NEW TEXTS

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Relational Exchange and the Degree of Embeddedness: An Empirical Study of Supply Chains

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Abstract

This paper focuses on the relational aspect of embeddedness and examines direct interfirm exchange in supply chains. We distinguish between the transactional and the relational forms of exchange and construct an original typology of their constitutive elements, which we attach to the phases of the interfirm contract cycle. An index of relational exchange is built measuring the degree of embeddedness in the supply chain relationships. Regression models are used to reveal the factors that facilitate relational exchange, including the firms' location in the supply chain, the type of product, and the intensity of the interactions between exchange partners. Empirical data were collected by the author and the research team in 2010 from the grocery and home electronic appliances sectors, which account for approximately 50% of sales in Russian retailing. In total, 512 questionnaires were completed by the managers of retail chains and their suppliers in five of Russia's cities, including Moscow, St. Petersburg, Yekaterinburg, Novosibirsk, and Tyumen. On average, 50 retailers and 50 suppliers were interviewed in each city area.

Keywords: economic sociology; embeddedness; economic exchange; contract relationships; markets; Russia.

Introductory Remarks

In recent decades, embeddedness as a central concept in the new economic sociology [Granovetter 1985] became subject to growing criticism. Among the major shortcomings of this concept, opponents pointed to the reinforcement of the separate existence of the economy and society that allowed the market as a sociological object to elude researchers [Krippner 2001; Beckert 2007]. A lack of clarity was noted due to the multiplicity of meanings attached to embeddedness. This concept was also criticized for becoming a self-referential narrative [Portes 2010] and a general methodological principle that implied that all economic activities are embedded, without showing how they actually are embedded [Gemici 2008].

This paper elaborates on the ideas developed in our previous theoretical study on relational exchange [Radaev 2015]. That study was aimed at unpacking the notion of embeddedness and providing a clearer understanding of its constitutive elements. The main objective of this paper is to explicate how these constitutive elements of embeddedness and underlying factors of relational exchange could be empirically investigated. We examined interrelations between these constitutive elements and built an integrative index of relational exchange measuring the degree of embeddedness. We defined the key factors that could facilitate relational exchange. These factors included the channel role of the firm in the supply chain and the type of supply chain, the characteristics of the product and the firm size, and the structure and intensity of the interfirm relationships. We studied each of these factors separately and then built an integrative index of relational exchange to measure the degree of embeddedness.

The paper is structured as follows. Starting with a short summary of our theoretical approach to the analysis of embedded/relational exchange, we formulated major hypotheses regarding the factors affecting this type of market exchange. Then we describe the methodology and data sources and put these hypothetical propositions to the test. Finally, we draw some conclusions on the hybrid character of market exchange in the supply chain.

Theoretical Statements

Our theoretical approach is based upon the following assumptions. First, the embeddedness of the market exchange should not be treated as a general methodological principle but rather as a testable theoretical proposition. The *degree of embeddedness* of the market exchange in social relationships varies, and the forms of embeddedness are very diverse. It is important to explore the concrete composition of arm's-length and embedded ties, measure their strength, and examine the actual degree of embeddedness of economic actions [Uzzi 1999].

Second, we assume that embeddedness is a multidimensional category. Embeddedness is shaped by a variety of relatively independent constitutive elements that may be developed (or not developed) in relation with different exchange partners or with one partner that is attached to different phases of the market exchange. We need to explore the content of embedded ties, especially their relational aspects.

Third, we apply a *processual view* of social structure [Padgett, Powell 2012] to explore embeddedness as a dynamic process and investigate how actors produce relationships in the short run by choosing between embedding and disembedding strategies [Heidenreich 2012]. We assume that the market actors make multiple strategic choices at each phase of the market exchange. Market relationships are affected by these strategic choices, which are made under the conditions of uncertainty that are constantly produced by the market.

In this paper, we focus on *relational embeddedness* that deals with the effects of cohesive ties between market actors rather than structural embeddedness that captures the effects of the structure of relations around actors [Granovetter 1990; Gulati, Gargiulo 1999]. Empirically, we investigate direct interfirm market exchange and explore the emergence of its relational aspects resulting from the strategic choices made by the market sellers as they move through the cycle of contractual relationships. Special attention is paid to the institutional arrangements that govern the rules of exchange in the supply chain [Fligstein 2001].

To explore the content of social ties, we distinguish between two ideal types of market exchange. The first type is defined as a *transactional exchange* based on casual contacts and arm's-length ties whereas the second type is categorized as a *relational exchange* based on continuous or embedded ties. These two types represent alternative forms of governance for managing market relations. We emphasize that, on one hand, market exchange is not confused with transactional exchange, and, on the other hand, that relational exchange is not treated as the opposite of market exchange. It implies that the market is presented as a complex composition of transactional and relational exchanges that may intermingle and contradict one another.

