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Understanding the role of marketing–purchasing collaboration in industrial markets: The case of Russia

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ABSTRACT

This study aims to investigate the role of interfunctional collaboration between marketing and purchasing functions in industrial companies. Interfunctional collaboration is considered as a measure of the internal alignment and partnership between departments in the firm, which in turn contributes to the creation of sustainable advantages via improved external partnerships and facilitating demand chain integration. We test the impact of customer orientation as well as the interactions between departments (specifically marketing and purchasing) as collaboration antecedents, and analyze the direct impact of marketing–purchasing collaboration on business performance. The model is tested on a sample of 148 industrial companies in Russia with two key respondents in each firm, incorporating the purchasing as well as the marketing perspective. The results show that marketing–purchasing collaboration mediates the effects of interfunctional interaction as well as customer orientation on business performance. Alternative model testing shows that the direct effects of these antecedent constructs on performance are non-significant in the context of Russian industrial companies.

1. Introduction

In the current business environment characterized by increasing competitive pressures, externally oriented functions of the firm face serious challenges, especially by striking a sustainable balance between the aims of companies and their business partners (Achrol, 1997; Achrol & Kotler, 1999; Ford, Gadde, Håkansson, & Snehota, 2003). Customers become increasingly demanding, forcing companies to increase their ability to interact collaboratively. This trend recognizes the importance of sustaining the performance of both a focal company and its network partners (Clarke, 2006; Wind, 2008). Thus, multifaceted goals put emphasis on achieving both operational efficiency within the firm as well as market effectiveness through the optimal combination of resources and knowledge of the firm *and* its network partners (Cox, 2004; Mouzas, 2006). Such thinking is in line with arguments from the resource dependence theory (Casciaro & Piskorski, 2005a,b; Pfeffer & Salancik, 1978) and the literature on business networks (Anderson, Håkansson, & Johanson, 1994; Matthyssens, Vandenbempt, & Weyns, 2009; Möller & Halinen, 1999). Achievement of immediate, operational results within a firm may lead to both a dramatic decrease in the firm's ability to adjust to future challenges (Ford & McDowell, 1999; Ritter, 1999; Ritter & Gemünden, 2003), and a reduction in its ability to retain competitive advantages via successfully mobilizing other business partners (Ehret, 2004; Eng, 2006; Mouzas, 2006; Mouzas & Naudé, 2007). Achieving a balance between focal company goals and those of interaction partners in complex business networks has previously been linked to developing interfunctional collaboration within a firm, i.e. creating internal cooperative approaches and internal strategic partnerships (Campbell, 1998; Piercy, 2009).

Existing research highlights the demand for improvement of interdepartmental collaboration: "the logic is that strategic external relationships (with customers, supplier and partners) should be mirrored in strategic internal relationships…" (Piercy, 2009, p.857). More specifically, a shifting focus on interfunctional collaboration can be perceived: from investigating collaborations between 'neighbouring' functions, e.g. marketing and sales, or purchasing and operations, to collaborations between boundary spanning functions (Piercy, 2009). Such functions are responsible for the coordination of external relationships, specifically customer relationships and supplier relationships (Ivens, Pardo, & Tunisini, 2009). However, while research has suggested the importance of the integration of boundary spanning functions such as purchasing and marketing (Sheth, Sharma, & Gopalkrishnan, 2009), there is not enough empirical evidence regarding this issue and its interplay with firm performance. Our study uses this research challenge as its starting point by focusing on marketing–purchasing collaboration.

Marketing–purchasing collaboration represents a specific case of interfunctional collaboration which has been shown to be an important

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component of the behavioral aspect of both market orientation (Auh & Menguc, 2005; Narver & Slater, 1990) and demand chain integration (Jüttner, Christopher, & Baker, 2007; Lambert & Cooper, 2000; Sheth, Sisodia, & Sharan, 2000). The challenge is therefore for companies to instigate marketing–purchasing collaboration: to develop internal configurations of different functions which will help them to identify, maintain and develop external business relationships with crucial partners in the business network (Jüttner et al., 2007; Kahn & Mentzer, 1998). Improving external business relationships requires several distinctive antecedents with regard to the marketing–purchasing collaboration within a firm. Firstly, in line with requirements identified as part of the concept of market orientation, the company needs to develop a deep understanding of its business partners, especially buying companies (Da Silva, Davies, & Naudé, 2002; Danneels, 2003; Hsieh, Chiu, & Hsu, 2008; Kohli & Jaworski, 1990; Narver & Slater, 1990). Such customer orientation is linked to the essence of the marketing function (Awuah, 2008; Brady & Cronin, 2001; Deshpandé, Farley, & Webster, 1993) and is also in line with the demand chain integration concept (Jüttner, Gosell, & Christopher, 2006). In order to best serve customers in a mutually beneficial way, a company needs to use and transform certain resources (Alderson, 1965; Alderson & Martin, 1965; Prenkert & Hallen, 2006). However, the company does not possess all of the resources and competences itself and is thus dependent on its supply network (Paulraj & Chen, 2007; Pfeffer & Salancik, 1978). Consequently, the second antecedent important for aligning external business relationships lies in the interactions of internal boundary-spanning functions (Eng, 2006; Henneberg, Mouzas, & Naudé, 2009; Piercy, 2009). Thus, the company needs to develop interfunctional interactions which, together with customer orientation, provide the collaboration between marketing and purchasing which is hypothesized to be beneficial for firm performance.

Besides our contribution of clarifying the antecedents and consequences of interfunctional marketing–purchasing collaboration, we specifically focus on the setting of Russian firms. The importance of internal marketing–purchasing collaboration represents a particular challenge for transitional economies, such as Russia, as firms have not had sufficient time to develop either the competences to relate to multiple business partners in complex networks, nor the capabilities to foster interaction and collaboration between externally facing functions such as purchasing and marketing (Peng & Luo, 2000; Piercy, 2009). The levels of complexity and dynamism of the new economic environments in transitional countries are in fact characterized by challenges to established competition rules, resulting in "collapsing capabilities" (Atuahene-Gima, Li, & De Luca, 2006, p. 360). In case of Russia, after the collapse of the planned economy and the dissolution of existing economic ties between companies and whole value-creating systems, firms had to adapt to the newly formed business environment, while developing new internal capabilities at the same time. Lorentz and Ghauri (2010) observe that "despite the recent positive development in Russian market, the heritage of the centralized planning oriented command economy is still evident" (p. 243). Numerous studies have focused on the challenges of Russian business culture and networking practices, which often provide examples of inefficient and opportunistic interactions (Jansson, Johanson, & Ramström, 2007; Kouchtch & Afanasiev, 2001; Menkhaus, Yakunina, & Herz, 2004; Salmi, 1996). Overcoming such obstacles, as Johanson (2007) states, required significant time and resource investments, and was based on the development of decentralized and mutual planning capabilities by individual firms. In fact, "interpersonal networks are important in uncertain and unstable economic environments, as interpersonal trust mitigates risk and reduces the influence of turbulent macro-environmental changes" (Butler & Purchase, 2008, p. 531).

Our research is embedded in these discussions and is aimed at providing insights via an empirical study of Russian industrial firms, identifying antecedents and performance outcomes of marketing–purchasing collaboration. In addition to informing current managerial practice in transitional economies, specifically Russia, and thus providing insights into the functioning of often overlooked business networks outside Western countries (e.g. Anderson et al., 1994; Håkansson & Ford, 2002; Ritter, Wilkinson, & Johnston, 2004, for an exception using non-Western data see Chan, 2000; Peng & Luo, 2000), our research contributes to addressing some important research gaps, namely clarifying the role of interfunctional collaboration of marketing and purchasing as crucial example of boundary spanning functions. We thus contribute to the stock of knowledge on demand chain integration and business relationships in networks (Jüttner et al., 2007; Lambert & Cooper, 2000; Sheth et al., 2000). The paper is structured as follows: we first present the theoretical basis of the study and key concepts to be considered, and then propose a nomological model describing the key research assumptions as well as the underlying hypotheses. We present the results from a dyadic dataset of 148 Russian companies and, using structural equation modeling, propose key implications for practitioners. Finally, we identify further areas for potential research.

2. Literature review and hypotheses development

2.1. The nature and consequences of interfunctional collaboration

The role of collaboration between different firm functions is widely discussed in the research literature, e.g. as "an affective and volitional process where departments work together with mutual understanding, common vision, and shared resources to achieve collective goals" (Kahn & Mentzer, 1998, p. 55). Effective interfunctional collaboration has become an important strategic emphasis of successful firms (Morgan & Piercy, 1998). Such collaboration is to a large extent based on aligning organizational aims, values and priorities between functions, especially regarding working with external partners. This alignment allows for the creation of synergetic effects among departments, leveraging available resources and knowledge (Ellinger, 2000; Piercy, 2009). Development of internal collaboration is often influenced by increasing pressure from external partners, especially customers, and thus "involving sales and marketing personnel in supply strategy and alliance management also offers potential for more effective joint working on shared problems and new opportunities" (Piercy, 2009, p. 862). Internal collaboration is arguably built into the system of external collaboration within up- and down-stream channels (Ellinger, 2000; Kahn & Mentzer, 1998).

