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Purpose: This paper investigates the impact of key supplier relationship management (KSRM) – understood as an aggregated supply chain management (SCM) process in the upstream direction – on the overall level of the execution of SCM within organizations.

Methodology: A conceptual model is developed from a theoretical framework and proposes the capability to do KSRM as a mediator between internal and external SCM resources and SCM execution. A survey of 174 managers representing different supply chain stages is used to test the model through variance-based structural equation modelling.

Findings: The findings reveal that external SCM resources directly affect the capability to do KSRM. Nevertheless, internal resources show a considerable indirect impact through external resources and can thus be considered an indirect determinant. The capability to do KSRM in turn impacts upon the level of SCM execution, measured in terms of the integration of business processes, directly and substantially, as well as mediating the effect between SCM resources and the level of SCM execution.

Value: The main contribution of this paper is to empirically demonstrate the potential of KSRM for enhancing the level of SCM execution within organizations and consequently the level of integration in supply chains, leading to higher customer and shareholder value.

Keywords: Supplier management (relations), supply chain management, partial least squares

Article Classification: Research paper

Introduction

Interorganizational relationships play a major role in marketing channels (e.g., Jüttner and Peck, 1998). Thus, Krapfel *et al.* (1991) suggested, quite early on, a strategic approach for managing this type of partnership. Taking fashion retailing as one example, supplier management is seen as a means to achieve supply chain responsiveness (Doyle *et al.*, 2006). Taking into account that the number of suppliers of such companies ranges from a few hundred to many thousands (Statista, 2015), the focus on those suppliers that are very important to the overall success of a retailer, is essential (e.g., Lindgreen *et al.*, 2013).

Over the past 20 years, academic research, for example in the fields of supply chain management, purchasing and marketing, has examined how value is created from close buyer-supplier relationships (for an overview see e.g., Hingley *et al.*, 2015). From a retailer's perspective, Corsten and Kumar (2005) have shown how suppliers can benefit from retailer-specific supplier management approaches which are based on cooperative relationships.

Within the business-to-business relationship literature, this has been widely discussed under the umbrella term of 'buyer-seller relationships'. Lately, Forslund (2014) has shown how the level of logistics performance depends on the quality of the relationships between retailers and their suppliers. Hamister (2012) has shown that strategic retail supplier partnerships positively affect key supplier performance.

Overall, supply chains include upstream as well as downstream relations with customers and suppliers, and supply chain managers have to decide whether or not to work with upstream and downstream partners, as well as the degree of exchange they want to have with these partners (Giannakis and Louis, 2011). These decisions refer to the strategic dimension of supply chain management (SCM), i.e. the 'co-ordination of a strategic and long-term co-operation among co-makers in the total supply chain for the development and

production of products, both in production and procurement and in product and process innovation' (Schnetzler and Schönsleben, 2007, 498; see also Howgego, 2002).

In the following, we want to concentrate on the management of relationships with those suppliers that organizations consider to be very important, or key suppliers. We define key supplier relationship management (KSRM) as the management of familiar relationships between a company and a supplier, in which the two parties share a significant level of business process integration and view themselves as an extension of their firms (Lambert *et al.*, 1996). In that sense, key supplier relationships are recognized as high involvement relationships in which the benefits outweigh the costs of being in the relationship (Lambert *et al.*, 1996; Gadde and Snehota, 2000). This differentiated view on supplier relationships and their management allows firms to achieve the advantages of being responsive, agile, fast and profitable (Doyle *et al.*, 2006).

Given the importance of KSRM for successful SCM, this paper is concerned with aspects of KSRM in the upstream or supplier direction, and considers it as a highly aggregated business process (Lambert, 2010), as opposed to the view that it may be separated into further sub-processes proposed by Park *et al.* (2010), for example.

So far, the relevant literature has provided limited support and empirical evidence for the importance of KSRM for SCM and its execution. Recently, Miocevic and Crnjak-Karanovic (2012) showed how KSRM practices leverage on the link between supply chain orientation and organizational buying effectiveness. Further, Teller *et al.* (2012) found some indication of the importance and relevance of KSRM to the overall explanation of supply chain execution and its power to improve the level of implementation of SCM within an organization. Forslund (2014) identified a positive outcome for logistics performance if retailers manage their supplier relationships adequately. She looked, however, at the effect of KSRM on SCM and not so much at the inputs to KSRM.

Based on these preliminary findings regarding KSRM's potential for SCM, this paper aims to (1) investigate how the execution of SCM resources within a firm affects its capability to do KSRM and (2) determine the impact of KSRM on the level of the execution of SCM within an organization. In this context, we define capability as the ability of a firm to marshal and use its resources to effect a desired output change, as opposed to the firm possessing within it the competence to actually do so (Loasby, 1998; Penrose, 2009). According to Kähkönen and Lintukangas (2012), capabilities in a supply chain context help to create superior performance as well as customer value. This may also include – through supplier relationship management – the involvement of suppliers in certain core processes such as new product development (Kotzab *et al.*, 2015).

Thus, the value of this paper is that it provides further understanding and explanation of KSRM's role as a crucial SCM process, as well as pointing out the necessity of focusing on the management of upstream supply chain relationships and their importance for overall supply chain performance. To achieve these research aims, we present the following line of argumentation in our paper.

After this introduction, in which we have shown the relevance of KSRM as an integral part of SCM, we present a conceptual model and hypotheses for SCM and KSRM, and our methodology for the research study. An analysis and discussion of the study findings follows, and the paper is rounded off with implications for future research.

Conceptual model

Due to the limited amount of empirical research on the relationship between KSRM and the execution of SCM and due to the absences of a measurement scale for KSRM, we focus here on the core element of supplier-related relationship management, which is the fundamental capability of supply chain partners to set up relationships with their core strategic partners.

This refers to the planning and implementation element of the KSRM process (Choi and Hartley, 1996, Liker and Choi, 2004) and is labelled the 'capability to do KSRM'.