To reveal the constitutive elements of the relational exchange, we borrow an idea from the buyer–seller relationship life cycle, which moves toward commitment or dissolves over the years [Dwyer, Schurr, Oh 1987: 15–20; Cannon, Perreault 1999: 456]. Using the notion of the life cycle, we attach the primary elements of the market exchange to the phases of relationship development. We adjusted this idea to the specific context of the retailer–supplier relationships to be investigated on an empirical level. To accomplish this task, we did not use the entire life cycle of interfirm relationships but considered the basic contractual cycle lasting up to the moment when a business contract is to be renewed or dissolved (normally this takes one year in the sectors under study). We decompose this contract cycle into five distinct major phases that are implemented on a consequential basis, namely:

1. The selection of exchange partners
2. The bargaining over the terms and conditions and the conclusion of the contract
3. The contract execution and enforcement
4. The evaluation of relationship quality
5. The termination or renewal of the business contract

The suggested classification for the relational exchange dimensions is rather similar to some other typologies [Cannon, Perreault 1999; Rajamma, Zolfagharian, Pelton 2011]. However, there are some differences as well. For example, we added a selection of business partners based on relational criteria as a separate dimension that is missing from the other classifications. We believe that this dimension is of crucial importance as a starting point for each contract cycle and a significant element of the relational work performed by managers to build effective networks.

We emphasize that market sellers make their choice between transactional and relational types of exchange in each phase of the described contract cycle. Resulting from these choices, the five relational elements become constitutive ties for the embedded exchange.

Turning to the testable hypotheses for the empirical research, we start with the effect of the *channel role* in the supply chain on the long-term orientation of exchange partners. In previous studies, retailers are likely to have a long-term orientation with the suppliers that they are more dependent on, while the suppliers are likely to develop a long-term relationship with a retailer only if the retailer is highly dependent on them [Ganesan 1994]. In our view, the market sellers with more bargaining power tend to be more transaction oriented while the market sellers with less bargaining power try to compensate for this lack by developing the tools for relational exchange [Radaev 2013]. Thus, we start with the following proposition:

> *Hypothesis 1. Market sellers with less bargaining power are likely to develop a relational exchange compared to market sellers with more bargaining power, which are more inclined toward a transactional exchange.*

Considering the *types of supply chains*, we used the distinction between the buyer-driven and producer-driven types of supply chains [Gereffi 1994]. We assume that the downstream partners in the buyer-driven supply chain have higher bargaining power and, therefore, could be more transaction oriented while the downstream partners' bargaining power in the producer-driven supply chain is generally lower, implying that they are relatively more relationship oriented. Hence, our next hypothesis is formulated as follows:

> *Hypothesis 2. The downstream exchange partners in the buyer-driven supply chain are more inclined toward transactional exchange while the downstream exchange partners in the producer-driven supply chain rely more on relational exchange.*

The type of exchange could depend on the *category of exchanged goods* and their symbolic features. Brands present an important tool for attaining relationship stability with customers [Fournier 1998]. When selling private label and especially no-name goods, collaboration would not make much difference, as standard product quality and the cheapest price matter. As for branded goods that offer unique and specific value to consumers, promoting these goods is more risky and costly for the exchange partners. Thus, promoting branded goods requires long-term, mutually beneficial exchange relationships [Elg, Paavola 2008]. Our next hypothesis is the following:

> *Hypothesis 3. The sale of branded goods is positively related to a preference for relational exchange because it requires a more selective approach and more attention being placed on the identity of a potential business partner.*

Size is widely used as an indicator of the firm's structural and bargaining power in the market exchange [Uzzi 1996; Baker, Faulkner, Fisher 1998]. The potential influence of the firm size on the types of exchange is rather ambivalent. On the one hand, larger firms can demand more from the exchange partner by virtue of their size [Baker 1990]. They are less resource dependent and can easily drop existing exchange partners and switch to new ones. On the other hand, large firms may have more interest in continuity and a stable relationship due to their better bargaining capacity and the higher potential costs involved in switching exchange partners [Levinthal, Fichman 1988; Baker, Faulkner, Fisher 1998]. Larger firms could also have more capacity to make strategic choices between the types of exchange, and therefore, may have very divergent orientations. Keeping these complexities in mind, however, we suggest the following proposition:

> *Hypothesis 4. The size of a firm is positively related to the preference for a relational exchange due to the better capacity of larger firms to control the exchange relationship and the higher costs involved in switching exchange partners.*