The nature of internal collaboration is very close to the concept of integration of functions (Ellinger, 2000) and is based on developing trust, mutual respect, communication and information sharing, as well as shared responsibility in decision making and outcomes (Griffin & Hauser, 1996; Kahn & Mentzer, 1996). Integration can be defined as the process of achieving unity of effort among the various organizational subsystems in the accomplishment of the company's task (Lawrence & Lorsch, 1967). Previous research suggests that especially internal norms, for example exemplified in interfunctional collaboration, will have a direct effect on the norms in interacting with external partners — thus a high level of interdepartmental openness and readiness to share information will have a positive effect on cooperating with external partners (Campbell, 1998; Ellinger, 2000). Kahn and Mentzer (1998) discuss three existing approaches to defining integration among the functions: an interaction-based approach in which communication between the departments, meetings and information flow is forcing successful integration; collaboration-based integration, in which teamwork, shared resources and goals are the main driving force; and composite integration, implying that both interaction and collaboration are two main elements of interdepartmental integration. This multi-construct approach is also supported by Biemans, Brenčič, and Malshe (2010).

Arguably the most often used conceptualization of internal collaboration relates to *interfunctional coordination* as a subconstruct of market orientation (Jaworski & Kohli, 1993; Kohli & Jaworski,

1990), using a behavioral operationalization (Narver & Slater, 1990). It refers to the degree to which the functions and departments within the firm communicate with each other and work cooperatively (Kohli & Jaworski, 1990). The danger of low internal alignment has been addressed by Atuahene-Gima et al. (2006), who stress the phenomenon of 'internal stickiness', which occurs when accumulated market knowledge at the firm level stays isolated within one department.

The elements that lead to interfunctional collaboration can become a source of competitive advantage (Blomqvist & Levy, 2006; Eng, 2006; Kent, 1996). Menguc and Auh (2005) argue that such collaboration develops social capital within the company which in itself enables better access to, and use of, resources (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). Reagans and Zuckerman (2001) postulate the same effect of interfunctional collaboration but see diversity as the main driver.

While interfunctional collaboration has been discussed extensively in the literature, one of the shortcomings of existing empirical research is that it is mostly based on single informants, capturing only one specific functional perspective. Internal dyadic or triadic studies are rare. Furthermore, existing research mostly focuses on collaborations between neighboring functions, e.g. between marketing and other customer- or internal resource-related departments, such as the interaction of marketing with sales (Gosselin & Bauwen, 2006), manufacturing (Alegre & Chiva, 2004), sales, communication and product development (Möller & Rajala, 1999), administration, production and R&D (Ford & Saren, 2001; Kahn & Mentzer, 1998; Souder & Moenaert, 2007), human resource management (Chimhanzi, 2004), or finance (Srivastava, Shervani, & Fahey, 1998). However, while the importance of interactions between 'boundary-spanning functions' such as purchasing on the one hand, and marketing on the other, has been advocated (Piercy, 2009), there does not exist enough empirical research analyzing the specific interplay between these two crucial departments. Most research focuses on *inter-organizational* purchasing and marketing interactions, such as in the context of Just-in-Time business relationships (Gunesekaran, 1999; O'Neal, 1989), neglecting the *intra-organizational* collaboration issues.

Another shortcoming of existing studies is that they have used mainly Western countries for their investigation. The issue of interfunctional alignment is arguably pivotal for firms in transitional economies. These economies, given their relatively short history of being a market-driven, are typified by lack of information about potential partners and low information disclosure readiness, resulting in both higher instability in business relationships and readiness to adopt opportunistic behavior (Håkansson & Ford, 2002; Ford & Håkansson, 2006; Johanson, 2007). These factors imply that there exists more risk in managing external interactions and relationships than in established market economies. Thus, internal collaboration among functions becomes important due to the need to compensate internally for the instability of external relationship interactions (Powell, 1992).

2.2. Consequences of marketing–purchasing collaboration

Given that interfunctional collaboration is one of the major behavioral characteristics of a firm enabling sustainable competitive advantage (Narver & Slater, 1990), and that marketing and purchasing are two major functions in firms engaged in business-to-business activities (Ford, 2002), it is important to understand how marketing and purchasing collaborate and learn from each other to enhance effectiveness and goal achievement (Jüttner et al., 2007; Williams, Giunipero, & Henthorne, 2006). None of the existing studies have examined the antecedents and consequences of interfunctional collaboration between the marketing and the purchasing functions as the two main organizational activity areas which link the firm to outside stakeholders (customers and suppliers, respectively). Marketing and purchasing interactions have so far only been discussed from a supply chain perspective (Paulraj & Chen, 2007; Trkman, Štemberger, Jaklic, & Groznik, 2007). However, several marketing studies have pointed to the cross-functional nature of marketing capabilities of the firm with the focus on supply chain coordination (Day, 1994; Jüttner et al., 2007; Sheth et al., 2000). Therefore, marketing and purchasing collaboration becomes the focal construct of our study in the context of the Russian economy. This construct is based on the concept of demand chain integration which argues for linking both the supply chain management and marketing perspectives, taking the customer as a starting point of the analysis (Jüttner et al., 2007).

This marketing–purchasing collaboration can therefore be conceptualized as a part of the firm's strategic market sensing capabilities (Day, 1994; Foley & Fahy, 2004), i.e. the ability to identify potential opportunities and align the firm's activities with capabilities and resources of upstream (supplier) and downstream (customer) partners in the market. Such activities have been argued to provide a higher probability of value innovation, contributing to the creation of sustainable advantages for the firm (Day & Van den Bulte, 2002; Teece, Pisano, & Shuen, 1997). This is in line with findings that effective firms achieve higher interfunctional collaboration among different organizational activity areas (Lawrence & Lorsch, 1986). Therefore, it can be posited that:

Hypothesis 1. Increased marketing–purchasing collaboration impacts positively on business performance.

2.3. Antecedents of marketing–purchasing collaboration

While interaction has frequently been considered in the literature in terms of activities between business partners (Håkansson, 1982), a similar perspective can be applied to interdepartmental issues (Lim & Reid, 1992; Ruekert & Walker, 1987). Interaction has been argued to be part of interdepartmental collaboration, e.g. Kahn and Mentzer (1998) define it as information exchange processes between departments. Ruekert and Walker (1987) posit communication interactions as a driver of interfunctional collaboration. Similarly, Morgan and Piercy (2009) suggest that collaboration between departments depends on the level of communication and interaction. As Kahn and Mentzer (1998) argue, interaction is often an important component of interdepartmental collaboration. However, they warn that it is not a sufficient, as it alone will not ensure successful interdepartmental relationships. Nevertheless, an interaction view emphasizes communication (e.g. meetings or information flows) between departments (Griffin & Hauser, 1992; Ruekert & Walker, 1987). In fact, much of the marketing literature highlights that effective interfunctional collaboration is predicated on interaction, and thus, prescribes marketing's increased contact with other departments (Griffin & Hauser, 1992; Moenaert, Souder, DeMeyer, & Deschoolmeester, 1994; Urban & Hauser, 1993). Other sources argue that the role of interaction is a composite of existing communication, connectedness and conflict (Menon, Jaworski, & Kohli, 1997). The positive relationship between interfunctional interaction and collaboration will therefore exist in cases of aligned aims and interests between the departments, which means in turn an absence of interdepartmental conflict (Morgan & Piercy, 1998).

Empirical studies regarding the effect of aspects of interfunctional interaction on collaboration have produced mixed results. Rodriguez, Perez, and Gutierrez (2005) as well as Meunier-FitzHugh and Piercy (2006) consider interfunctional communication as an antecedent of collaboration, as well as of performance (Biemans et al., 2010; Hitt, Hoskisson, & Nixon, 1993; Kahn, Reizenstein, & Rentz, 2004). Empirically these studies were able to support the impact of interactions on collaboration, and of collaboration on performance, but not the effect of interactions on performance (Kahn & Mentzer, 1998). However, for marketing and R&D collaboration within a firm, Song, Neeley, and Zhao (1996) show that interaction positively impacts both information sharing and communication, which are then in turn positively associated with collaboration.

Interfunctional collaboration in our study relates to the marketing and purchasing function. Some existing research provides evidence that interaction is an important antecedent for collaboration involving the marketing function: "Careful management of marketing's interaction with other departments…can help firms become adaptive, effective and efficient" (Cadogan, Sundqvist, Salminen, & Puumalainen, 2005, p. 520). We follow the above argument and model interfunctional interaction (between marketing and purchasing) as being an antecedent of interfunctional collaboration, i.e. collaboration mediates the effect of interactions on firm performance, with interfunctional interaction itself not having a direct impact on performance. Higher interaction is therefore expected to foster further collaboration but does not necessarily have a direct impact on firm success:

Hypothesis 2. Marketing–purchasing interaction impacts positively on marketing–purchasing collaboration.