The literature sees the capability to do KSRM as an SCM-related process (Lambert *et al.*, 2005) that supports the integration of processes between upstream supply chain partners on a strategic level (Krapfel *et al.*, 1991; Hogarth-Scott and Parkinson, 1993; Lambert *et al.* 1998; Kotzab *et al.*, 2011; Hamister, 2012). More specifically, Teller *et al.* (2012) provided an empirical indication that the capability to do KSRM – over and above other SCM-related processes – plays a substantial role in changing the level of the execution of SCM within an organization. Based on Kotzab *et al.* (2015) SCM execution we define as the implementation of SCM within a firm and thus as the level of a firm's internal and external integration of business processes with customers and suppliers for the purpose of creating value and improving the total performance of the supply chain (Lambert *et al.*, 1998; Frohlich and Westbrook, 2001; see appendix). Based on the tight link between relationship management – and as such KSRM - and the level of implementation of SCM within an organization, or execution of SCM (Olsen and Ellram, 1997; Lambert, 2010), we thus hypothesize that:

H_1/γ_{13}: The greater the capability to do KSRM (ξ_3)*, the higher is the level of SCM execution* (η_1).

Earlier we defined key supplier relations as high-involvement relationships. Looking at the various phases of a relationship development process, as suggested by Dwyer *et al.* (1987), we consider such relationships to be at the fourth stage, that is, the commitment level, by which point the partners have shared values and governance structures as well as having made joint investments in the relationship. Heide (1994) called this kind of cooperation a form of bilateral non-market governance in the stage of relationship maintenance, with long-term incentive systems, joint activities, team responsibilities and a mutual interest in continuing the relationship.

SCM processes and thus the capability to do KSRM are determined by the internal 'fitness' of a firm, and in the following are labelled as internal SCM-related resources (Kotzab *et al.*, 2015). Such resources are essential to the enabling of SCM-related processes and the execution of SCM (e.g., Lambert, 2004). Internal SCM-related resources are provided from within an organization and do not necessarily require collaboration with other supply chain partners. They include resources such as top management support, human and financial resources, internal goal setting before commencing work on SCM projects, the ability of the staff to use SCM-related IT systems, and those systems' appropriateness, internal guidelines for data exchange with supply chain partners, personnel who are trained to contribute to SCM projects, cross-functional project groups for SCM, the expertise to set up supply chain partnerships and the willingness within the organization to integrate with other supply chain partners (Boeck and Fosso Wamba, 2008; Sandberg and Abrahamsson, 2010; see appendix). These resources of supply chain partners are used to strengthen relationships within supply chains and thus – in combination with other SCM-related processes – enable firms to do KSRM (Lambert *et al.*, 1998). By drawing on Droge *et al.*'s (2004), Sandberg and Abrahamsson's (2010) and Hamister's (2012) notions on the role resources play in creating capabilities in the supply chain that can ultimately enhance competitiveness, we propose that these internal SCM resources are prerequisites and thus antecedents of the capability to do KSRM, leading to our second hypothesis:

H_2/γ_{31}: The more internal SCM resources are made available in an organization (ξ_1), the greater is its capability to do KSRM (ξ_3).

Internal SCM resources are closely related to a firm being externally 'fit' for SCM, in other words to the existence of external SCM-related resources (Droge *et al.*, 2004). External resources – unlike internal ones – result from coordination and collaborative activities between supply chain partners (Kotzab *et al.*, 2015). Examples are collaboration

agreements with other supply chain partners, interorganizational project groups, interorganizational information systems, awareness of decision-related interdependencies between organizations, mutual trust, the existence of long-term relationships with other supply chain partners, an equal distribution of power, risks and benefits in the chain, mutual dependencies, the exchange of information on stock levels, forecasting and product development, and similarities in corporate cultures and decision-making processes (Prajogo and Olhager, 2012; Hingley, 2005; Theodoras *et al.*, 2005; Boeck and Fosso Wamba, 2008; Bobot, 2011; Forslund, 2014; see appendix). Lambert (2004) proposed a close link between the existence of external SCM resources – as operationalized above – in an organization and the capability to execute SCM processes such as KSRM. Based on Lavie's (2006) notions on (shared) resources being a driver of network relationships and a key element of network alliances, we thus propose:

H_3/γ_{32}: The more external SCM resources are made available in an organization (ξ_2), the greater is its capability to do KSRM (ξ_3).

Both internal and external SCM resources are seen to affect the SCM execution level – in the same way as they affect the capability to do KSRM directly (Lambert *et al.*, 2005; Corsten and Kumar, 2005; Miocevic and Crnjak-Karanovic, 2012). Also, following Lambert's (2004, 2010) view of a hierarchical order, internal SCM resources may affect external SCM resources directly as well (γ_{21}). Nevertheless, these effects are not of primary importance when investigating the role of KSRM in SCM execution and are thus not at the centre of the following empirical evaluation and subsequent discussion of the role of KSRM.

The proposed linkages between the three hypotheses build a conceptual model which posits that the capability to do KSRM plays a central role in influencing the level of execution of SCM. The integral role of KSRM, as part of other SCM-related processes, was proposed and discussed by Lambert (2004) and Kotzab *et al.* (2006a). So far, though, the literature has

provided no empirical proof of KSRM's power to mediate between internal and external SCM resources and SCM execution. Thus, we propose the following final two hypotheses:

H_{4a}: The capability to do KSRM significantly mediates the effect of internal SCM resources on the execution of SCM (γ_{11}).

H_{4b}: The capability to do KSRM significantly mediates the effect of external SCM resources on the execution of SCM (γ_{12}).

To test the significance of our KSRM construct in terms of being an antecedent and providing the leverage for SCM execution, we undertook an empirical study, the methodology of which is detailed in the following section.

Methodology

Empirical research design

In order to empirically investigate our conceptual model and test our hypotheses, we conducted a survey targeting the senior managers of large organizations in the manufacturing, trade and service industries. A structured, self-administered questionnaire, containing 45 questions using nominal and ordinal scales, served as the research instrument.