Then, we suggest the duration of the contract ties as a particular characteristic that varies in relation to different exchange partners. The market actions are embedded in on-going systems of social relationships [Granovetter 1985]. Thus, the duration of the business relationship is another important parameter that may influence the type of relationship [Baker, Faulkner, Fisher 1998; Gulati, Gargiulo 1999]. If exchange relationships continue after the single transaction period, they may develop from arm's-length ties into embedded ties. The positive impact of durable ties on relational outcomes is also noted in the marketing literature [Hingley 2005], claiming that relationships are constituted by a series of repeated exchanges [Fournier 1998]. Relationships emerge with a higher probability if they are based on a successful past experience with the exchange partner. Keeping this in mind, we formulate the following hypothesis:

> *Hypothesis 5. The ratio of long-term exchange partners is positively related to the preferences of relational exchange because the continuation of relationships makes them more sustainable and mutually oriented.*

The intensity of business contacts during the time of the contract execution serves as an important element of contract enforcement, control over the partners' behavior, and relationship development [Williamson 1985; Baker, Faulkner, Fisher 1998; Poppo, Zenger 2002]. Given that most of the contracts are imperfect and incomplete, the formal contractual mechanisms are complemented with relational governance. These mechanisms are introduced to safeguard the owners of specialized assets from the losses that may result from exchanges with opportunistic partners [Mesquita, Brush 2008]. Frequent contact during the contract execution means that the business parties care about their relationship, learn to cooperate, try to control transactions, and mutually adjust to the requirements of their exchange partners. These contacts indicate the intensity of the relational work performed by the managers. We measure the frequency of these ex post interactions as the average number of contacts within one month during the time of contract execution and thus pose our final hypothesis:

Hypothesis 6. The frequency of business contacts during the time of contract execution is positively related to a preference for relational exchange because it contributes to effective contract enforcement, reduces the risks of opportunistic behavior, and makes relationships more sustainable.

We now turn to a brief description of our data sources.

Data Sources

Data were collected from a standardized survey conducted by the author and research team from November-December 2010 in the area of Russian retail trade. Because the collection of data on dependence and control from a single source may produce common biases [Provan, Skinner 1989], we use the same questionnaire to survey both the suppliers and the retailers and persuade the exchange parties to describe their relationships from two opposite sides. We assume that the more discrepancies there are in the estimations, the more attention should be paid to that given aspect of the relationship [Bloom, Gundlach, Cannon 2000].

In total, we received 512 questionnaires completed by 255 retail chain managers addressing their suppliers and 257 suppliers addressing the retail chains. Most of the questions were devoted to the company characteristics and interfirm ties. The survey was conducted in five large Russian cities in which modern store formats are well developed, including Moscow, St. Petersburg, Yekaterinburg, Novosibirsk, and Tyumen. Thus, cities from the Central, Central-Western, Ural, and Siberian regions of Russia are represented. On average, 50 retailers and 50 suppliers were interviewed in each city area.

Empirical data were collected from the grocery sector and the consumer electronics sector, which account for approximately 50% of sales in Russian retailing. The larger portion of completed questionnaires was collected from the grocery sector (74%), which is the largest retail sector and which currently attracts most of the attention from analysts and policy makers. The consumer electronics sector is used for the cross-sector comparisons (26%). It is important that the grocery sector and the consumer electronics sector present good examples of the buyer-driven and producer-driven types of supply chains [Gereffi 1994]. Thus, we have an opportunity to compare the results obtained from two different types of market channels.

The sampling procedures were different with regard to the two main groups of firms. On the retailers' side, we addressed all multiple store companies (both global and domestic), given that their total number is limited and they are more homogeneous compared to suppliers. On the suppliers' side, first, we divided the firms into two groups, e.g. the distributors/wholesalers and the manufacturers arranging direct supplies to retail outlets. We used equal sampling fractions for these heterogeneous groups because they corresponded to the estimated division of supplies between the manufacturers and the distributors at the time that the survey was conducted. Second, firms were randomly selected from these groups. The business directories from the trading firms *RosFirm*, *InfoRos*, and *TorgRus* were used for this purpose. In the final sample, we had 46% large and 54% small and medium-sized firms. The average firm age for the retailers and suppliers was eleven years.

The Main Elements and Integrative Index of Relational Exchange

In this section, we analyze each of the relational/embedded exchange elements separately and examine their interrelation. Our data showed that all five elements of relational exchange were relatively widespread (see Table 1).

Starting with the selection of exchange partners, we revealed that two thirds of managers (64%) use at least one relational criterion for this selection while only one third of them were transaction oriented and relied upon a variety of impersonal commercial considerations.

When asked about any specific vertical restraints in their contracts, 40% of the surveyed managers reported on the frequent use of marketing and/or volume fees paid by suppliers to the chain stores. The rest of the managers used more standard contract conditions with no relationship-specific requirements.