Marketing and purchasing have different perspectives on business relationships. This may hinder key aspects of interfunctional collaboration, for example the sharing and exchange of knowledge and ideas (Day, 1994; Nonaka, 1994; Nonaka, Umemoto, & Senoo, 1996). Marketing–purchasing collaboration can be an area of conflict due to differences in motivation and interests (Humphreys, Williams, & Goebel, 2009), which has been explained via mutual resource dependence (Goebel, Marshall, & Locander, 2003) or overall organizational conflict (Barclay, 1991). For the purpose of our study, we posit the central role of 'market-sensing' in creating interdepartmental alignment of aims and facilitating collaboration between marketing and purchasing. This is due to the fact that the extant literature discusses the particular role of understanding markets (something which is particularly done by marketing) in aligning departments and functions within the firm (Day, 1994; Jaworski & Kohli, 1993; Kohli & Jaworski, 1990). For example, Kahn and Mentzer (1998) argue that the integration of departments is to a large extent the responsibility of customer-facing units. It is the marketing department that is responsible for creating interfunctional collaboration, and enabling the rest of the company to become customer oriented. The collaboration among the departments will be based on the goals that are received and aligned among the departments (Kahn & Mentzer, 1998). The aims set at the strategic level of the firm will have direct impact on the level of involvement of departments in the collaboration process (Morgan & Piercy, 1998).

Thus, marketing needs to disseminate market information and customer-related knowledge among the departments (Day, 1994; Kohli & Jaworski, 1990; Nonaka et al., 1996). Narver and Slater (1990) point to the fact that every department and function can create higher value for customers. Indeed, the contribution of other functions should be incorporated into the firm's marketing strategy (Narver & Slater, 1990; Wind & Robertson, 1983). It is therefore important for both marketing and purchasing to understand customer demands in order to create a basis for superior value creation. Thus, investigating interfunctional collaboration between marketing and purchasing departments relates specifically to the strategic balancing of departmental interests around the issue of customer orientation (Williams et al., 2006). Again this follows the logic of the demand chain integration concept (Heikkila, 2002; Jüttner et al., 2007) which suggests that the customer should be the starting point of any analysis, i.e. proposing a marketing and customer-oriented approach to interactions regarding supply chain management (Baker, 2003). We therefore hypothesize that:

Hypothesis 3. Customer orientation impacts positively on marketing–purchasing collaboration.

Customer orientation, while mostly associated with knowledge residing in the marketing department, needs to be distributed within the whole company to impact on collaboration and business performance. However, taking the purchasing department as an example, this function typically has suboptimal resources to achieve knowledge about the target customers as well as the wider demand network. To achieve such customer knowledge, the purchasing department needs to have interactions with the owner of such knowledge, i.e. the marketing department. Thus, it can be posited that:

Hypothesis 4. Marketing–purchasing interaction impacts positively on customer orientation.

Based on these four hypotheses which link the four main constructs, the overall nomological model is introduced in Fig. 1. The focal concept of marketing–purchasing collaboration is modeled as a mediator between the antecedent constructs of customer orientation on the one hand, and marketing–purchasing interaction on the other. Interfunctional collaboration between the marketing and purchasing departments in turn is related to the company's business performance.

3. Research design

3.1. Data collection

The empirical dataset to test our nomological model relates to Russian companies across different industries. To pre-test the constructs as well as existing measurement scales, several qualitative studies were undertaken. A specific aim of these studies was to understand whether the focal concepts which had been developed from the research literature could be used in the context of the transitional Russian economy, as these are mainly based on data from mature economies. For this purpose, an initial open round-table discussion was organized with thirty-seven CEOs, marketing and purchasing directors to discuss the issue of business relationships and interfunctional collaborations, including customer and supplier interactions in a business-to-business context. During these discussions, the managers indicated that they perceived customer knowledge dissemination throughout the firm to be one of the key sources of market development and a driver of innovation in Russia. Furthermore, this discussion also identified the potential issue of misalignment between marketing and purchasing departments.

Having established that the core constructs were understood and meaningful in a Russian context, some further interviews (as with all other empirical phases, these interactions were done in Russian) were

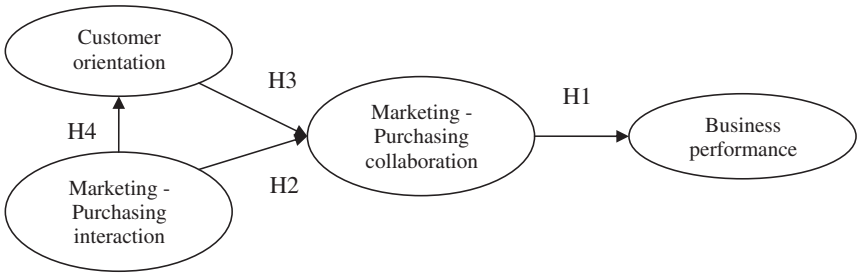


Fig. 1. Nomological model.

conducted with forty top managers (these were selected from the same sample frame that was later used for the quantitative phase of the research; after the interviews, these firms did not participate in the quantitative stage). These interviews tested the construct descriptions as well as an initial draft of the questionnaire with measurement models for each construct. As a result, some question wordings were slightly changed, and the final questionnaire for the quantitative study was prepared.

Our sample was based on a list of industrial companies (from the SKRIN database, comprising a variety of sectors), covering the whole of Russia. We randomly contacted 502 firms. The respondents were mostly top management, specifically heads of marketing or purchasing. Two key respondents per company were used, one covering the marketing perspective and the other the supply perspective of the company. A total of 186 companies agreed to participate (response rate of 37.1%). The data was collected by face-to-face interactions with the relevant respondents; research assistants were used for conducting the interviews. This method was used as mailed questionnaires typically do not yield sufficient response rates in the Russian business environment. The questionnaire for both key respondents contained the same questions. We thus always attempted to collect two different internal perspectives on the same constructs, controlling for two diametrically opposed outside-facing functions in the firm, as well as minimizing the potential for common methods bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A total of 38 firms identified the same person (usually the CEO) as being the most competent respondent covering supply as well as marketing perspectives in the firm, thus providing only single respondent data sets. These firms were excluded from further analyses in order not to violate the common method bias assumption. Thus, the final sample consisted of 148 firms providing a dyadic data set (a response rate of 29.5%) with a total of 296 respondents. The respondents were also asked to indicate how knowledgeable they perceived themselves to be in addressing the questions in our survey. The level of perceived respondent knowledgeability (on a 5-point Likert scale) averaged 4.7, indicating the respondents had relevant knowledge for our study. Tables 1a and 1b provide some socio-demographic information on the respondents for both the purchasing and marketing sides.

3.2. Construct measures

The measurement models for each construct were based on 5-point Likert scales (virtually all were anchored in “strongly agree” and “strongly disagree”). The item pool for each measurement model was taken from existing research. We used translation/back-translation to ensure that the question wording in Russian was equivalent to that of the source publication. The final questionnaire consisted of 19 items for the four constructs. All measurement models use reflective scales (Diamantopoulos & Siguaw, 2006; Diamantopoulos & Winklhofer, 2001; MacKenzie, Podsakoff, & Jarvis, 2005). Scale properties were evaluated using traditional psychometric approaches. Reliability and unidimensionality of the scales was tested, and item-to-total correlations were assessed for all the scales (Anderson & Gerbing, 1988; Fornell & Larcker, 1981). Following an exploratory factor analysis (EFA), four items were dropped due to cross-loadings on other constructs, leaving 15 items used in the path estimations. Table 2a shows the final item loadings. For these 15 items the CFA using AMOS 7.0 to cross-validate the factor structure (Mishra, Heide, & Cort, 1998) shows good model fit (Jöreskog & Sörbom, 1988; Kline, 2005) with $\chi^2 = 1.107$ ($p = 0.237$), RMR = 0.042, GFI = 0.926, CFI = 0.993, RMSEA = 0.027 ($p = 0.906$).

Table 1a
Sample description respondents.

	Marketing side	Supply side
Male respondents (%)	62.2	69.0
Female respondents (%)	37.8	30.9
Average age (years)	41.7	42.3
Average duration of employment in this firm (years)	10.6	10.3
Average duration of employment on the position (years)	5.5	5.6
CEO and board level (%)	61.3	77.0
Functional director level (%)	38.7	23.0

Table 1b
Sample description companies.

Key industries (%)	
Machinery	18.1
Production of construction materials	13.9
Food industry	13.9
Appliance machinery	11.1
Chemical industry	9.7
Light industry	7.6
Woodworking industry	6.9
Packaging	5.6
Other	13.1
Annual sales 2006 (m USD)	
Less than 1.5	12.2
1.5–3	30.1
3–15	28.5
More than 15	29.2
Number of employees	
Less than 50	8.8
From 50 to 100	12.2
From 100 to 500	38.1
From 500 to 1000	17.9
More than 1000	23.0

Note: Percentages may not add up to 100 due to rounding.