Due to excellent access opportunities to organizations and the high level of SCM implementation in Austria, we defined our population of interest as the 790 biggest Austrian organizations in the retail and manufacturing sectors as per the ÖNACE classification. This empirical research setting accounts for a typical central European and highly developed supply chain environment. From that population, we selected 200 organizations at random. To minimize the negative consequences of common sources of survey errors – in particular non-response error – we followed the tailored design method (TDM) proposed by Dillman *et al.* (2009). We pre-notified potential respondents over the phone, not only in order to gain their

commitment to participate in the survey but also to ensure their suitability as informants, that is, that they were senior managers responsible for logistics and SCM. As we understand our problem as an interorganizational one, we opted for a single-informant approach, referring to Kumar *et al.* (1993). We solved the selection problem by choosing senior logistics and supply chain managers as the respondents. We deemed them appropriate due to the very specific nature of our questions and thus the high level of expertise, along with access to very specific information, required to answer them. This approach is also in line with the notions of Huber and Power (1985), as the managers selected were the most knowledgeable and experienced in terms of the phenomenon of interest. Furthermore, the problem of disagreements in the data as a result of the different knowledge and perceptions of the key informants was reduced.

The survey was then sent by mail to the selected respondents representing the 200 selected organizations. After several extensive waves of reminding and motivating the identified informants to complete our survey, we ended up with 174 usable questionnaires, making a response rate of 87%.

The final sample (n, 174) consisted of senior managers representing manufacturing companies (39%), trading companies (29%) and other organizations belonging to the service, building and energy sectors (32%). Comparing the industry affiliations of the respondents with the distribution of industry affiliations in the random sample, we found no significant difference (Chi-squared test: 2.811; $p>0.05$). Thus we can conclude that our sample represents the population of interest sufficiently well. Finally, it is worth mentioning that our respondents had, on average, been with their organizations for more than 12 years (standard deviation (s), 11.5) and in their current job role for 5.6 years on average (s, 6.1). We can thus conclude that the answers to our questions are based on several years' experience within the organizations in question and within the field of logistics and supply chain management.

Applied scales and analysis

The conceptual model was tested based on the scales developed by Kotzab ***et al.*** (2006a, 2006b), who provided detailed descriptions of the various items standing behind the constructs. Details on the scales behind the constructs internal and external SCM resources as well as SCM execution together with the related literature can be found in the both the conceptual model section and the appendix.

We measured internal/external SCM resources and the execution of SCM reflectively. We draw support for this decision from the notions of Jarvis ***et al.*** (2003): We consider the direction of causality from the latent construct towards the indicators for all of our constructs. This is of particular importance for our dependent construct SCM execution, given Lee and Cadogan's (2013) critique on treating formative constructs as dependent ones. Based on previous work applying those scales (e.g., Kotzab ***et al.***, 2006a, Kotzab ***et al.***, 2006b), we expected the items behind each of the constructs to be correlated. Furthermore, we saw a surplus meaning of the construct on top of those of the indicators, and consequently we did not deem that a scale score based on the indicator ratings would adequately represent the constructs. Finally, discarding any of the indicators behind the constructs would not change the meanings of the constructs themselves.

The capability to do KSRM was measured by a single-item construct and was based on Lambert ***et al.***'s (1998) discussions of KSRM-related processes as a central part of SCM. The rationale behind this decision was that KSRM as a concept has not received considerable attention in the literature, nor has it seen wide implementation in practice. Furthermore, we consulted the decision guidelines on applying single versus multi-item scales in management research, proposed by Fuchs and Diamantopoulos (2009). According to those, we can be confident in using a single-item measurement approach for the capability to do KSRM because (1) the construct has a quite concrete and one-dimensional nature, (2) the primary

research objective is to gain a general and explorative view of the construct's role within the concept of SCM, (3) the sample population is quite diverse and (4) the sample size is rather limited, due to the challenge involved in motivating SCM executives to participate in such studies. Consequently, we argue, in line with Hair Jr *et al.* (2009), that, if a construct with only one measure is acceptable, then any related models are therefore acceptable, along with any conclusions drawn.

To test the proposed hypotheses, we applied variance-based structural equation modelling (SEM) using partial least squares (PLS) (Chin, 1998; Tenenhaus *et al.*, 2005), with the help of the software SmartPLS (Ringle *et al.*, 2015). Compared to covariance-based SEM approaches, the PLS approach has several advantages related to the level of measurement and multinormality (Hair Jr *et al.*, 2012). We specifically applied the variance-based approach because we were testing a rather complex model based on a relatively small sample (Chin and Newsted, 1999). Further, we were not attempting to test a theory but to predict SCM-related antecedents of KSRM, and the impact of KSRM on SCM execution (Hair Jr *et al.*, 2011). Lastly, our study has a quite exploratory character and thus requires a variance-based rather than covariance-based SEM approach (Hair Jr *et al.*, 2011).

When looking at the results of our tests of the measurement validity of our constructs, we can see that all factor loadings are highly significant ($p<0.001$) (see Appendix). Their sizes exceed or are very close to the suggested threshold of 0.70 (Hulland, 1999). The internal consistency of all the constructs can also be considered satisfactory, with both the Cronbach's alpha and the composite reliability values greater than 0.70 (Nunnally, 1978; Fornell and Larcker, 1981). The average variances extracted (AVEs) are in the range of 0.5 or higher, meaning that the degree of convergent validity is acceptable (Bagozzi and Yi, 1988). For all constructs, the AVE is larger than the highest of the squared intercorrelations with the other constructs in the measurement model, which means that they are sufficiently

discriminant from each other (see Table 1). When examining the cross-loadings, we can see that all factor loadings on the assigned construct are higher than all loadings on the non-assigned constructs (Chin, 1998; Hair Jr *et al.*, 2014). We can thus conclude that there is a sufficient local fit of the data and that the two resource constructs are sufficiently discriminant from each other.

Insert Table 1 here

To determine whether industry affiliation had a significant impact on our results, we introduced a control variable (service/retail and non-service/retail-related affiliation) into our model. We found the impact of our control variable to be insignificant (t-value, $<<1.96$) and controlling for this variable did not alter the significance levels of our proposed effects as presented in the following section.