Regarding the use of non-coercive power during the execution of contracts, 67% of the managers provided support to their exchange partners in at least one of the suggested forms. Only one third of the managers did not invest in specific relational assets.

Regarding the evaluation of relationship quality, nearly half of our respondents (49%) perceived their relationship with the exchange partner to be cooperative, demonstrating their relationship orientation when constructing interfirm ties.

Finally, 61% of the managers did not dissolve their business contracts at the end of the previous year. These managers demonstrated their commitment to their existing partners and their orientation toward durable market ties.

It is important to check to what extent these elements are mutually independent. We used the phi coefficient for the dummy variables to measure the correlations between these dimensions. As shown in Table 1, all of the correlations were moderate (all under 0.3 and most under 0.1), confirming that the measures were distinct.

Among the significant correlations, the duration of the contract relationship was positively related to the relational choice of business partner and the quality of the relationship, while it was negatively related to the existence of the vertical restraints associated with marketing and volume fees to the chain stores. The latter could mean that there might be a discrepancy between the amount of paid fees and the volume of factual sales at the end of the contract period. This discrepancy might lead to dissatisfaction between the exchange partners considering that their previous calculations were wrong and it might provoke the dissolution of market ties in the subsequent year.

Cooperative behavior was positively related to the assistance provided to the business partners during the time of contract execution. At the same time, surprisingly, this assistance as an investment in relational assets was more associated with the transactional choice of exchange partners. This association could be explained by the necessity of additional efforts aimed at the adjustment of exchange relationships when partners were selected on an impersonal basis. The rest of the correlations were not significant.

Table 1

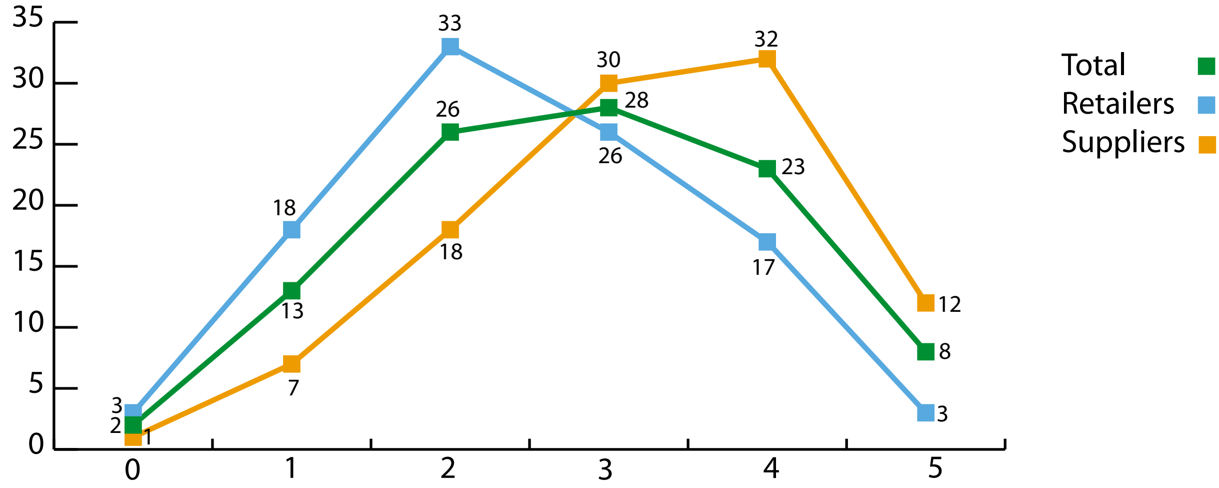
Correlation Matrix for Variables Used in the Index of Relational Exchange (Phi Coefficient)

Dimensions	N	FREQ	SELECT	FEES	INVEST	COOP
Relational selection of partners (SELECT)	512	64.1%				
Vertical restraints in contracts (FEES)	486	39.9%	.062			
Relation-specific investment (INVEST)	470	67.2%	– .096*	.074		
Cooperative orientation in relations (COOP)	500	48.6%	.070	.085	.263**	
Renewal of contracts (RENEW)	468	60.9%	.136**	– .155**	– .063	.150**

Notes: *N* — number of respondents giving definite answers; *FREQ* — percentage of respondents giving positive answers.
* $p < .05$; ** $p < .01$ (two-tailed tests).

The relative independence of the five relational exchange dimensions indicated the importance of hybrid forms of governance. The literature both in economic sociology and relationship marketing revealed the prevalence of hybrid forms of governance and mixed ties among market actors [Baker 1990; Uzzi 1996; Cannon, Perreault 1999]. The prevalence of the hybrid form was normally tested in relation to different exchange partners. We explored the symbiotic relationships that were established with the same exchange partners.

