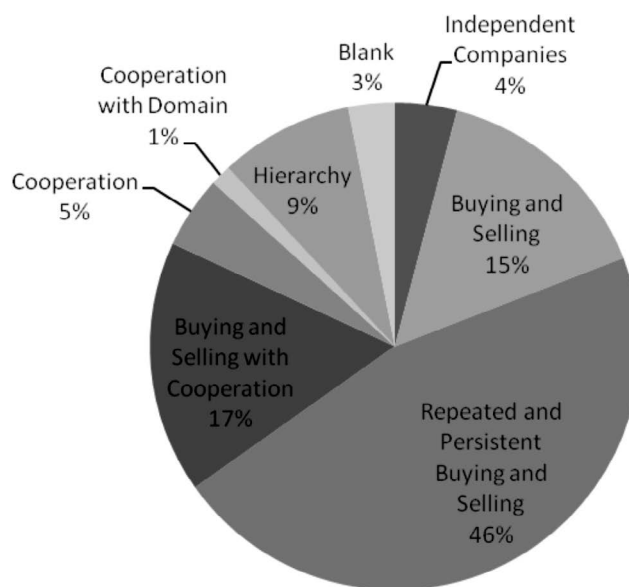


Fig. 2. Distribution of types of relationship for surveyed companies

Rys. 2. Dystrybucja typowych powiązań dla badanych firm

database which is an economic-financial database that holds the details of more than 550,000 Spanish companies.

The target population in this research was composed of 6738 companies, after eliminating those who had incidences (repeated, wrong, extinct, settled). The sample was determined using a simple random technique due to its advantages of randomness and self-weighting. Considering the low response rates in similar studies (see for example [Sauer-mann and Roach 2013](#); [Jin 2011](#) and [Medway and Fulton 2012](#)), 4,559 companies were contacted by telephone during the months of September and October and made a batch of recalls during the months of November and December; in this contact respondents were requested to participate by responding to a questionnaire available in a purpose designed website.

Of the 303 questionnaires, eight invalid responses were eliminated, leaving finally a database consisting of 293 cases. This number allows us to work with a sampling error of 5.6% in confidence intervals of 95%.

The distribution associated to the types of relationship is shown in Figure 2.

3. Methodology, reliability, validity and model fit

To measure the variables under study we used measurement scales as shown in Table 1. These scales have been made from those used in the literature, making adaptations that have allowed fitting them to the industry and the characteristics of its agents. This academic foundation ensures the content validity of the scales. To determine the form of governance we asked directly what was the type of relationship that best fits the relation between the company and its suppliers. To ensure the reliability of the study we defined two sets of possible answers: one with seven descriptive options and another with various kinds of relationships, related to market and the hierarchy. The values of the Cronbach Alpha and the percentage of variance explained confirm the reliability and validity of the measurement model.

Before sending the questionnaire to the sample of companies selected, a pilot survey was conducted with four companies. These four companies were asked to comment and propose changes for those cases in where they did not understand the questions. Additionally, experts from the mining sector gave their input and proposed changes in the wording and the order of questions to improve clarity and understanding.

To test the hypotheses, we propose a model that fits the relation between variables by introducing the form of governance as a result of the transaction characteristics and as a cause of the result obtained from the relationship. The adjusted model is depicted in Figure 3, and the model fit indexes and standardized regression coefficients are shown in Tables 2 and 3. These indexes showed the goodness of fit of the model.