Since we had gathered the data based on self-reports, we considered the issue of common method bias by following the notions of Podsakoff *et al.* (2003). In terms of the structure of the research instrument, we clearly separated the questions. Further, we did not reveal the specific purpose of our project and assured confidentiality to our respondents. Finally, we conducted a confirmatory factor analysis subsuming all indicators under one latent construct, that is, a common method variance factor. The resulting model showed a suboptimal global fit with the empirical data (root mean squared error of approximation, 0.116 (cut-off value: <0.05); Tucker-Lewis index, 0.719 (cut-off value: >0.9); comparative fit index >0.738 (cut-off value: >0.9); CMIN/df, 3.313 (cut-off value: <2)), indicating that our results are not affected by common method bias.

Results

Model estimation

The interpretation of the coefficients of determination (r^2) indicates that almost two thirds of the variance of the construct external SCM resources (ξ_2) is explained by the internal resources (ξ_2) (r^2, .647). Both types of SCM resources (ξ_1 and ξ_2) explain the capability to do KSRM (ξ_3) by slightly less than one third (r^2, .229). Finally, the construct SCM execution (η_1) exhibits an r^2 value of 0.364, meaning that all three constructs (ξ_1, ξ_2 and ξ_3) contribute considerably to the explanation of the variance of this construct.

Interpreting the direct effects exclusively, we can see that the internal SCM resources (ξ_1) significantly and substantially affect the external SCM resources (ξ_2) (γ_{21}, .804; p<.001) whereas the impact on SCM execution (η_1) is significant but weak (γ_{11}, .242; p<.05). The internal resources show no significant effect on the capability to do KSRM (ξ_3) (γ_{31}, .050; p>.05).

The external SCM resources (ξ_2) affect SCM execution (η_1) only slightly, with the effect being significant but weak (γ_{12}, .238; p<.05). They also show a significant medium-sized effect on the capability to do KSRM (ξ_3) (γ_{32}, .437; p<.01), which in turn significantly affects the execution of SCM (η_1), also with a medium-sized effect (γ_{13}, .237; p<.001). To conclude, we can confirm hypotheses H_1 (capability to do KSRM (ξ_3)-7execution of SCM (η_1)) and H_3 (external SCM resources (ξ_2)-7capability to do KSRM (ξ_3)) but not H_2 (internal SCM resources (ξ_1)-7capability to do KSRM (ξ_3)) when exclusively interpreting the direct effects.

Taking into account the total effect, by additionally considering the indirect effects between constructs and thus considering (partial) mediating effects, we find that the internal SCM resources (ξ_1) have significant and strong effects on both the capability to do KSRM (ξ_3)

(.402; p<.01) and the execution of SCM (η_1) (.529; p<.001), while the external SCM resources (ξ_2) also affect the execution of SCM (η_1) significantly and substantially (.342; p<.001). These results again support hypotheses H_1 and H_3 but also suggest confirming H_2 in terms of an internal SCM-resources having an indirect rather than a direct effect on the capability to do KSRM.

Mediation test

To test for mediation by our core construct capability to do KSRM (see H_{4a} and H_{4b}), we applied Baron and Kenny's (1986) four-step procedure: Firstly, we tested the direct effect between the two constructs of SCM resources (ξ_1 and ξ_2) and SCM execution (η_1). Both resource constructs show a significant effect on SCM execution (ξ_1-7η_1, .535***; ξ_2-7η_1, .551***). Secondly, we evaluated the effects between the resource constructs and the mediator, and obtained significant results (ξ_1-7ξ_3, .419***; ξ_2-7ξ_3, .482***). Thirdly, we assessed whether the proposed mediator affects the endogenous constructs. The effect is again significant (ξ_3-7η_1, .447***). Finally, we examined the indirect effects (ξ_1-7ξ_3-7η_1, ξ_2-7ξ_3-7η_1) and tested whether they were different from zero, by applying Sobel's test (1982). We found Sobel's *z* to be 4.916 for the indirect effect of the internal SCM resources construct and 5.429 for the external SCM resources construct; thus, we conclude that the indirect effects are significantly different from zero.

Further to the abovementioned four steps, we calculated the size and strength of the mediating effects by using the measure 'variance accounted for' (VAF), based on Shrout and Bolger's (2002) formula. We found the VAF value of the mediated construct internal SCM resources to be 0.259 and that of external SCM resources to be 0.281. Thus, we found the mediating power of our KSRM construct to be medium-sized. Having obtained significant results in each of the four steps, we can confirm both H_{4a} and H_{4b} and conclude that the

effects of SCM internal and external resources on SCM execution are significantly mediated by the capability to do KSRM.

Discussion and conclusions

In this research, we have specifically discussed and empirically evaluated the link between resources in vertical network partnerships related to supply chain partnering, and the capability to manage upstream relationships with important stakeholders or key suppliers and subsequently increase the level of SCM execution within the organization. The paper thus makes several contributions to theory and practice:

One main contribution is that we have provided empirical evidence on the tight link between SCM resources and network capabilities such as relationship management – in our case upstream with suppliers, in what we term KSRM. This finding is in line with Lavie's (2006) view on the contribution of non-shared and shared resources to interfirm networks, their integration, and subsequently their competitive advantage. It also confirms the notions of Corsten and Kumar (2005), who showed how retailers in the consumer goods industry can gain benefit from collaborative relationships with their suppliers. In our paper, we have extended the view to other industries and shown which generic internal and external resources impact such collaborative relationships, across industries and supply chain stages.

We have shown that internal SCM resources represent an indirect determinant, and external SCM resources are a direct requirement and thus antecedent, of a firm's capability to do KSRM. This finding provides support for Lambert's (2004) hierarchical order and emphasizes the importance of preparing an organization internally for supply chain partnering and KSRM, and then developing collaborative resources with supply chain partners, in order to render the organization capable of doing KSRM. This finding also complements the notions of Miocevic and Crnjak-Karanovic (2012), who saw a more general supply chain

orientation – along with SCM resources – as the prerequisites of KSRM. For practice, this finding emphasizes the necessity that supply chain partners be fit for SCM internally, and then (more importantly) externally, in order for organizations to be capable of following the principle of the 'keyness of relationships' on the supply side (Ivens *et al.*, 2009).