The obtained data showed that market actors were indeed more inclined toward the hybrid forms of exchange with the same partner rather than toward pure transactional or relational exchange. This tendency was backed up by the distribution of frequencies in our index of relational exchange. Only 2% of managers demonstrated a complete absence of relationship orientation and only 8% of managers were so attached to the relational exchange that they chose all five dimensions. Thus, hybrid forms of market exchange prevailed over either pure extreme form, which together represent only 10% of the sample. Fig. 1 demonstrates the shift in values for suppliers toward the relational forms of exchange when compared to retailers.



Note: '0' — all elements are transactional; '5' — all elements are relational.

Fig. 1. Index of Relational Exchange by Location in Supply Chain, n = 408 (%)

In the next section of the paper, we investigate the factors that may affect the relational exchange. First, we consider their impact on different elements of relational exchange. Then, we examine how these factors affect the integrative index of relational exchange.

Factors Affecting the Elements of Relational Exchange

To reveal the primary factors affecting the elements of relational exchange, we ran binary logistic regression models for each of these elements. The regression coefficients for the primary predictors are summarized in Table 2.

With regard to the location in the supply chain, the suppliers were much more likely to rely upon relational criteria, as compared to retailers, when selecting their business partners. This finding confirmed our *Hypothesis 1* and proved that suppliers were more conscious of the identity of their exchange partners and the success of past dealings. Suppliers are also inclined to perceive exchange relationships as being cooperative more often than retailers are. This finding reflected the suppliers' higher relationship orientation, which was particularly valid for the grocery sector, in which they possessed lower bargaining power. When making decisions regarding the termination or renewal of contracts for the following year, the suppliers tended to continue their contract relationships while the retail chains were more transaction oriented in this respect (all coefficients were highly significant, $p = .000$). Regarding the specific binding agreements and relationship investments, the differences between the exchange partners were not significant.

Contrary to our *Hypothesis 2*, sectoral divisions were not important for the choices between the elements of transactional and relational exchange. In particular, we expected the marketing and promotional allowances to be more prevalent in the grocery sector than in the consumer electronics sector, following the predictions made in the previous studies [Rennhoff 2008: 61]. However, significant differences were not found here.

According to *Hypothesis 3*, the share of branded goods was positively related to the relational selection of partners, proving that the sale of branded goods, with their unique qualities, required more attention being placed on the partners' identity (p = .000). There was also a positive influence between branded goods and the probability of contract renewal for the next yearly cycle (p < .05), although the impact was low. However, our proposition that the promotion of branded goods would require more time and effort than for private labels and no-name goods was not rejected.

We did not find significant effects for firm size. Our *Hypothesis 4* should therefore be rejected. The only exception was that the larger companies demonstrated more neutral perceptions toward the channel relationships, while the smaller firms tried to be more cooperative (p < .05).

As was predicted by *Hypothesis 5*, the share of existing long-term partners had a positive effect on the selection of exchange partners. A successful past experience implied a more intensive use of relational criteria. The ratio of long-term partners also raised the probability of relationship-specific investment and contract renewal, which were supposed to secure these investments, although the impact of this factor was relatively low.

Finally, there was a significant positive effect from the intensity of interactions during the contract execution on all five elements of relational exchange, although the impact was not high and the significance varied. Still, in accordance with our *Hypothesis 6*, this finding implied that these ex post contacts were needed to ensure the sustainability of relationships through marketing and volume fees, relationship-specific investments, building cooperative ties, and the renewal of procurement contracts.

Table 2

Binary Logistic Regression: Dependent Variables Are Elements of Relational Exchange

	SELECT (n = 394)	FEES (n = 374)	INVEST (n = 364)	COOP (n = 385)	RENEW (n = 370)
Suppler/Retailer	1.114*** (.231)	.370 (.217)	– .062 (.236)	.828*** (.217)	1.210*** (.232)
Grocery sector	– .080 (.285)	– .479 (.270)	– .069 (.288)	– .229 (.271)	.313 (.285)
Share of branded goods	.015*** (.004)	.001 (.003)	– .008 (.004)	.000 (.003)	.009* (.004)
Company size	– .256 (.241)	– .353 (.225)	.305 (.248)	– .551* (.230)	– .037 (.243)
Share of long-term partners	.014*** (.003)	.003 (.003)	.007* (.004)	.006 (.003)	.008* (.003)
Frequency of contacts	.052* (.026)	.052* (.024)	.101* (.040)	.109*** (.029)	.107** (.033)
Constant	– 1.583** (.566)	– .071 (.513)	.280 (.568)	– .244 (.523)	– 1.741** (.574)
R2	.220	.047	.073	.141	.198

Notes: Standard errors in parentheses;
* p < .05; ** p < .01; *** p < .001 (two-tailed tests).