Table 1. Measures

Tabela 1. Działania

Variable	Authors	Items	Reliability
Length of the relationship	(Carson et al. 2006; Hoetker et al. 2007) Time slots: (Levin et al. 2006)	Length of relationship with the supplier: <ul style="list-style-type: none"> ◆ Less than 1 Year ◆ Between 1 and 5 years ◆ Between 6 and 10 years ◆ Over 10 years ◆ Undefined 	–
Transmission of information	(Mohr and Spekman 1994)	Label the relationship with your supplier on the following adjectives: <ul style="list-style-type: none"> ◆ Incomplete – Complete ◆ Not timely – Timely ◆ No credible – Credible ◆ Not accurate – Accurate 	Cronbach Alpha: 0.820 Percentage of variance explained: 73.669
Dependencies	Specificities: (Carson et al. 2006) Dependencies: (Golicic and Mentzer 2006)	Particularities of the relationship with the supplier of mineral resources <ul style="list-style-type: none"> ◆ If we were to change supplier, we'd have to make a big investment ◆ My business is dependent on the supplier. ◆ This provider is essential to our success and / or achieve our goals 	Cronbach Alpha: 0.765 Percentage of variance explained: 80.989
Trust	(Kingshott 2006)	Our supplier of mineral resources ... <ul style="list-style-type: none"> ◆ Makes efforts to keep close the changing needs of our consumers. ◆ Shows an active interest in helping us being more competitive. ◆ Shows an active interest in trying to understand how our business works. 	Cronbach Alpha: 0.866 Percentage of variance explained: 88.146
Economic outcomes	(Larson 1992; McIntyre et al. 2004)	The relationship with our supplier of mineral resources ... <ul style="list-style-type: none"> ◆ Allows us to more easily adapt to technological changes. ◆ Involves increases in our market share. ◆ Helps us become more competitive in the market. ◆ Has allowed us better achieve our strategic objectives. 	Cronbach Alpha: 0.775 Percentage of variance explained: 81.658
Satisfaction	(Bharadwaj and Matsuno 2006; Rutherford et al. 2006)	Regarding the relationship with our supplier of mineral resources ... <ul style="list-style-type: none"> ◆ Our benefits from this relationship is generally proportional to our level of contributions to the relationship. ◆ The costs and benefits of the relationship are offset over time. ◆ My company receives a lot of benefits from its relationship with the supplier. ◆ In general, we are very satisfied with this provider. 	Cronbach Alpha: 0.728 Percentage of variance explained: 55.216
Quality of relationship	(Gençtürk and Aulakh 2007; Golicic and Mentzer 2006; Kingshott 2006)	The relationship that my firm has with our supplier of mineral resources ... <ul style="list-style-type: none"> ◆ It's something we are very committed. ◆ It is very important to us. ◆ It is something that our company really cares much for the long term. ◆ It deserves full attention of our company to be maintained. ◆ Focuses on long-term benefits even if it means some short-term disadvantages. 	Cronbach Alpha: 0.881 Percentage of variance explained: 89.386

Table 1. cont.

Tabela 1. cd.

Variable	Authors	Items	Reliability
Form of governance		<p>Which of the following types of relationship best fits your company keeps with your supplier?</p> <ol style="list-style-type: none"> 1. Buying and selling (totally independent market relationship) 2. Repeated and persistent buying and selling 3. Buying and selling with cooperation in some aspects 4. Cooperation (collaboration between independent companies) 5. Cooperation with domain by the buyer in some aspects 6. Independent companies with hierarchy between them 7. Hierarchy (we are one sole company) <p>Which of the following ways of building a relationship is more suited to one maintained between your company and its supplier?</p> <ul style="list-style-type: none"> ◆ Buying and selling only one time ◆ Repeat Purchase ◆ Supply Agreement ◆ Service contract ◆ Informal agreement ◆ Short-term formal agreement ◆ Outsourcing in the short term (operational outsourcing contract) ◆ Formal long-term agreement ◆ Long-term contract (strategic outsourcing contract) ◆ Cooperation Agreement ◆ Temporary Business Association (a temporary- consortium without legal personality) ◆ Strategic Alliance ◆ Strategic Network ◆ Integrated Services Agreement ◆ Shareholdings ◆ Cross-Shareholdings ◆ EIG, Economic Interest Grouping (consortium with legal personality) ◆ Joint venture (joint venture) ◆ Agency agreement ◆ Licensing and royalty ◆ Company belonging to our group ◆ It is our own company 	<p>Cronbach Alpha: 0.832 Percentage of variance explained: 85.621</p>