Another main contribution of this paper is that we have found that the capability to do KSRM is a core requirement for increasing the level of SCM implementation within a company. This supports Teller *et al.*'s (2012) work, which found that KSRM is a core SCM-related process. This substantial effect also supports the central role played by relationship management in general, and supplier relationship management specifically, in the integration within vertical interorganizational networks, as proposed by Paulraj *et al.* (2012) and Hamister (2012). As a consequence, looking upstream in terms of relationship management with key suppliers, the latter can be considered an important success factor for SCM, albeit not the only one (Hogarth-Scott and Parkinson, 1993; Hamister, 2012; Forslund, 2014). However, the relevance of KSRM for supply chain partnering in this study stems from the strong and substantial mediation, and consequently leveraging, of the relationship between getting the firm internally and externally fit for SCM, and executing SCM (Lambert, 2004; Hingley, 2005; Bobot, 2011). As we have found a considerable link between the capability to do KSRM and SCM execution, we conclude – based on the notions of Frohlich and Westbrook (2001) and Li *et al.* (2006) – that it is KSRM that ultimately and indirectly drives the performance of firms. This conclusion clearly underlines the importance of the practice of relationship management within the supply chain, downstream towards customers, but more particularly upstream towards suppliers.

The findings of our study also support the bidirectional character of SCM, as noted by authors such as Cousins and Menguc (2006). From a practical point of view the results clearly indicate the need for supply chain managers to focus their collaborations upstream as

well as downstream, and by doing so to develop and maintain the focal firm's collaborative relationships with both customers and suppliers. Our findings support the required demand-side perspective.

In summary, given the limited state of the KSRM literature, our explanatory findings call for a stronger consideration of the concept in SCM and service research. Firms should look upstream as well as downstream when developing relationship management within their supply chains.

Limitations and future research

As with all research, there are some limitations in this study. Despite the fact that the context-specific characteristics of the Central European supply chain setting in which our empirical study was embedded can be regarded as typical of those in developed economies, the context does need to be taken into account when interpreting the data. Future studies in other settings – for example, developing countries – could help to confirm our findings. Future research in other industries, and focusing on smaller organizations than the ones represented by our respondents, might also stimulate more specific results.

The construct of KSRM was operationalized as the key ability to set up relationships with important strategic suppliers. Future research could look beyond that and develop a more comprehensive scale of KSRM, including aspects of maintaining relationships and differentiating between different kinds of key suppliers.

References

Bagozzi, R.P. and Yi, Y. (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science,* Vol. 16 No. 1, pp. 74-94.

Baron, R.M. and Kenny, D.A. (1986), "The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology,* Vol. 51 No. 6, pp. 1173-1182.

Bobot, L. (2011), "Functional and dysfunctional conflicts in retailer-supplier relationships", *International Journal of Retail and Distribution Management,* Vol. 39 No. 1, pp. 25-50.

Boeck, H. and Fosso Wamba, S. (2008), "RFID and buyer-seller relationships in the retail supply chain", *International Journal of Retail and Distribution Management,* Vol. 36 No. 6, pp. 433-460.

Chin, W.W. (1998), "The partial least squares approach to structural equation modelling", in Marcoulides,G.A. (Ed.), *Modern Methods for Business Research*, Lawrence Erlbaum Associates, Hillsdale, NJ, pp. 295-336.

Chin, W.W. and Newsted, P.R. (1999), "Structural equation modelling: Analysis with small samples using partial least squares", in Hoyle,R.H. (Ed.), *Statistical Strategies for Small Sample Research*, Sage, Thousand Oaks, CA, pp. 307-341.

Choi, T.Y. and Hartley, J.L. (1996), "An exploration of supplier selection practices across the supply chain", *Journal of Operations Management,* Vol. 14 No. 4, pp. 333-343.

Cigolini, R., Cozzi, M. and Perona, M. (2004), "A new framework for supply chain management conceptual model and empirical test", *International Journal of Operations & Production Management,* Vol. 24 No. 1, pp. 7-41.

Corsten, D. and Kumar, N. (2005), "Do suppliers benefit from collaborative relationships with large retailers? an empirical investigation of efficient consumer response adoption", *Journal of Marketing,* Vol. 69 No. 3, pp. 80-94.

Cousins, P.D. and Menguc, B. (2006), "The implications of socialization and integration in supply chain management", *Journal of Operations Management,* Vol. 24 No. 5, pp. 604-620.

Dillman, D.A., Smyth, J.D. & Christian, L.M. (2009), *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method,* John Wiley and Son, Hoboken, NJ.

Doyle, S.A., Moore, C.M. and Morgan, L. (2006), "Supplier management in fast moving fashion retailing", *Journal of Fashion Marketing and Management,* Vol. 10 No. 3, pp. 272-281.

Droge, C., Jayaram, J. and Vickery, S.K. (2004), "The effects of internal versus external integration practices on time-based performance and overall firm performance", *Journal of Operations Management,* Vol. 22 No. 6, pp. 557-573.

Dwyer, F.R., Schurr, P.H. and Oh, S. (1987), "Developing buyer-seller relationships", *Journal of Marketing,* Vol. 51 No. 2, pp. 11-27.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research,* Vol. 18 No. 1, pp. 39-40.

Forslund, H. (2014), "Exploring logistics performance management in supplier/retailer dyads", *International Journal of Retail and Distribution Management,* Vol. 42 No. 3, pp. 205-218.

Frohlich, M.T. and Westbrook, R. (2001), "Arcs of integration: An international study of supply chain strategies", *Journal of Operations Management,* Vol. 19 No. 2, pp. 185-200.

Fuchs, C. and Diamantopoulos, A. (2009), "Using single-item measures for construct measurement in management research", *Die Betriebswirtschaft,* Vol. 69 No. 2, pp. 195-210.

Gadde, L. and Snehota, I. (2000), "Making the most of supplier relationships", *Industrial Marketing Management,* Vol. 29 No. 4, pp. 305-306.

Giannakis, M. and Louis, M. (2011), "A multi-agent based framework for supply chain risk management", *Journal of Purchasing and Supply Management,* Vol. 17 No. 1, pp. 23-31.

Hair Jr, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. (2009), *Multivariate Data Analysis. A Global Perspective,* Pearson, Upper Saddle River/NJ.