The construct of *customer orientation* was measured using four items from the original Narver and Slater (1990) scale. *Marketing–purchasing interaction* was measured using four existing items from Kahn and Mentzer (1998). The same article also provided four items for *marketing–purchasing collaboration.* Finally, we measure *business performance* as the firm's profitability, relative market share, and sales growth in comparison to competitors. The respondents were asked to compare the performance of their firm over the last three years vis-à-vis their main competitors (Vorhies & Harker, 2000). The items for this construct were measured on a five-point Likert-type scale anchored in ‘much worse’ and ‘much better’.

To avoid common method bias, we used dyadic data in the model test, i.e. we obtained predictor (independent) and criterion (dependent) construct scores from different respondents (Podsakoff et al., 2003). We used the purchasing side respondents for the construct of customer orientation and marketing–purchasing interaction, and marketing side respondents for the constructs of marketing–purchasing collaboration and business performance. The rationale for this lies in the fact that the marketing department is the one responsible for creation of interfunctional alignment in the firm (Kahn & Mentzer, 1998; Verhoef & Leeflang, 2009). Therefore the assessment of the firm's customer orientation and of the marketing–purchasing interaction by the purchasing side respondents is capturing the effects of the activities created by the marketing department (and not the assumed or intended effectiveness of these activities). At the same time, interfunctional collaboration between marketing and purchasing, and business performance, relate to marketing-perceived measures; thus, the dependent constructs in the nomological model are assessed by the responsible function (i.e. marketing), while its antecedents are measured by purchasing. This dataset will be referred to as the initial or ‘mixed dataset’. Furthermore, we also test this dataset against a dyadic dataset, using average scores for all items based on the average values from the answers provided by both the marketing and the purchasing respondent for the same item (Van Bruggen, Lilien, & Kacker, 2002). This dataset will be called the ‘dyadic dataset’ later.

Table 2a
EFA results (mixed dataset, original model).

Item	Component			
	1	2	3	4
M–P Collaboration 6 (M)	0.870			
M–P Collaboration 2 (M)	0.870			
M–P Collaboration 4 (M)	0.863			
M–P Collaboration 1 (M)	0.845			
Customer Orientation 4 (P)		0.856		
Customer Orientation 2 (P)		0.848		
Customer Orientation 3 (P)		0.798		
Customer Orientation 1 (P)		0.753		
M–P Interation 3 (P)			0.812	
M–P Interation 1 (P)			0.780	
M–P Interation 2 (P)			0.766	
M–P Interation 4 (P)			0.646	
Business Performance 2 (M)				0.892
Business Performance 1 (M)				0.882
Business Performance 3 (M)				0.843
% of variance	21.3	19.5	16.8	15.9

Note: Extraction method: principal component analysis. Rotation method: Varimax with Kaiser normalization, rotation converged in 5 iterations. (M) indicates answers from marketing respondents, (P) from purchasing respondents.

As Table 2b shows, all standardized factor loadings for the used items are above 0.7 (Nunnally & Bernstein, 1994) except in the case of one item for marketing–purchasing interactions. In all cases the average variance extracted (AVE) exceeds the critical level of 0.5 (Fornell & Larcker, 1981), and the composite reliabilities (CR) are higher than 0.85. Discriminant validity has been confirmed applying the Fornell and Larcker (1981) criterion (Table 3).

4. Hypotheses testing

4.1. Initial nomological model test

To test the hypotheses in our model, we used covariance-based structural equation modeling (SEM) with AMOS 7.0, after we tested the dataset for normal distribution. For our initial model tests we used the mixed purchasing–marketing dataset (see Appendix A for construct means, standard deviations, and construct correlations). Using the Maximum Likelihood (ML) indicator, the model shows a good fit with the data (Bollen, 1990; Hu & Bentler, 1995). All the structural paths were supported at significant confidence levels. No additional paths were proposed by the SEM modification indices. The overall fit measures and significance levels are: $\chi^2 = 1.125$ ($p = 0.202$), with the non-significant fit indicating that the model's covariance structure is not significantly different from the observed covariance matrix, RMR = 0.047, GFI = 0.923, CFI = 0.991, RMSEA = 0.029 ($p = 0.890$).

Table 2b
Measurement statistics (mixed dataset).

Construct/items	Standardized factor loading	Cronbach's alpha	CR
Customer orientation (purchasing)		0.90	0.89
We closely monitor and assess our level of commitment in serving customer's needs.	0.83		
Business strategies are driven by the goal of increasing customer value.	0.91		
Our competitive advantage is based on understanding customer needs.	0.73		
Our business objectives are driven by customer satisfaction.	0.77		
Marketing–purchasing interaction (Purchasing)		0.82	0.84
Meetings	0.75		
Committees/task forces	0.77		
Phone conversations	0.88		
Emails	0.60		
Marketing–purchasing collaboration (marketing)		0.89	0.90
Achieve goals collectively	0.82		
Have a mutual understanding	0.89		
Share ideas, information and/or resources	0.77		
Work together as a team	0.86		
Business performance (marketing)		0.88	0.88
Growth of comparative market share	0.91		
Sales growth	0.85		
Business profitability	0.76		

Note: CR = composite reliability; all items are measured on a 5-point Likert scale, anchored in 'strongly agree' and 'strongly disagree' (except items for business performance which were anchored in 'much worse' and 'much better').

Table 3
AVE and squared construct correlation matrix (initial dataset).

Construct	1	2	3	4
1. Customer orientation	0.66			
2. Marketing–purchasing interaction	0.18	0.57		
3. Marketing–purchasing collaboration	0.16	0.15	0.69	
4. Business performance	0.05	0.00	0.05	0.71

As Fig. 2 shows, both antecedent constructs have highly significant and positive path coefficients in relation to the focal construct of marketing–purchasing collaboration. Thus, Hypotheses 2 and 3 are supported: Customer orientation positively impacts on interdepartmental collaboration with a coefficient of 0.291 ($p<0.01$), as does marketing–purchasing interaction (0.257, $p<0.01$). In turn, marketing–purchasing interaction strongly affects customer orientation (0.425, $p = 0.00$), as expected by Hypothesis 4. Marketing–purchasing collaboration has a relatively strong and significant positive effect on firm performance (0.233, $p = 0.01$). Hypothesis 1 is therefore also supported.

4.2. Alternative model tests

Three additional model tests were conducted to ascertain if the original model could be improved upon. We identify these as the *reversed*, *dyadic*, and *saturated* approaches, and discuss each briefly in turn. Firstly, in our initial nomological model we used the mixed dataset with antecedent constructs based on respondents from the purchasing perspective, and outcome constructs based on the marketing perspective. For the *reversed* model, we tested the fit of a 'reversed' dataset, i.e. the antecedent constructs are made up from marketing respondents, while the outcome construct scores are based on purchasing respondents. As such a make-up of the dataset would have no valid conceptual grounding, it would be expected that the reversed dataset fits the model worse than the mixed dataset. The $\chi^2 = 1.383$ ($p = 0.017$) now becomes significant, and the slightly worse fit indicators support the assumption that the reversed model does not fit the data well (RMR = 0.070, GFI = 0.915, CFI = 0.976, RMSEA = 0.051 ($p = 0.452$)).

The second variant on the dataset used utilizes *dyadic* data. Noting that each item was answered by two respondents from the same company (a purchasing and a marketing manager), the data can be combined to form a dyadic score for each item, representing not the perceptions of a single manager but a more balanced perspective relating to the organization. Several ways to integrate dyadic data exist. For the purpose of this study, we used average scores (Deshpandé, Farley, & Webster, 2000; Van Bruggen et al., 2002). The resulting dyadic dataset provided the item scores shown in Table 4. Cronbach's alpha for the four constructs are improved slightly compared to the mixed dataset, as does the composite reliability. The estimates of the CFA demonstrate good model fit, with RMR = 0.042, GFI = 0.913, CFI = 0.977, RMSEA = 0.054 ($p = 0.364$); however, the fit is not as good as for the mixed data. Table 5 provides the AVEs and squared correlation matrix, indicating in all cases AVEs exceeding the critical level of 0.5, with the squared correlations being lower than the AVEs (Fornell & Larcker, 1981).

Again using ML estimation procedures, we test the model using this dyadic dataset (see Fig. 3). All hypotheses are supported, with all pathways showing slightly stronger positive path coefficients, all at

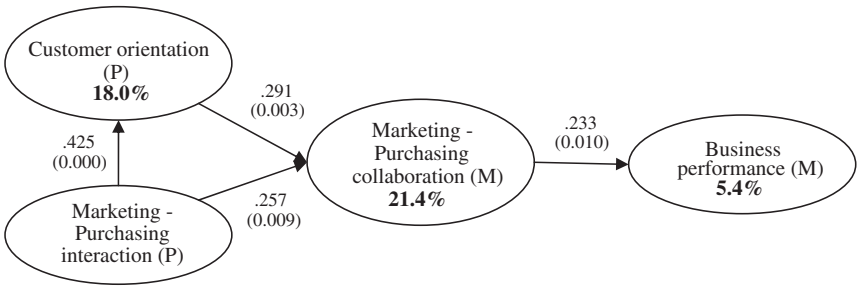


Fig. 2. Path estimation original model (mixed dataset).