Conclusions

Regarding the past of the relationship, this study shows that the length of the relationship enhances trust in the other partner (Hypothesis 2). This result is in accordance with the authors that highlighted the importance of frequency to the generation of trust (Levin et al. 2006; Wang et al. 2006). Nevertheless, the present study shows a lack of relationship between the length of the relationship and the level of integration in the governance form (non-acceptance of Hypothesis 1). This fact is an indicator that long-term relationships occur

Table 2. Model fit indexes

Tabela 2. Indeksy dopasowania modelu

NPAR	CMIN	DF	P	CMIN/DF	FMIN	F0	LO 90	HI 90
38	66,661	67	,489	,995	,229	,000	,000	,079
RMR	GFI	AGFI	PGFI		RMSEA	LO 90	HI 90	PCLOSE
,102	,969	,951	,618		,000	,000	,034	,999
NFI/Delta1	RFI/rho1	IFI/Delta2	TLI/rho2	CFI	AIC	BCC	BIC	CAIC
,963	,950	1,000	1,000	1,000	142,661	146,792	282,378	320,378
PRATIO	PNFI	PCFI			ECVI	LO 90	HI 90	MECVI
,736	,709	,736			,490	,491	,570	,504
NCP	LO 90	HI 90			HOELTER .05	HOELTER .01		
,000	,000	22,932			381	423		

Table 3. Standardized regression coefficient

Tabela 3. Standaryzowane współczynniki regresji

		C.P.	Standardized Coefficients		C.P.	Standardized Coefficients
trust	↔ information	***	,324	hump19_1		,921
trust	dependence	***	,255	depp11_1	trust	,751
trust	antrel_1	,034	,124	infrel6_1	dependence	,882
economic outcome	dependence	,002	,196	I_tiprel_1	information	,831
economic outcome	trust	***	,669	J_matrel_1	governance form	,841
governance form	dependence	***	,506	rmdo78_1	governance form	,784
governance form	trust	***	,273	rmdo76_1	economic outcome	,802
relational quality	economic outcome	***	,380	comp90_1	economic outcome	,874
relational quality	information	,005	,167	comp91_1	relational quality	,895
relational quality	dependence	***	,290	inficre6_1	relational quality	,784
relational quality	governance form	,214	,098	infrap6_1	information	,663
hump18_1	trust	***	,824	depp12_1	information	,624
					dependence	,824