Hair Jr, J.F., Ringle, C.M. and Sarstedt, M. (2011), "PLS-SEM: Indeed a silver bullet", *Journal of Marketing Theory and Practice,* Vol. 19 No. 2, pp. 139-151.

Hair Jr, J.F., Sarstedt, M., Ringle, C.M. and Mena, J.A. (2012), "An assessment of the use of partial least squares structural equation modeling in marketing research", *Journal of the Academy of Marketing Science,* Vol. 40 No. 3, pp. 414-433.

Hair Jr, J.F., Hult, G.T.M., Ringle, C.M. & Sarstedt, M. (2014), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM),* Sage, Thousand Oaks (CA).

Hamister, J.W. (2012), "Supply chain management practices in small retailers", *International Journal of Retail and Distribution Management,* Vol. 40 No. 6, pp. 427-450.

Heide, J.B. (1994), "Interorganizational governance in marketing channels", *Journal of Marketing,* Vol. 58 No. 1, pp. 71-85.

Hingley, M.K. (2005), "Power to all our friends? living with imbalance in supplier – retailer relationships", *Industrial Marketing Management,* Vol. 34 No. 8, pp. 848-858.

Hingley, M., Lindgreen, A. and Grant, D.B. (2015), "Intermediaries in power-laden retail supply chains: An opportunity to improve buyer – supplier relationships and collaboration", *Industrial Marketing Management,* Vol. forthcoming.

Hogarth-Scott, S. and Parkinson, S.T. (1993), "Retailer-supplier relationships in the food channel: A supplier perspective", *International Journal of Retail and Distribution Management,* Vol. 21 No. 8, pp. 12-19.

Howgego, C. (2002), "Maximising competitiveness through the supply chain", *International Journal of Retail and Distribution Management,* Vol. 30 No. 12, pp. 603-605.

Huber, G.P. and Power, D.J. (1985), "Retrospective reports of strategic-level managers: Guidelines for increasing their accuracy", *Strategic Management Journal,* Vol. 6 No. 2, pp. 171-180.

Hulland, J. (1999), "Use of partial least squares (PLS) in strategic management research: A review of four recent studies", *Strategic Management Journal,* Vol. 20 No. 2, pp. 195-204.

Ivens, B.S., Pardo, C., Salle, R. and Cova, B. (2009), "Relationship keyness: The underlying concept for different forms of key relationship management", *Industrial Marketing Management,* Vol. 38 No. 5, pp. 513-519.

Jarvis, C.B., Mackenzie, S.B., Podsakoff, P.M., Mick, D.G. and Bearden, W.O. (2003), "A critical review of construct indicators and measurement model misspecification in marketing and consumer research", *Journal of Consumer Research,* Vol. 30 No. 2, pp. 199-218.

Jüttner, U. and Peck, H. (1998), "Investigating corporate strategies for supplier management in retailing companies- a framework for analysis", *Journal of Strategic Marketing,* Vol. 6 No. 3, pp. 223-239.

Kähkönen, A. and Lintukangas, K. (2012), "The underlying potential of supply management in value creation", *Journal of Purchasing and Supply Management,* Vol. 18 No. 2, pp. 68-75.

Kotzab, H., Friis, A. and Busk, T. (2006a), "The implementation of supply chain management within organizations: Construct, measurement and explorative empirical discussion", *Die Unternehmung,* Vol. 60 No. 2, pp. 89-104.

Kotzab, H., Grant, D.B. and Friis, A. (2006b), "Supply chain management implementation and priority strategies in danish organisations", *Journal of Business Logistics,* Vol. 27 No. 2, pp. 273-300.

Kotzab, H., Teller, C., Grant, D.B. and Sparks, L. (2011), "Antecedents for the adoption and execution of supply chain management", *Supply Chain Management: An International Journal,* Vol. 16 No. 4, pp. 231-245.

Kotzab, H., Teller, C., Grant, D.B. and Friis, A. (2015), "Supply chain management resources, capabilities and execution", *Production Planning & Control,* Vol. 26 No. 7, pp. 525-542.

Krapfel, R.E., Salmond, D. and Spekman, R. (1991), "A strategic approach to managing Buyer-Seller relationships", *European Journal of Marketing,* Vol. 25 No. 9, pp. 22-37.

Kumar, N., Stern, L.W. and Anderson, J.C. (1993), "Conducting interorganizational research using key informants", *Academy of Management Journal,* Vol. 36 No. 6, pp. 1633-1651.

Lambert, D.M., Emmelhainz, M.A. and Gardner, J.T. (1996), "Developing and implementing supply chain partnerships", *International Journal of Logistics Management,* Vol. 7 No. 2, pp. 1-17.

Lambert, D.M., Cooper, M.C. and Pagh, J.D. (1998), "Supply chain management: Implementation issues and research opportunities", *International Journal of Logistics Management,* Vol. 9 No. 2, pp. 1-19.

Lambert, D.M. (2004), "The eight essential supply chain management processes", *Supply Chain Management Review,* Vol. 8 No. 6, pp. 18-26.

Lambert, D.M., García-Dastugue, S.J. and Croxton, K.L. (2005), "An evaluation of process-oriented supply chain management frameworks", *Journal of Business Logistics,* Vol. 26 No. 1, pp. 25-51.

Lambert, D.M. (2010), "Customer relationship management as a business process", *Journal of Business & Industrial Marketing,* Vol. 25 No. 1, pp. 4-17.

Lee, N. and Cadogan, J.W. (2013), "Problems with formative and higher-order reflective variables", *Journal of Business Research,* Vol. 66 No. 2, pp. 242-247.

Li, S., Ragu-Nathan, B., Ragu-Nathan, T. and Subba Rao, S. (2006), "The impact of supply chain management practices on competitive advantage and organizational performance", *Omega,* Vol. 34 No. 2, pp. 107-124.

Liker, J.K. and Choi, T.Y. (2004), "Building deep supplier relationships", *Harvard Business Review,* Vol. 82 No. 12, pp. 104-113.