Factors Affecting the Index of Relational Exchange

We next used our index of relational exchange, ranging from 0 to 5, as a dependent variable in a linear regression model. We included our major predictors in this model to reveal the main factors affecting the degree of embeddedness. The maximum observed correlation between independent variables was under .05; in most cases, it was under .02, indicating that multicollinearity effects were avoided. We ran a linear regression for the total sample, then for the managers from the grocery sector (the largest group in our sample), and then separately for the groups of retailers and suppliers.

Starting with the regression coefficients for the entire sample, the model fit was significant at the .000 level. The predictor variables collectively explained 30.3% (R2) of the total variance of correlations (see Table 3). The greatest observed Variance Inflation Factor (VIF) was under 2.0, confirming that multicollinearity was not unduly influencing the estimates.

In accordance with our previous expectations concerning location in the supply chain (*Hypothesis 1*), the suppliers were more likely to develop a relational orientation because they were trying to control the behavior of retail stores, which had more bargaining capacity. This finding was valid both for the total sample and for the grocery sector. The effect size was relatively high.

Regarding sectoral divisions, relational exchange was more important in the sector of consumer electronics than in the grocery sector, as was predicted in *Hypothesis 2* ($p < 0.5$). At the same time, the obtained results were not robust in relation to retailers and suppliers when taken separately.

The ratio of branded goods in the total number of store units was positively related to the degree of relational embeddedness, which was true for the entire sample, the grocery sector, and for the retailers ($p < .05$). Managing branded goods required more transaction-specific efforts and an additional focus on the identity of the partner. This finding supported our *Hypothesis 3*. However, this coefficient was not significant for the group of suppliers.

The company size did not demonstrate positive effects in all variations of our regression model. We used a subjective evaluation of the company size here, but we also tried all measures of size that were at our disposal (number of stores, number of territorial localities). Thus, *Hypothesis 4* was not confirmed by the data.

The durability of market ties with the exchange partner had more important connections with the formation of relational/embedded exchange. The impact of the ratio of long-term partners was significant at the .000 level for the total sample, the grocery sector, and for the retailers, as was predicted by our *Hypothesis 5*. This causation was not as strong for suppliers, but was still significant ($p < .05$).

The frequency of ex post contacts between the retailers and the suppliers during the contract execution also showed a strong positive relationship with the importance of relational/embedded exchange, which was consistent with our *Hypothesis 6*. It is remarkable that the relationships were significant not only for the entire sample and for the grocery sector, but also for each group of managers.

Comparing four variations of our regression model (see Table 3), we obtained very similar results for the grocery sector, which represented three fourths of our total sample. R2 was also very similar (.308). We had similar associations in the case of retailers (R2 = .258). The model fit was significant at the .000 level in both cases. The greatest observed VIF was under 2.1. As for the model for suppliers, it explained only 12% of the variance, although the model fit was significant at the .011 level. We also had significant coefficients for the share of long-term partners and the frequency of retailer–supplier contacts during the execution of contracts.

Table 3

Linear Regression: The Dependent Variable Is the Index of Relational Exchange

	Total Sample (n = 323)	Grocery Sector (n = 253)	Retailers (n = 177)	Suppliers (n = 146)
Suppler/Retailer	.874*** (.120)	.864*** (.135)		
Grocery sector	– .324* (.150)		– .312 (.199)	– .361 (.240)
Share of branded goods	.004* (.002)	.004* (.002)	.006* (.003)	.002 (.003)
Company size	– .118 (.122)	– .081 (.140)	– .181 (.171)	.032 (.194)
Share of long-term partners	.008*** (.002)	.008*** (.002)	.010*** (.003)	.005* (.003)
Frequency of contacts	.075*** (.013)	.075*** (.014)	.097*** (.019)	.054** (.017)
Constant	1.823*** (.279)	1.393*** (.247)	1.593*** (.407)	2.867*** (.394)
R2	.303	.308	.258	.121

Notes: standard errors in parentheses;
* p < .05; ** p < .01; *** p < .001 (two-tailed tests).

Discussion and Conclusions

The market is not only affected by social relationships but also contains social relationships as a built-in element. It is not productive to identify a market exchange as the transactional exchange of autonomous actors whose identities do not matter or to treat embedded exchange as an opposite non-market form. Real-world markets present divergent combinations of transactional and embedded ties. It is important to explore the concrete composition of these ties, to measure their strength, and to examine the degree of embeddedness of economic actions [Uzzi 1999].

Relational/embedded exchange is multidimensional and is constituted by a composition of relatively independent elements, which may be developed concurrently not only in relationships with different exchange partners but also in a relationship with one partner if that partner is attached to different aspects of the market exchange.