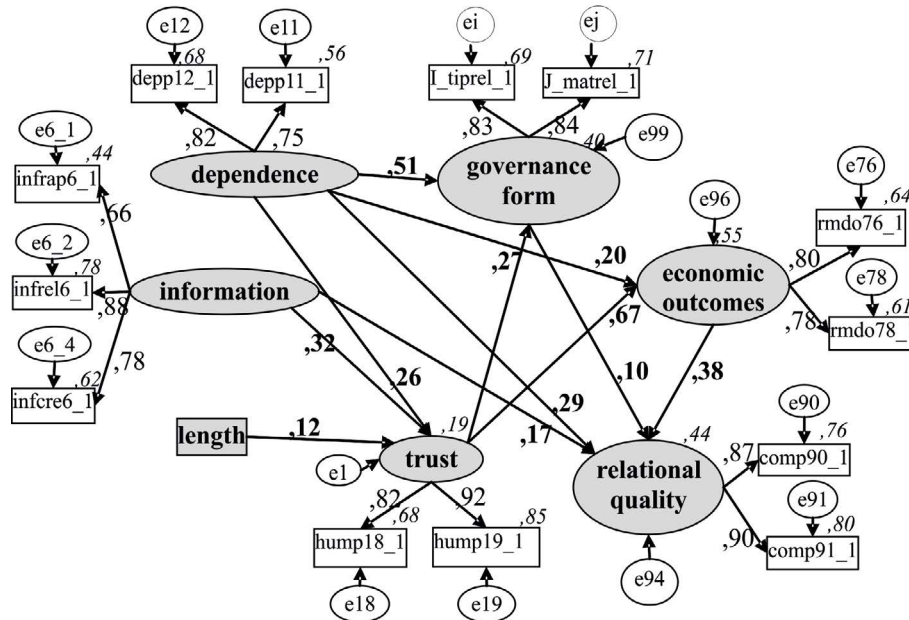


Fig. 3. Proposed model introducing form of governance

Rys. 3. Proponowany model wprowadzający formę zarządzania

in both market and hierarchy. The greater frequency of transactions or its greater duration is not necessarily generating specificities or leading to the creation of specialized structures that make necessary their integration as proposed by Subramani and Venkatraman (2003) and Williamson (1998). Thus, the mere repetition of transactions is not the factor that would lead to the integration of the activity, but the existence of elements that create ties or dependencies.

As regards the transmission of information, the results are similar. This variable does not affect the level of integration in the governance form (non acceptance of Hypothesis 3), questioning the best properties of transmission of information attributed to the company's hierarchy, since it attains high levels of communication regardless of the form of governance. However, there is a positive influence of the transmission of information on the confidence in the other partner (Hypothesis 4). In this way, our results support the social perspective that associates transmission of information with the generation of trust (Achim 2003; Hartmann and Apaolaza Ibáñez 2007; Levin et al. 2006; Wang et al. 2006; Yang et al. 2008).

Concerning the third variable, dependence, it affects positively the level of integration in the governance form (Hypothesis 5) and enhances trust in the other partner (Hypothesis 6). These results show the positive influence of dependence on the adoption of more integrated forms justifying the need of protection of specificities (see for example, Caves and Bradburd 1988; John and Weitz 1988) or the reduction of unbalanced bargaining power (Caves and

Bradburd 1988; Lyons 1994), but also the generation of trust, since these adaptations serve as generating elements of trust and credible commitments (Dyer 1997).

On the effect of trust on the governance form, the results show a positive relation (rejection of Hypothesis 7). Thus, the generation of trust seems to be a cause of reaching a more integrated activity, contrary to what the majority of the literature suggest and more in line with those authors who attribute to the forms of governance superior management and coordination features. Based on the idea that hierarchical rules diminish trust (Gençtürk and Aulakh 2007; Mayer et al. 1995), and that trust reduces the need of formalization (Lyons 1994), the integrated relationships can only survive in those cases where trust is high enough, allowing the transmission of information, flexibility and less formalization inherent in these structures. It would give relevance to the common values and close human treatment between the members of the organization.

Regarding the variables related to the business performance, the satisfaction variable has been removed because of the low significance of its relations (Hypothesis 11, Hypothesis 12 and Hypothesis 13). Thus, satisfaction is not favored with trust or with the form of governance selected, therefore theories including factors related to the balance of dependencies or interdependencies (Chang 2005) and the comparison between initial expectations and final assessment of what is obtained (Celuch et al. 2006) seem to become more consistent.

On the other hand, the variables governance form, trust and economic performance do have an influence on the quality of the relationship.

As for economic performance, dependence is the variable that contributes most to the achievement of economic performance (Hypothesis 8), supporting the importance of the development of specialized assets (Dikolli et al. 2007). The generation of trust also affects economic performance (Hypothesis 9). This supports the theories that suggest that trust makes the relationship more efficient, reducing not only transaction costs but also the organization ones.

However, the form of governance does not affect the achievement of better economic performance (Hypothesis 10). Here we get a consistent relation with the great heterogeneity found in the academic literature about the functional form of the relation between vertical integration and business performance (for this variety, see for example Reed and Fronmueller 1990; Contini et al. 1992; Babe 1981; Bowman 1978; Maddigan and Zaima 1985).