Lindgreen, A., Vanhamme, J., van Raaij, E.M. and Johnston, W.J. (2013), "Go configure: The mix of purchasing practises to choose for your supply base", *California Management Review,* Vol. 55 No. 2, pp. 72-96.

Loasby, B.J. (1998), "The organisation of capabilities", *Journal of Economic Behavior & Organization,* Vol. 35 No. 2, pp. 139-160.

Miocevic, D. and Crnjak-Karanovic, B. (2012), "The mediating role of key supplier relationship management practices on supply chain orientation. the organizational buying effectiveness link", *Industrial Marketing Management,* Vol. 41 No. 1, pp. 115-124.

Nunnally, J.C. (1978), *Psychometric Theory,* McGraw-Hill, New York.

Olsen, R.F. and Ellram, L.M. (1997), "A portfolio approach to supplier relationships", *Industrial Marketing Management,* Vol. 26 No. 2, pp. 101-113.

Park, J., Shin, K., Tai-Woo Chang and Park, J. (2010), "An integrative framework for supplier relationship management", *Industrial Management & Data Systems,* Vol. 110 No. 4, pp. 495-515.

Paulraj, A., Chen, I.J. and Lado, A.A. (2012), "An empirical taxonomy of supply chain management practices", *Journal of Business Logistics,* Vol. 33 No. 3, pp. 227-244.

Penrose, E. (2009), *The Theory of the Growth of the Firm,* Oxford University Press, Oxford.

Podsakoff, P.M., MacKenzie, S.B., Jeong-Yeon Lee and Podsakoff, N.P. (2003), "Common method biases in behavioral research: A critical review of the literature and recommended remedies", *Journal of Applied Psychology,* Vol. 88 No. 5, pp. 879-903.

Prajogo, D. and Olhager, J. (2012), "Supply chain integration and performance: The effects of long-term relationships, information technology and sharing, and logistics integration", *International Journal of Production Economics,* Vol. 135 No. 1, pp. 514-522.

Ringle, C.M., Wende, S. & Becker, J.-. (2015), *SmartPLS 3 (Http://Www.Smartpls.Com),* SmartPLS GmbH, Boenningstedt.

Sandberg, E. and Abrahamsson, M. (2010), "The role of top management in supply chain management practices", *International Journal of Retail and Distribution Management,* Vol. 38 No. 1, pp. 57-69.

Schnetzler, M.J. and Schönsleben, P. (2007), "The contribution and role of information management in supply chains: A decomposition-based approach", *Production Planning & Control,* Vol. 18 No. 6, pp. 497-513.

Shrout, P.E. and Bolger, N. (2002), "Mediation in experimental and nonexperimental studies: New procedures and recommendations", *Psychological Methods,* Vol. 7 No. 2, pp. 422-445.

Sobel, M.E. (1982), "Asymptotic intervals for indirect effects in structural equations models", in Leinhart,S. (Ed.), *Sociological Methodology*, Jossey-Bass, San Francisco, pp. 290-312.

Statista (2015), *Number of Suppliers of Selected Fashion Retailers.* Available at: http://de.statista.com/statistik/daten/studie/247506/umfrage/anzahl-der-lieferanten-von-ausgewaehlten-modeunternehmen/. Accessed on 26.05.2015. Statista, New York.

Teller, C., Kotzab, H. and Grant, D.B. (2012), "Improving the execution of supply chain management in organizations", *International Journal of Production Economics,* Vol. 140 No. 2, pp. 713-720.

Tenenhaus, M., Vinzi, V.E., Chatelin, Y.M. and Lauro, C. (2005), "PLS path modeling", *Computational Statistics & Data Analysis,* Vol. 48 No. 1, pp. 159-205.

Theodoras, D., Laios, L. and Moschuris, S. (2005), "Improving customer service performance within a food supplier-retailers context", *International Journal of Retail and Distribution Management,* Vol. 33 No. 5, pp. 353-370.

Table 1. Convergent validity, composite reliability and discriminant validity measures

Latent constructs	ρ/α	ξ_1	ξ_2	ξ_3	η_1
Internal SCM resources (ξ_1)	.948/.940	(.706)			
External SCM resources (ξ_2)	.942/.933	.646	(.660)		
Capability to do KSRM (ξ_3)	n/a	.160	.228	(1)	
Execution of SCM (η_1)	.872/.780	.280	.298	.200	(.695)

Caption: α, Cronbach's alpha; ρ, composite reliability; average variance extracted values (AVE) are presented on the diagonal; squared correlation matrix for latent constructs shown below the diagonal.

Appendix

Construct Indicator (*'to what degree…'*)		Measures/Indices μ (σ)	 λ_n (t-value)
Internal SCM resources (ξ_1) (Lambert *et al.*, 1998; Cigolini *et al.*, 2004; Kotzab *et al.*, 2006a)			
x_{11}	…are personnel / human resources made available for SCM issues?	3.04 (1.14)	.767 (19.817)
x_{12}	…are financial resources made available for SCM issues?	2.87 (1.14)	.783 (22.645)
x_{13}	…does the top management of your company support SCM issues?	2.87 (1.15)	.843 (36.665)
x_{14}	…were internal goals set up before SCM projects were launched?	3.13 (1.23)	.843 (36.453)
x_{15}	…are employees able to use IT systems for SCM issues?	3.40 (1.29)	.778 (27.92)
x_{16}	…does your company have IT systems capable of processing data from other SCM partners?	3.12 (1.30)	.741 (19.68)
x_{17}	…is there an agreement on guidelines with respect to the exchange of information with other companies in the supply chain?	2.85 (1.3)	.732 (17.464)
x_{18}	…are employees trained in order that they may contribute to SCM projects?	2.92 (1.14)	.827 (33.995)
x_{19}	…does your company have project groups consisting of people from different functional areas?	3.26 (1.28)	.730 (16.81)
x_{110}	…is there the necessary expertise in your company to set up and maintain supply chain relationships?	3.49 (.95)	.734 (15.108)
x_{111}	…is your company willing to integrate with other supply chain members?	3.36 (1.10)	.753 (22.754)
x_{112}	…is the cross-functional execution of internal business processes important within your company?	4.01 (.94)	.683 (10.151)
x_{113}	…are supply chain processes evaluated within your company?	2.87 (1.42)	.805 (27.69)