$p = 0.000$ significance levels. Furthermore, the dyadic dataset also provides higher explained variances for the dependent constructs (e.g. for marketing-purchasing collaboration 43.8% for the dyadic dataset, up from 21.4% for the mixed dataset). However, the fit indices show a slightly worse fit than for the mixed dataset: RMR = 0.048, GFI = 0.908, CFI = 0.973, RMSEA = 0.058 ($p = 0.246$). Furthermore, $\chi^2 = 1.501$ ($p = 0.002$) is significant, indicating a fit which can be optimized. Therefore, our mixed dataset arguably fits the model better than the dyadic version.

Finally, a more *saturated*, i.e. enriched model was tested by adding two hypotheses linking the antecedent constructs directly to the dependent construct of business performance to qualify the impact of marketing–purchasing collaboration as a mediator construct. Note that this model had again two sub-variants, using first the mixed and then the dyadic datasets.

Two hypothetical pathways were tested: The first pathway relates to the assertion by Kahn and Mentzer (1998) that not just interfunctional collaboration but also interfunctional interactions have a direct impact on firm performance. The second hypothetical pathway relates to the fact that customer orientation, has been found to have a direct and positive impact on company outcomes (Appiah-Adu & Singh, 1998; Baker & Sinkula, 1999; Han, Kim, & Srivastava, 1998; Slater & Narver, 1994). We therefore also test the direct effect of customer orientation on business performance.

These two tentative pathways directly link the antecedent constructs and the dependent construct of business performance, without the mediating influence of the construct of marketing–purchasing collaboration. The enriched model therefore looks at the relative impact that the antecedent constructs have in terms of their direct vis-à-vis their mediated impact on company success. Fig. 4a shows the path estimations for this model using the *mixed* dataset. The model fit is improved with $\chi^2 = 1.107$ ($p = 0.237$), RMR = 0.042, GFI = 0.926, CFI = 0.993, RMSEA = 0.027 ($p = 0.906$). While the paths initially hypothesised in Hypotheses 1–3 are still significant (the path coefficients change only slightly), while Hypotheses 4 and the two new pathways are not significant. Thus, marketing–purchasing interaction has no direct effect on firm performance, thereby replicating the empirical results found in Kahn and Mentzer (1998). More interesting is the rejection of the link between customer orientation and business performance: for Russian industrial companies, customer orientation does not impact directly on performance. Although the path estimation coefficient is positive as expected, it is moderately strong at 0.202 but not significant with $p = 0.056$. Thus, any positive effect of a deep understanding of customer needs and wants, and driving customer satisfaction and value, is mediated via the construct of interfunctional alignment, in our case the collaboration of the marketing and the purchasing function. However, the link between marketing–purchasing collaboration and business performance (path estimate of 0.189) is now not significant ($p = 0.066$). Altogether, the model improves the explained variance of the criterion constructs.

We also tested the enriched model with the same six pathways with the *dyadic* dataset (Fig. 4b). While the overall model fit is adequate with RMR = 0.042, GFI = 0.913, CFI = 0.977, RMSEA = 0.054 ($p = 0.364$), the $\chi^2 = 1.430$ ($p = 0.006$) is again problematic. In this model the path between customer orientation and performance becomes significant, i.e. customer orientation is positively and significantly linked with business performance (0.336, $p < 0.01$). The additional path increases the explained variance of the business performance construct to 17.3%. However, the other new pathway again cannot be supported as the path coefficient is not significant. Furthermore, while the other path coefficients in the model change only marginally, the link between marketing–purchasing collaboration and business performance is again not significant (0.162, $p = 0.161$). This means that while the original model in Fig. 2 corroborated the mediating effect of marketing–purchasing collaboration, this effect is statistically not significant in either of the enriched models. This finding,

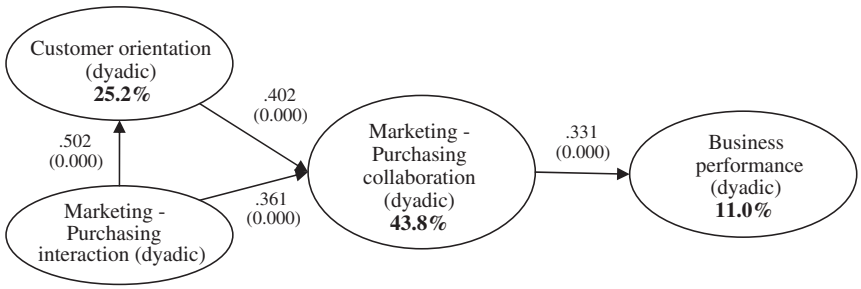
Table 4
Measurement statistics (dyadic dataset).

Construct/item	Standardized factor loading	Cronbach's alpha	CR
Customer orientation (dyadic)		0.92	0.91
We closely monitor and assess our level of commitment in serving customer's needs.	0.86		
Business strategies are driven by the goal of increasing customer value.	0.91		
Our competitive advantage is based on understanding customer needs.	0.80		
Our business objectives are driven by customer satisfaction.	0.81		
Marketing–purchasing interaction (dyadic)		0.81	0.83
Meetings	0.79		
Committees/task forces	0.85		
Phone conversations	0.81		
Emails	0.51		
Marketing–purchasing collaboration (dyadic)		0.92	0.93
Achieve goals collectively	0.91		
Have a mutual understanding	0.91		
Share ideas, information and/or resources	0.79		
Work together as a team	0.88		
Business performance (dyadic)		0.91	0.91
Growth of comparative market share	0.90		
Sales growth	0.91		
Business profitability	0.81		

Note: CR = composite reliability; all items are measured on a 5-point Likert scale, anchored in 'strongly agree' and 'strongly disagree' (except items for business performance which were anchored in 'much worse' and 'much better').

Table 5
AVE and squared correlation matrix (dyadic dataset).

Variable	1	2	3	4
1. Customer orientation	0.72			
2. Marketing–purchasing interaction	0.25	0.57		
3. Marketing–purchasing collaboration	0.34	0.32	0.76	
4. Business performance	0.16	0.04	0.10	0.77



Note : (dyadic) indicates construct being measured as the average values of the scores from purchasing and marketing respondents

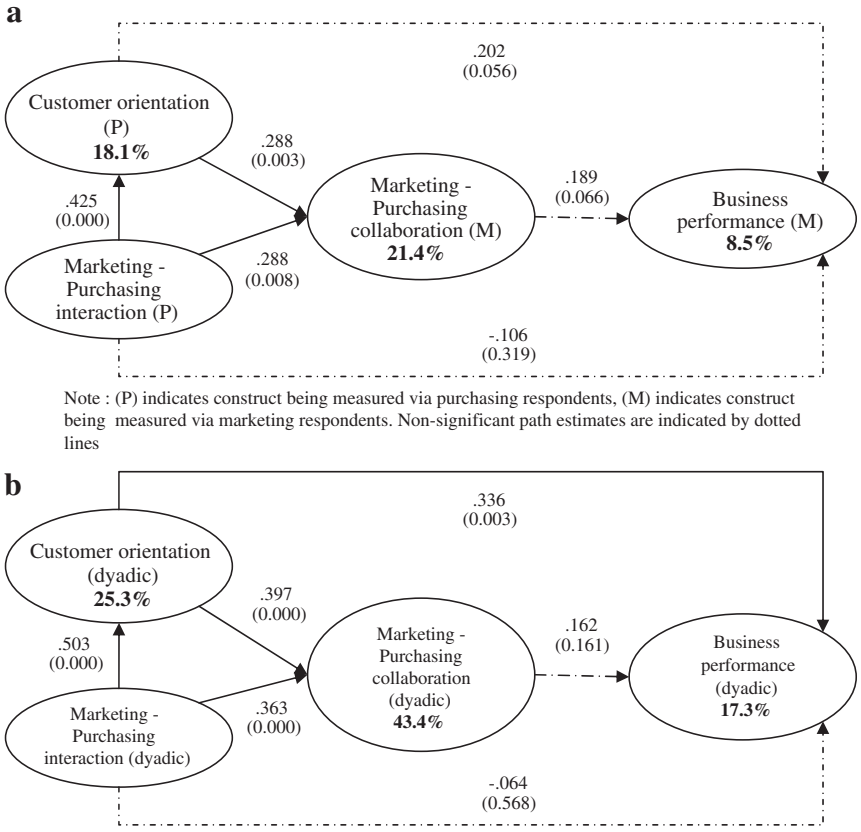
Fig. 3. Path estimation original model (dyadic dataset).

plus the significant χ^2 provide some difficulties in interpreting the results of the dyadic enriched model vis-à-vis other models, especially due to the fact that χ^2 indices are difficult to interpret for structural equation models with relatively small samples (Fornell & Larcker, 1981; Kaplan, 1988). The overall best fit between model and dataset is therefore provided by the original model with the mixed dataset (see Fig. 2). However, the other models provide additional interpretation options.