Concerning the quality of the relationship, not only this is determined by the economic outcome (Hypothesis 14), but also by the governance form, the transmission of information and the length of the relationship. It is supported by the positive influence of economic performance on commitment (Bharadwaj and Matsuno 2006; Geyskens and Steenkamp 2000; Goodman and Dion 2001; Joshi and Stump 1999; Lusch and Brown 1996; Rutherford et al. 2006; Skarmeas et al. 2002; Vázquez et al. 2005).

However, the present study does not find a direct influence of trust on relational quality (Hypothesis 15). The effect of trust seems to be reflected in the governance form that ensures a less formal contract, long-term continuity and willingness to share strategic information

and make adjustments with a view to mutual future benefit (Arruñada et al. 2001; Lyons 1994; Roy and Dugal 1998; Selnes 1998).

The level of integration in the form of governance has a positive effect on the continuity of the relationship and therefore in its quality

In summary, the past of the relationship favours the quality of the relationship through their positive influence on trust, level of integration in governance form and economic outcomes. Moreover, dependence and information have a direct influence on the relational quality. The relational quality is also directly favoured by the economic outcomes and the level of integration in the governance form that enhances the generation of sustainable economic performance.

This suggests that though achieving better economic performance and a quality relationship can be understood and explained without the need of forms of governance, they do have effects on the interrelations between these variables. This effect is determined mainly by the need to adopt certain forms of governance which suit the circumstances existing in the environment, a fact that will condition the future possibility of obtaining good performance in the longer term and higher quality relationships.

5. Recommendations and implications

The main findings of this study and the implications for management refer firstly to the importance of generating trust and adopting more integrated forms of governance to favor the relational quality. Trust, along with dependence, determines the choice of vertical form of governance and favors the economic outcomes; form of governance and economic outcomes intervene in the quality business relationships. This fact is supported by recent academic work which highlights the importance of the early-formed relationships, trust and dependence for enhancing innovation capacity (Jørgensen and Ulhøi 2010). Thus, managers should foster closer relationships that go beyond mere commercial transactions.

Secondly, the characteristics of the transaction, dependence, transmission of information and the length of the relationship, favors the development of trust between partners. The transmission of information and dependence positively affect the quality of the relationship. In addition, when specificities are involved, the relationship should be managed through forms of governance that would help their protection, that is by the hierarchy of the company or forms near to it.

Thus, it is possible to say that managers should promote the length of relationship, the transmission of information and dependence, as these generate trust, more integrated governance forms and higher economic outcomes and relational quality. While achieving better economic performance, a higher quality of the relationship can be understood and explained without the need of forms of governance, however they do have effects on the interrelations between these variables. This effect is determined mainly by the need to adopt

certain forms of governance which suit the circumstances prevailing in the environment and this will determine the future possibility of obtaining longer-term outcomes and higher relational quality.

The main recommendations refer to the kind of relationship that improves economic outcomes and relational quality, highlighting the need to promote dependence, foster trust and adopt integrated governance forms. The mineral resources firms can take particular advantage of these governance forms because of their huge startup costs, their specialized knowledge, the importance of the quality and availability of raw materials and the high specialization of its assets.

Although we have contrasted obtaining good economic results improves the quality of the relationship and predisposing the parties to do everything they can to continue that relationship, the academic literature has also noted the existence of relationships that operate the inverse. In this sense, relational stability is a prerequisite for obtaining economic benefits from the relationship (Weitz and Jap 1995), encouraging the involvement of suppliers with product quality (Lai et al. 2005). Thus, it would be possible to establish a feedback process in which the quality of the relationship favors communication, the generation of dependencies and trust, and ultimately allows the company to enter a virtuous cycle of improvement business results from the management of supplier relationships. The introduction of this feedback loop opens a new line of research.