Given that the retailer–supplier contracts in the studied area of retail trade are normally signed for one year, to be continued in the following year or dissolved, we take the basic one-year contractual cycle and decompose this cycle into five distinct major phases implemented on a consequential or partially on a concurrent basis. This process starts with the selection of business partners, which could rely upon transactional or relational criteria, and proceeds to the conclusion of the business contract, which may rely upon standard terms and conditions or may involve vertical transaction-specific restraints. The process then moves along to contract enforcement, which may involve (or not involve) investment in specific relational assets. Finally, the exchange parties evaluate the quality of the relationship and consider whether to continue or terminate their contract ties for the subsequent year.

Market relationships are built through repeated strategic choices made by both exchange parties, who may shift between transactional and relational modes of exchange in each phase of the contract cycle. At an empirical level, we see that relational exchange in all of its major elements is widely spread. However, neither relational nor transactional exchange necessarily prevails, and most of the market actors are more inclined toward a hybrid interface than toward a pure form of transactional or relational exchange [Baker 1990; Uzzi 1996; Cannon, Perreault 1999]. Different elements of transactional and relational exchange are interspersed with one another. It is not a combination of transactional exchange with some partners and relational exchange with others, but a combination of divergent dimensions of market exchange in relationships with the same partners. To assess the degree of embeddedness, we create an index of relational exchange that varies from a pure transactional to a pure relational exchange.

Regarding the factors that facilitate embedded/relational exchange, the location in the supply chain is important. The situation is not symmetrical for retailers and suppliers; they may have different interests in the stability of market ties, as was explicated in both the sociological and the marketing research [Baker, Faulkner, Fisher 1998; Rajamma, Zolfagharian, Pelton 2011]. In general, the suppliers with less market power are more inclined toward relational forms of market ties than the retailers are.

We expected to find more intensive relational exchange in the producer-driven commodity chain [Gereffi 1994], represented by the consumer electronics sector in our case. However, no significant differences between this sector and the grocery trade were revealed either for the total sample or for the groups of retailers and suppliers.

We also thought that larger firms might have more interest in continuity and stable relationships due to both their better bargaining capacity and the higher costs of switching between partners [Levinthal, Fichman 1988; Baker, Faulkner, Fisher 1998]. However, we did not obtain sufficient empirical evidence to support this statement. At the same time, the effect of managing branded goods on the embedded/relational exchange is more pronounced. Branded goods offer a unique and specific value to consumers and require a more careful selection of suppliers and more relationship-specific investment [Elg, Paavola 2008]. Branded goods present an important tool for attaining relationship stability [Fournier 1998].

The ratio of long-term exchange partners has more important effects on the formation of relational/embedded ties in accordance with the previous findings in economic sociology [Baker, Faulkner, Fisher 1998; Gulati, Gargiulo 1999]. We revealed a strong positive relationship between the intensity of interfirm interactions and the preference for relational/embedded exchange. Frequent contacts between retailers and suppliers during the contract execution are needed to reduce opportunism and to safeguard investment in specialized assets [Mesquita, Brush 2008].

As a general conclusion, we would claim that the market exchange is represented by a variety of hybrid forms in which transactional and relational elements are interspersed. Hybrid forms are reflected not just in a portfolio of divergent ties with different exchange partners but also in a combination of divergent ties with one partner.

Rejecting the 'hostile worlds' argument [Zelizer 2012], economic sociology should study the markets as being infused with social relationships. To accomplish this task, it is important to take the direct market exchange into the core of sociological research and reveal the multiple combinations of ties in which market sellers are sequentially or concurrently engaged.

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References

Baker W. (1990) Market Networks and Corporate Behavior. *American Journal of Sociology*, vol. 96, pp. 589–625.

Baker W. E., Faulkner R., Fisher G. (1998) Hazards of the Market: The Continuity and Dissolution of Interorganizational Market Relationships. *American Sociological Review*, vol. 63, pp. 147–177.

Beckert J. (2007) *The Great Transformation of Embeddedness: Karl Polanyi and the New Economic Sociology*. MPIfG Discussion Paper 07/1. Cologne: Max Planck Institute for the Study of Societies.

Bloom P. N., Gundlach G. T., Cannon J. P. (2000) Slotting Allowances and Fees: Schools of Thought and the Views of Practicing Managers. *Journal of Marketing*, vol. 64, pp. 92–108.

Cannon J. P., Perreault W. D., Jr. (1999) Buyer–Seller Relationships in Business Markets. *Journal of Marketing Research*, vol. 36, pp. 439–460.

Dwyer F. R., Schurr P. H., Oh S. (1987) Developing Buyer–Seller Relationships. *Journal of Marketing*, vol. 51, pp. 11–27.