5. Conclusions and implications

5.1. Theoretical conclusions and limitations

This study examined the extent to which purchasing and marketing managers collaborate in order to achieve superior business performance. We used data from 148 paired respondents from Russian industrial companies so as to overcome the problems commonly associated with common methods bias. As hypothesized, our results provide evidence for the role that both antecedents play in determining marketing–purchasing collaboration, as well as for the mediating effect that customer orientation has between marketing–purchasing interaction and marketing–purchasing collaboration. Furthermore, our empirical results demonstrate that marketing–purchasing collaboration has a significant and positive effect on business performance. This finding supports recent suggestions that there exist dual relationships between how active and influential a marketing department is, and the development of a customer orientation (Verhoef & Leeflang, 2009). Our results are in line with findings by Han et al. (1998) which show that having a customer orientation positively impacts both directly and indirectly on performance, with the indirect (mediated) path being the dominant one. However, this effect was not robust in our study as the extended model did not corroborate this positive relationship. This may indicate that some of the hypothesized relationships which are based on a



Note : (P) indicates construct being measured via purchasing respondents, (M) indicates construct being measured via marketing respondents. Non-significant path estimates are indicated by dotted lines

Note : (dyadic) indicates construct being measured as the average values of the scores from purchasing and marketing respondents

Fig. 4. a. Path estimation enriched model (mixed dataset). b.Path estimation enriched model (dyadic dataset).

nomological model that was developed from research mostly pertaining to developed/Western economies do not yet adequately describe the transitional state of the Russian economy but refer to an 'end-state' of development of market-based exchanges in an economy. As such, this qualifies Slater and Narver's (1994) findings that the business environment does not affect the link between customer orientation and business performance.

Tests with different datasets show the robustness of these results but also indicate questions for further research. Direct relationships between customer orientation and marketing–purchasing interaction on business performance were not generally supported, thus underlining the importance of marketing–purchasing collaboration as a mediating construct in achieving business performance. However, some of the alternative models provide an indication that there exists a direct link between customer orientation and firm performance (the path estimates on several data models were only just not significant) which complements the mediated effect that customer orientation has via fostering more interfunctional alignment. These ambivalent results suggest that additional research needs to be undertaken in order to understand the development of these direct vis-à-vis indirect (mediated) relationships of customer orientation to company performance, e.g. by a longitudinal study which takes into account the changing transitional characteristics of the Russian economy. Furthermore, intra-industry datasets may find different relationships depending on the developmental stage of these industries in adapting to market-based exchanges. This would require larger datasets to be gathered, where the effects of control variables such as industry, company size, or the length of time that a company has been in business can be assessed.

Our analyses also show that different datasets using multiple respondents can be used to cross-validate the testing of the nomological model for robustness. These tests outline some limitations of our research, namely, the fact that although a dyadic dataset improves the explained variance within the overall model, the fit indices, especially χ^2, become problematic. Furthermore, we use an average score method to derive dyadic data. Further research is necessary which also uses the fit and directionality information inherent in dyadic data (Deshpandé et al., 1993; Van Bruggen et al., 2002).

5.2. Managerial implications

An important managerial implication of our work is that we have demonstrated that in order to achieve improved business performance, companies need to improve both their understanding of their business partners (especially their counterparts' buyers) through developing a customer orientation, and the internal relationships between purchasing and marketing. These internal and external facing capabilities are considered to be sources of particular risk in more recently developing economies such as Russia, where under earlier conditions of being a more centrally planned economy, such competencies were not required. We used a cross-industry dataset from Russia to understand these issues with regard to whether or not they impact on overall business performance. The study has identified both interaction between the marketing and purchasing functions and also customer orientation as being antecedents of the level of collaboration between the same two functions, which in turn influences business performance.

The empirical results of this study provide strong support for the hypotheses that have been developed. If managers operating in a Russian environment have the objective of improving their business performance – as they clearly do, given the freedom that they now have to do so – then they do need to focus on internal collaboration between their marketing and purchasing departments, given the linkages between the two. As customer-facing resources (information, access, etc.) are usually controlled by the marketing department, this makes it necessary for the marketing department to be proactive in fostering such interfunctional alignment. Moreover, companies need to focus on improving both customer orientation and the interactions between the marketing and purchasing departments, given the direct effect that these have on collaboration, plus the indirect effect of interaction via customer orientation.

Our original thinking in tackling this research project was that Russian management practices, in some sense, lagged behind those in more mature economies, given the fact that their transition to freer managerial practices have only relatively recently taken place. What we find interesting is that the robustness of our results provide only weak this thinking: the results that we report in this paper have tended to reflect what is found in traditional western economies, albeit, less clearly developed. As in the west, there is evidence to support the mediating role that marketing–purchasing collaboration plays in achieving superior performance. Unlike the west, there seems no direct link between customer orientation and superior business performance. This indicates to us that Russian managers can and indeed should consider traditional business practices used by Western companies and employ them in Russia's transitional economy. However, the fact that no direct link between customer orientation and firm performance was found was unexpected. As this relationship is linked to an underlying concept of marketing, and also linked to the concept of market orientation, further studies need to explore this counter-intuitive finding.

Appendix A

Means, standard deviations and correlations of the constructs (mixed dataset).

Constructs	Mean	Standard deviation	1	2	3	4
1.Customer orientation	4.55	0.59	1			
2.Marketing–purchasing interaction	3.73	1.16	0.425**	1		
3.Marketing–purchasing collaboration	4.03	0.89	0.399**	0.382**	1	
4.Business performance	0.67	0.78	0.233**	0.052**	0.229**	1

**$p<0.01$.
Note: all constructs are scored on a scale of 1 to 5, except for business performance which is scored on a scale of −2 to +2.

Means, standard deviations and correlations of the constructs (dyadic dataset).

Constructs	Mean	Standard deviation	1	2	3	4
1.Customer orientation	4.51	0.57	1			
2.Marketing–purchasing interaction	3.58	0.99	0.503**	1		
3.Marketing–purchasing collaboration	4.11	0.77	0.580**	0.562**	1	
4.Business performance	0.72	0.69	0.398**	0.196**	0.321**	1

**$p<0.01$.
Note: all constructs are scored on a scale of 1 to 5, except for business performance which is scored on a scale of −2 to +2.

References

Achrol, R. S. (1997). Changes in the theory of interorganizational relations in marketing: toward a network paradigm. *Journal of the Academy of Marketing Science*, *25*(1), 56−71.
Achrol, R. S., & Kotler, P. (1999). Marketing in the network economy. *Journal of Marketing*, *63*(4), 146−163.
Alderson, W. (1965). *Dynamic marketing behavior: A functionalist theory of marketing.* Homewood, IL: Richard D. Irwin, Inc.
Alderson, W., & Martin, M. W. (1965). Toward a formal theory of transactions and transvections. *Journal of Marketing Research*, *2*(2), 117−127.
Alegre, J., & Chiva, R. (2004). Alignment between product innovation and competitive priorities. *International Journal of Business Performance Management*, *6*(3/4), 287−297.
Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411−423.
Anderson, J. C., Håkansson, H., & Johanson, J. (1994). Dyadic business relationships within a business network context. *The Journal of Marketing*, *58*(4), 1−15.
Appiah-Adu, K., & Singh, S. (1998). Customer orientation and performance: A study of SMEs. *Management Decision*, *36*(6), 385−394.

Atuahene-Gima, K., Li, H., & De Luca, L. M. (2006). The contingent value of marketing strategy innovativeness for product development in Chinese new technology ventures. *Industrial Marketing Management*, *35*, 359—372.

Auh, S., & Menguc, B. (2005). Top management team diversity and innovativeness: The moderating role of interfunctional coordination. *Industrial Marketing Management*, *34*(3), 249—261.

Awuah, G. B. (2008). Analyzing customer-orientation practices of firms from a wider perspective. *Journal of Business-to-Business Marketing*, *15*(1), 45—70.

Baker, S. (2003). *New consumer marketing.* Chicester: John Wiley & Sons.

Baker, W. E., & Sinkula, J. M. (1999). The synergistic effect of market orientation and organizational learning on organizational performance. *Journal of the Academy of Marketing Science*, *27*(4), 411—427.

Barclay, D. W. (1991). Interdepartmental conflict in organizational buying: The impact of the organizational context. *Journal of Marketing Research*, *28*(2), 145—159.

Biemans, W. G., Brenčič, M. M., & Malshe, A. (2010). Marketing–sales interface configurations in B2B firms. *Industrial Marketing Management*, *39*, 183—194.

Blomqvist, K., & Levy, J. (2006). Collaboration capability: A focal concept in knowledge creation and collaborative innovation in networks. *International Journal Management Concepts and Philosophy*, *2*(1), 31—48.