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BADANIE CZYNNIKÓW GENERUJĄCYCH JAKOŚĆ W RELACJACH Z KLIENTAMI I DOSTAWCAMI

Słowa kluczowe

relacja między klientem a dostawcą, relacje jakościowe, zaufanie, wydajność ekonomiczna, przemysł wydobywczy i przetwórczy niemetalicznych surowców mineralnych

Streszczenie

Analiza powiązań międzyorganizacyjnych jest atrakcyjna dla badań naukowych ze względu na wpływ, jaki ma zarządzanie relacjami w łańcuchu dostaw na konkurencyjność przedsiębiorstw.

Niemniej jednak, w decyzjach dotyczących przemysłu mineralnego nie ma prawie żadnych badań na ten temat.

W artykule dokonano badań relacji między klientami a dostawcami w przemyśle górniczym i przetwórczym niemetalicznych surowców mineralnych w celu określenia, jakie formy relacyjne umożliwiają osiągnięcie lepszej konkurencyjności przedsiębiorstw i wyższe relacje jakościowe.

W celu przeprowadzenia tych badań autorzy proponują spójny model, zawierający zmienne charakteryzujące transakcje, formy zarządzania oraz wyniki ekonomiczne i relacyjne. Artykuł oparty jest na ramach transakcyjnych; tym samym przyjęcie jednej lub innej formy zarządzania jest realizowane poprzez długość relacji, przekazywanie informacji i zależności między agentami. Jeśli chodzi o wynik to jakość relacji jest zaznaczona ze względu na jego znaczenie w konkurencyjności przedsiębiorstw. Jakość relacyjna jest rozumiana jako stabilność relacji lub znaczenie przekazane przez nabywcę do utrzymania relacji lub relacyjnego zaangażowania.

Wygenerowane hipotezy są przeciwstawiane modelowi równości strukturalnych na próbie 293 hiszpańskich firm. Wyniki potwierdzają znaczenie wcześniejszych relacji i zintegrowanych form w celu uzyskania lepszych wyników. W tym znaczeniu, menedżerowie powinni zachęcać do zaufania i zależności, ponieważ wpływa to pozytywnie na wydajność. Zaufanie i zależności decydują o wyborze pionowej formy zarządzania, a te czynniki wraz z informacjami wpływają na jakość relacji biznesowych. Można zatem powiedzieć, że formy zarządzania mają wpływ na wzajemne powiązania między charakterystykami transakcji a wynikami działalności.

EXPLORING QUALITY GENERATING FACTORS IN CUSTOMER-SUPPLIER RELATIONSHIPS

Keywords

customer-supplier relationship, quality relationship, trust, economic performance, non-metallic mineral products mining and manufacturing industry

Abstract

The analysis of interorganizational relationships continues to attract academic research because of the influence that management of supply chain relationships has in business competitiveness. However, there are almost no studies about this decision in the mineral products industry.

The purpose of this study is to investigate customer-supplier relationships in the non-metallic mineral products mining and manufacturing industry in order to determine what relational forms enable achieving better business competitiveness and higher quality relationships.

To carry out this research, we propose a cohesive model comprising variables to characterize the transactions, the forms of governance and both economic and relational results. The paper is based on a transactional framework; thus, the adoption of one or another form of governance is addressed through the length of the relationship, the transmission of information and the dependencies between the agents. As for the outcome, the quality of the relationship is highlighted because of its importance in business competitiveness. The relational quality is understood as the stability of the relationship or the importance given by the buyer to maintaining the relationship or relational commitment.

The hypotheses generated are contrasted by a structural equation model in a sample of 293 Spanish companies. The results confirm the importance of past relationships and integrated forms to get better results. In this sense, managers should encourage trust and dependencies because they positively affect performance. Trust and dependencies determine the choice of a vertical form of governance, and these factors, along with information, intervene in the quality of business relationships. Thus, it is possible to say that forms of governance do have effects on the interrelations between the characteristics of the transactions and the business performance.