Elg U., Paavola H. (2008) Market Orientation of Retail Brands in the Grocery Chain: The Role of Supplier Relationships. *The International Review of Retail, Distribution and Consumer Research*, vol. 18, pp. 221–233.

Fligstein N. (2001) *Architecture of Markets: An Economic Sociology of Twenty-First-Century Capitalist Societies*, Princeton: Princeton University Press.

Fournier S. (1998) Consumers and Their Brands: Developing Relationship Theory in Consumer Research. *Journal of Consumer Research*, vol. 24, pp. 343−353.

Ganesan S. (1994) Determinants of Long-Term Orientation in Buyer–Seller Relationships. *Journal of Marketing*, vol. 58, pp. 1–19.

Gemici K. (2008) Karl Polanyi and the Antinomies of Embeddedness. *Socio-Economic Review*, vol. 6, pp. 5−33.

Gereffi G. (1994) The Organization of Buyer-Driven Global Commodity Chains: How U.S. Retailers Shape Overseas Production Networks. *Commodity Chains and Global Capitalism* (eds. G. Gereffi, M. Korzeniewicz), Westport: Praeger, pp. 95−122.

Granovetter M. (1985) Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, vol. 91, pp. 481–510.

Granovetter M. (1990) The Old and the New Economic Sociology: A History and an Agenda. *Beyond the Marketplace: Rethinking Economy and Society* (eds. R. Friedland, A. F. Robertson), New York: Aldine de Gruyter, pp. 89–112.

Gulati R., Gargiulo M. (1999) Where do Interorganizational Networks Come from? *American Journal of Sociology*, vol. 104, pp. 1439–1493.

Heidenreich M. (2012) The Social Embeddedness of Multinational Companies: A Literature Review. *Socio-Economic Review*, vol. 10, pp. 549–579.

Hingley M. (2005) Response to Comments on 'Power to all Friends? Living with Imbalance in Supplier–Retailer Relationships'. *Industrial Marketing Management*, vol. 34, pp. 870–875.

Krippner G. R. (2001) The Elusive Market: Embeddedness and the Paradigm of Economic Sociology. *Theory and Society*, vol. 30, pp. 775–810.

Levinthal D. A., Fichman M. (1988) Dynamics of Interorganizational Attachments: Auditor–Client Relationships. *Administrative Science Quarterly*, vol. 33, pp. 345–369.

Mesquita L. F., Brush T. Y. (2008) Untangling Safeguard and Production Coordination Effects in Long-Term Buyer-Supplier Relationships. *Academy of Management Journal*, vol. 51, pp. 785–807.

Padgett J. F., Powell W. W. (2012) The Problem of Emergence. *The Emergence of Organizations and Markets* (eds. J. F. Padgett, W. W. Powell), Princeton: Princeton University Press, pp. 1–29.

Poppo L., Zenger N. (2002) Do Formal Contracts and Relational Governance Function as Substitutes or Complements? *Strategic Management Journal*, vol. 23, pp. 707–725.

Portes A. (2010) *Economic Sociology: A Systematic Inquiry*, Princeton; Oxford: Princeton University Press.

Provan K. G., Skinner S. J. (1989) Interorganizational Dependence and Control Predictors of Opportunism in Dealer–Supplier Relations. *Academy of Management Journal*, vol. 32, pp. 202–212.

Radaev V. (2013) Market Power and Relational Conflicts in Russian Retailing. *Journal of Business and Industrial Marketing*, vol. 28, no 3, pp. 167–177.

Radaev V. (2015) Relational Exchange in Supply Chains and Its Constitutive Elements. *Journal of Economic Sociology= Ekonomicheskaya sotsiologiya*, vol. 16, no 1, pp. 81–99. Available at: http://ecsoc.hse.ru/2015-16-1.html (accessed 19 January 2016)

Rajamma R. K., Zolfagharian M. A., Pelton L. E. (2011) Dimensions and Outcomes of B2B Relational Exchange: A Meta-Analysis. *Journal of Business and Industrial Marketing*, vol. 26, pp. 104–114.

Rennhoff A. D. (2008) Promotional Payments and Firm Characteristics: A Cross-Industry Study. *Journal of Applied Economics and Policy*, vol. 27, pp. 47–62.

Uzzi B. (1996) The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect. *American Sociological Review*, vol. 61, pp. 674–698.

Uzzi B. (1999) Embeddedness in the Making of Financial Capital: How Social Relations and Networks Benefit Firms Seeking Financing. *American Sociological Review*, vol. 64, pp. 481–505.

Williamson O. E. (1985) *The Economic Institutions of Capitalism,* New York: Free Press.

Zelizer V. (2012) How I Became a Relational Economic Sociologist and What Does That Mean? *Politics and Society*, vol. 40, pp. 145–174.

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