Bollen, K. A. (1990). Overall fit in covariance structure models: Two types of sample size effects. *Psychological Bulletin*, *107*(2), 256—259.

Brady, M. K., & Cronin, J. J., Jr. (2001). Customer orientation: Effects on customer service perceptions and outcome behaviours. *Journal of Service Research*, *3*(3), 241—251.

Butler, B., & Purchase, S. (2008). Use of social capital among Russian managers of a new generation. *Industrial Marketing Management*, *37*, 531—538.

Cadogan, J. W., Sundqvist, S., Salminen, R. T., & Puumalainen, K. (2005). Export marketing, interfunctional interactions, and performance consequences. *Journal of the Academy of Marketing Science*, *33*(4), 520—535.

Campbell, A. (1998). Do internal departmental relationships influence buyers' expectations about external supply partnerships? *Journal of Business & Industrial Marketing*, *13*(3), 199—214.

Casciaro, T., & Piskorski, M. J. (2005a). Power imbalance, mutual dependence and constraint absorption: A closer look at resource dependence theory. *Administrative Science Quarterly*, *50*, 167—199.

Casciaro, T., & Piskorski, M. J. (2005b). Power imbalance, mutual dependence, and constraint absorption: A closer look at resource dependence theory. *Administrative Science*, *50*(2), 167—199.

Chan, K. B. (2000). *Chinese business networks: State, economy and culture.* Copenhagen S, Demark, Nordic Institute of Asian Studies: Prentice Hall, Pearson Education Asia Pte. Ltd.

Chimhanzi, J. (2004). The impact of integration mechanisms on marketing/HR. *Journal of Marketing Management*, *20*, 713—740.

Clarke, N. (2006). The relationships between network commitment, its antecedents and network performance. *Management Decision*, *44*(9), 1183—1205.

Cox, A. (2004). Business relationship alignment: On the commensurability of value capture and mutuality in buyer and supplier exchange. *Supply Chain Management: An International Journal*, *9*(5), 410—420.

Da Silva, R. V., Davies, G., & Naudé, P. (2002). Assessing customer orientation in the context of buyer/supplier relationships using judgmental modelling. *Industrial Marketing Management*, *31*(3), 241—252.

Danneels, E. (2003). Tight-loose coupling with customers: The enactment of customer orientation. *Strategic Management Journal*, *24*(6), 559—576.

Day, G. S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, *58*(4), 37—52.

Day, G. S., & Van den Bulte, C. (2002). Superiority in customer relationship management: Consequences for competitive advantage and performance. Report No. 01-123. Cambridge, MA: Marketing Science Institute.

Deshpandé, R., Farley, J. U., & Webster, F. E. (1993). Corporate culture, customer orientation, and innovativeness in Japanese firms: A quadrad analysis. *Journal of Marketing*, *57*(1), 23—37.

Deshpandé, R., Farley, J. U., & Webster, F. E. (2000). Triad lessons: Generalizing results on high performance firms in five business-to-business markets. *International Journal of Research in Marketing*, *17*, 353—362.

Diamantopoulos, A., & Siguaw, J. A. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. *British Journal of Management*, *17*(4), 263—282.

Diamantopoulos, A., & Winklhofer, H. M. (2001). Index construction with formative indicators: An alternative to scale development. *Journal of Marketing Research*, *38* (2), 269—277.

Ehret, M. (2004). Managing the trade-off between relationships and value networks. Towards a value-based approach of customer relationship management in business-to-business markets. *Industrial Marketing Management*, *33* (6), 465—473.

Ellinger, A. (2000). Improving marketing/logistics cross-functional collaboration in the supply chain. *Industrial Marketing Management*, *29*, 85—96.

Eng, T. -Y. (2006). An investigation into the mediating role of cross-functional coordination on the linkage between organizational norms and SCM performance. *Industrial Marketing Management*, *35*(6), 762—773.

Foley, A., & Fahy, J. (2004). Towards a further understanding of the development of market orientation in the firm: A conceptual framework based on the market-sensing capability. *Journal of Strategic Marketing*, *12*(4), 219—230.

Ford, D. (2002). *Understanding business marketing and purchasing: An interaction approach.* Cengage Learning EMEA.

Ford, D., Gadde, L. -E., Håkansson, H., & Snehota, I. (2003). *Managing business relationships.* Chichester: John Wiley & Sons.

Ford, D., & Håkansson, H. (2006). The idea of business interaction. *IMP Journal*, *1*(1), 4—20.

Ford, D., & McDowell, R. (1999). Managing business relationships by analyzing the effects and value of different actions. *Industrial Marketing Management*, *28*(5), 429—442.

Ford, D., & Saren, M. (2001). *Managing and marketing technology*, 2nd edition. London: Thomson.

Fornell, C., & Larcker, D. L. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, *18*(3), 39—50.

Goebel, D. J., Marshall, G. W., & Locander, W. B. (2003). Enhancing purchasing's strategic reputation: Evidence and recommendations for future research. *Journal of Supply Chain Management*, *39*(2), 4—13.

Gosselin, D. Ph., & Bauwen, G. A. (2006). Strategic account management: Customer value creation through customer alignment. *Journal of Business and Industrial Marketing*, *21*(6), 376—385.

Griffin, A., & Hauser, J. R. (1992). Patterns of communication among marketing, engineering and manufacturing – a comparison between two new product teams. *Management Science*, *38*(3), 360—373.

Griffin, A., & Hauser, J. (1996). Integrating R&D and marketing: A review and analysis of the literature. *Journal of Product Innovation Management*, *13*(2), 191—215.

Gunesekaran, A. (1999). Just-in-time purchasing: An investigation for research and application. *International Journal of Production Economics*, *59*, 77—84.

Håkansson, H. (Ed.). (1982). *International marketing and purchasing of industrial goods — An interaction approach.* Chichester: John Wiley & Sons.

Håkansson, H., & Ford, D. (2002). How should companies interact in business networks? *Journal of Business Research*, *55*(2), 133—139.

Han, J. K., Kim, N., & Srivastava, R. K. (1998). Market orientation and organizational performance: Is innovation a missing link? *Journal of Marketing*, *62*(4), 30—45.

Heikkila, J. (2002). From supply to demand chain management: Efficiency and customer satisfaction. *Journal of Operations Management*, *20*, 746—767.

Henneberg, S. C., Mouzas, S., & Naudé, P. (2009). Going beyond customers — A business segmentation approach using network pictures to identify network segments. *Journal of Business Market Management*, *3*(2), 91—113.

Hitt, M. A., Hoskisson, R. E., & Nixon, R. D. (1993). A mid-range theory of interfunctional integration, its antecedents and outcomes. *Journal of Engineering and Technology Management*, *10*, 161—185.

Hsieh, Y. -C., Chiu, H. -C., & Hsu, Y. -C. (2008). Supplier market orientation and accommodation of the customer in different relationship phases. *Industrial Marketing Management*, *37*(4), 380—393.

Hu, L. -T., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling* (pp. 76—99). Thousand Oaks, CA: University Press.

Humphreys, M. A., Williams, M. R., & Goebel, D. J. (2009). The mediating effect of supplier oriented purchasing on conflict in inter-firm relationships. *Journal of Business & Industrial Marketing*, *24*(3/4), 198—206.

Ivens, B., Pardo, C., & Tunisini, A. (2009). Organizing and integrating marketing and purchasing in business markets. *Industrial Marketing Management*, *38*(8), 847—1024.

Jansson, H., Johanson, M., & Ramström, J. (2007). Institutions and business networks: A comparative analysis of the Chinese, Russian and West European markets. *Industrial Marketing Management*, *36*, 955—967.

Jaworski, B. J., & Kohli, A. K. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing*, *57*(3), 53—70.

Johanson, M. (2007). Networks in transition. *Proceedings of the 23th IMP conference, Manchester, 2007*.

Jöreskog, K. G., & Sörbom, D. (1988). *LISREL7: A guide to the program and applications.* Chicago, IL: SPSS Inc.

Jüttner, U., Christopher, M., & Baker, S. (2007). Demand chain management-integrating marketing and supply chain management. *Industrial Marketing Management*, *36*(3), 377—392.

Jüttner, U., Gosell, J., & Christopher, M. G. (2006). Demand chain alignment competence — Delivering value through product life cycle management. *Industrial Marketing Management*, *35*, 989—1001.

Kahn, K., & Mentzer, J. (1996). Logistics and interdepartmental integration. *International Journal of Physical Distribution & Logistics Management*, *26*(8), 6—14.

Kahn, K., & Mentzer, J. (1998). Marketing's integration with other departments. *Journal of Business Research*, *42*(1), 53—62.

Kahn, K., Reizenstein, R. C., & Rentz, J. O. (2004). Sales-distribution interfunctional climate and relationship effectiveness. *Journal of Business Research*, *57*, 1085—1091.

Kaplan, D. (1988). The impact of specification error on the estimation, testing, and improvement of structural equation models. *Multivariate Behaivoral Research*, *23*, 69—86.

Kent, J. L., Jr. (1996). Leverage^2: Interfunctional co-ordination between logistics and information technology. *International Journal of Physical Distribution & Logistics Management*, *26*(8), 63—78.

Kline, R. B. (2005). *Principles and practice of structural equation modeling*, 2nd ed. New York: Guildford Press.

Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: The construct, research propositions and managerial implications. *Journal of Marketing*, *54*(2), 1—18.

Kouchtch, S., & Afanasiev, A. (2001). The network approach in marketing in Russia. *Proceedings of the 30th EMAC conference: Rethinking European marketing*. Bergen, Norway: Norwegian Business School.

Lambert, D., & Cooper, M. (2000). Issues in supply chain management. *Industrial Marketing Management*, *29*(1), 65—83.

Lawrence, P., & Lorsch, J. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly*, *12*, 1—30.

Lawrence, P., & Lorsch, J. (1986). *Organizations and environments.* Cambridge, MA: Harvard Business School Press.

Lim, J., & Reid, D. (1992). Vital cross-functional linkages with marketing. *Industrial Marketing Management*, *21*, 159–165.
Lorentz, H., & Ghauri, P. N. (2010). Demand supply network opportunity development process in emerging markets: Positioning for strategy realization in Russia. *Industrial Marketing Management*, *39*, 240–251.
MacKenzie, S. B., Podsakoff, P. M., & Jarvis, C. B. (2005). The problem of measurement model misspecification in behavioral and organizational research and some recommended solutions. *The Journal of Applied Psychology*, *90*(4), 710–730.
Matthyssens, P., Vandenbempt, K., & Weyns, S. (2009). Transitioning and co-evolving to upgrade value offerings: A competence based marketing view. *Industrial Marketing Management*, *38*(5), 504–512.
Menguc, B., & Auh, S. (2005). A test of strategic orientation formation versus strategic orientation implementation: The influence of TMT functional diversity and inter-functional coordination. *Journal of Marketing Theory and Practice*, *13*(2), 4–19.
Menkhaus, D., Yakunina, A., & Herz, P. (2004). Food retailing and supply linkages in the Russian Federation. *Journal of East–West Business*, *10*(3), 53–73.
Menon, A., Jaworski, B., & Kohli, A. (1997). Product quality: Impact of interdepartmental interactions. *Journal of the Academy of Marketing Science*, *25*(3), 187–200.
Meunier-FitzHugh, K. L., & Piercy, N. F. (2006). Exploring collaboration between sales and marketing. *European Journal of Marketing*, *41*(7/8), 939–955.
Mishra, D. P., Heide, J. B., & Cort, S. G. (1998). Information asymmetry and levels of agency relationships. *Journal of Marketing Research*, *35*(3), 277–295.
Moenaert, R. K., Souder, W. E., DeMeyer, A., & Deschoolmeester, D. (1994, Januaryy). R&D marketing integration mechanisms, communication flows, and innovation success. *Journal of Product Innovation Management*, *11*, 31–45.
Möller, K. K., & Halinen, A. (1999). Business relationships and networks: Managerial challenge of network era. *Industrial Marketing Management*, *28*(5), 413–427.
Möller, K., & Rajala, A. (1999). Organizing marketing in an industrial high-tech firms: The role of internal marketing relationships. *Industrial Marketing Management*, *28*(5), 521–535.
Morgan, N. A., & Piercy, N. F. (1998). Interactions between marketing and quality at the SBU level: Influences and outcomes. *Journal of the Academy of Marketing Science*, *26*(3), 190–208.
Mouzas, S. (2006). Efficiency versus effectiveness in business networks. *Journal of Business Research*, *59*(10–11), 1124–1132.
Mouzas, S., & Naudé, P. (2007). Network mobilizer. *Journal of Business and Industrial Marketing*, *22*(1), 62–71.
Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, *23*(2), 226–242.
Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, *54*(4), 20–35.
Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, *5*(1), 14–37.
Nonaka, I., Umemoto, K., & Senoo, D. (1996). From information processing to knowledge creation: A paradigm shift in business management. *Technology in Society*, *18*(2), 203–218.
Nunnally, J., & Bernstein, I. (1994). *Psychometric theory*. New York: McMillan.
O'Neal, C. R. (1989). JIT procurement and relationship marketing. *Industrial Marketing Management*, *18*(1), 55–63.
Paulraj, A., & Chen, I. J. (2007). Environmental uncertainty and strategic supply management: A resource dependence perspective and performance implications. *Journal of Supply Chain Management*, *43*(3), 29–42.
Peng, M. W., & Luo, Y. (2000). Managerial ties and firm performance in a transition economy: The nature of a micro–macro link. *Academy of Management Journal*, *43*(3), 486–501.
Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper and Row.
Piercy, N. F. (2009). Strategic relationships between boundary-spanning functions: Aligning customer relationship management with supplier relationship management. *Industrial Marketing Management*, *38*(8), 857–864.
Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *The Journal of Applied Psychology*, *88*(5), 879–903.
Powell, T. C. (1992). Organizational alignment as competitive advantage. *Strategic Management Journal*, *13*(2), 119–134.
Prenkert, F., & Hallen, L. (2006). Conceptualizing, delineating and analyzing business networks. *European Journal of Marketing*, *40*(3/4), 384–407.
Reagans, R., & Zuckerman, E. W. (2001). Networks, diversity, and productivity: The social capital of corporate R&D teams. *Organization Science*, *12*(4), 502–517.
Ritter, T. (1999). The networking company: Antecedents for coping with relationships and networks effectively. *Industrial Marketing Management*, *28*(5), 467–479.
Ritter, T., & Gemünden, H. G. (2003). Network competence: Its impact on innovation success and its antecedents. *Journal of Business Research*, *56*(9), 745–755.
Ritter, T., Wilkinson, I. F., & Johnston, W. J. (2004). Managing in complex business networks. *Industrial Marketing Management*, *33*(3), 175–183.
Rodriguez, N. G., Perez, M. J., & Gutierrez, J. A. T. (2005). Interfunctional trust as a determining factor of a new product performance. *European Journal of Marketing*, *41*(5/6), 678–702.
Ruekert, R., & Walker, O. (1987). Marketing's interaction with other functional units: A conceptual framework and empirical evidence. *Journal of Marketing*, *51*, 1–19.
Salmi, A. (1996). Russian networks in transition: Implications for managers. *Industrial Marketing Management*, *25*(1), 37–45.
Sheth, J., Sharma, A., & Gopalkrishnan, R. (2009). Why integrating purchasing with marketing is both inevitable and beneficial. *Industrial Marketing Management*, *38*(8), 865–871.
Sheth, J., Sisodia, R., & Sharan, A. (2000). The antecedents and consequences of customer-centric marketing. *Journal of the Academy of Marketing Science*, *28*(1), 55–66.
Slater, S. F., & Narver, J. C. (1994). Does competitive environment moderate the market orientation–performance relationship? *Journal of Marketing*, *58*(1), 46–55.
Song, M., Neeley, S. M., & Zhao, Y. (1996). Managing R&D-marketing integration in the new product development process. *Industrial Marketing Management*, *25*(6), 545–553.
Souder, W. E., & Moenaert, R. K. (2007). Integration marketing and R&D project personnel within innovation projects: An information uncertainty model. *Journal of Management Studies*, *29*(4), 485–512.
Srivastava, R., Shervani, T., & Fahey, L. (1998). Market-based assets and shareholder value: A framework for analysis. *Journal of Marketing*, *62*, 2–18.
Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509–533.
Trkman, P., Štemberger, M., Jaklic, J., & Groznik, A. (2007). Process approach to supply chain integration. *Supply Chain Management—An International Journal*, *12*(2), 116–128.
Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, *41*(4), 464–477.
Urban, G. L. & Hauser, J. R. (1993). *Design and Marketing of New Products*. Prentice-Hall, Second Edition.
Van Bruggen, G. H., Lilien, G. L., & Kacker, M. (2002). Informants in organizational marketing research: Why use multiple informants and how to aggregate responses. *Journal of Marketing Research*, *39*, 469–478.
Verhoef, P. C., & Leeflang, P. S. H. (2009). Understanding the marketing department's influence within the firm. *Journal of Marketing*, *73*, 14–37.
Vorhies, D. W., & Harker, M. (2000). The capabilities and performance advantages of market-driven firms: An empirical investigation. *Australian Journal of Management*, *25*(2), 145–171.
Williams, A. J., Giunipero, L. C., & Henthorne, T. L. (2006). The cross-functional imperative: The case of marketing and purchasing. *Journal of Supply Chain Management*, *30*(3), 28–33.
Wind, Y. (2008). A plan to invent the marketing we need today. *Sloan Management Review*, *49*(4), 20–28.
Wind, Y., & Robertson, T. (1983). Marketing strategy: New directions for theory and research. *Journal of Marketing*, *47*, 12–25.

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