External SCM resources (ξ_2) (Lambert *et al.*, 1998; Cigolini *et al.*, 2004)			
x_{21}	…is there collaborative agreement on the evaluation of supply chain processes with other supply chain members?	2.86 (1.21)	.833 (36.591)
x_{22}	…is there an agreement on collaborative goals with other supply chain members?	2.95 (1.21)	.787 (27.903)
x_{23}	…are there supply chain project groups in place with other supply chain members?	2.55 (1.22)	.828 (41.961)
x_{24}	…is your company aware that its decisions may affect other supply chain members?	3.52 (1.10)	.758 (20.951)
x_{25}	…is your company willing to trust other supply chain members?	3.11 (1.08)	.766 (20.225)
x_{26}	…does your company have long-term relationships with other supply chain members?	3.63 (1.11)	.718 (17.798)
x_{27}	…is there an equal distribution of power among all members of your supply chain?	2.59 (.90)	.664 (12.292)
x_{28}	…is the distribution of risks and benefits even between your company and other members of your supply chain?	2.65 (.92)	.687 (15.002)
x_{29}	…is there mutual dependency between your company and other members of your supply chain?	3.19 (1.14)	.620 (11.777)
x_{210}	…does your company exchange information regarding stock levels with other supply chain members?	2.87 (1.35)	.820 (32.909)
x_{211}	…does your company exchange forecasting information with other supply chain members?	2.96 (1.30)	.738 (15.961)
x_{212}	…does your company exchange product development information with other supply chain members?	2.61 (1.27)	.681 (9.875)
x_{213}	…is your corporate culture similar to that of other supply chain members?	2.65 (1.02)	.696 (16.232)
x_{214}	…is your corporate decision making similar to that of other supply chain members?	2.43(.95)	.739(18.557)

Construct Indicator (*"to what degree…"*)		Measures/Indices μ (σ)	 λ_n
Capability to do KSRM (ξ_3) (Lambert *et al.*, 1998)			
x_{31}	…is your company capable of building up multiple cooperations with important strategic suppliers?	3.75 (1.02)	n/a
Execution of SCM (η_1) (Lambert *et al.*, 1998; Frohlich and Westbrook, 2001)			
y_{11}	…has your company integrated sourcing, logi… …keting, product development and other areas with your suppliers?	2.84 (1.11)	.877 (35.865)
y_{12}	…has your company integrated sourcing, logistics, …arketing …duct development and other areas with your customers?	2.73 (1.19)	.862 (28.344)
y_{13}	…has your company internally integrated its sourcing, logi… …keting, product development and other areas?	3.29 (1.09)	.757 (14.677)

Caption: x, y, indicator or manifest variable; ξ, η, construct or latent (endogenous) variable: μ, mean value; σ, standard deviation; λ_n, factor loadings.

Notions: Ratings based on a five-point scale, verbally and numerically anchored (1, to a very low degree; 5, to a very high degree); sample size: n=174; all factor loadings show highly significant *t*-values.

Dear Professor Towers, dear Neil,

Again we wish to thank you for the opportunities to revise our manuscript in the light of the reviewers' comments. We also wish to thank the reviewers for their valuable comments. The comments definitely helped us to further improve the quality of the paper. In making our revision, we addressed each individual point raised, as outlined below. To make it most convenient for the two reviewers (and yourself) to find the changes made in response to their comments we refer to the relevant section of the paper and highlight the changes in red in the manuscript.

Best wishes

The authors

Answers to the comments of REVIEWER I

Comment RI/1:
1. Originality: Does the paper contain new and significant information adequate to justify publication?: This paper investigates the link between KSRM and overall SCM performance. Based on an Austrian survey the articles concludes that there is a linkage.

Unfortunately, I **do not think** the findings contains **any new significant information**. In the conclusions, for instance, it is stated that "One main contribution is that we have provided empirical evidence on the tight link between SCM resources ands network capbilitites such as relationship management". This is not a new thing - I did it myself in a survey study ten years ago that was published in IJLM. Another statement in the conclusions is that "..we have found that the capability to do KSRM is a core requirement for increasing the level of SCM implementation within a company". This finding is not surprising and actually one of the key topics in SCM literature.

As an overall suggestion, and based on my critique above, I think the paper should be **geared more towards "only" KSRM**, and less towards the linkage between KSRM and overall SCM. Another thing that I believe supports this is the fact that I miss clear cut definitions of the concepts you are elaborating. What is really KSRM? And what is "overall SCM" or "overall SCM processes" that you are discussing?

Answer RI/1: We thank the reviewer for highlighting that the contribution of our research needs to be tightened. We thank the reviewer to refer to his/her research published in the International Journal of Logistics Management. Unfortunately we were unable to clearly identify this work. Please accept our sincere apologies for that.
Focus of the paper and newness of results: We do want to stress that our research looks into the effect of the *capability* to do KSRM on the *execution* of SCM – but not SCM in general. We apologise if we did not make that clear enough. In terms of the newness of the results we argue that – to our best knowledge – literature has not jet provided empirical evidence on the link between supply chain *management* resources, *KSRM* and the *execution* of SCM.
Definitions: We also took on board the reviewer's critique on the lack of clear definitions of central terms in the paper. We now clearly define SCM, SCM execution, KSRM, key supplier relationship, capability, and resource in the introductory section.

We hope that the paper is now tighter and clearer with respect to the focus and the underlying key concepts.

[See 'Introduction', whole paper]

Comment RI/2:
2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: You seem to have been reading a lot of interesting literature (although somewhat old in some cases) and you have a lot of references. Many of them are however not **helping you forward towards your aim of the study**. Why have you **not presented and justified your variables investigated in the survey**? You have them in an appendix but there is a gap between the more superficial literature review presented in the manuscript and these variables.

Moreover, I think (but that may be a personal viewpoint) the introduction includes **too many references** that does not lead to the purpose of your study.

Answer RI/2: We completely agree with the reviewer that some parts of the paper were "overreferenced". For that reason we cleared out the references and focused on those which we regard as being of key importance to our argumentation and also reflect the discussion in IJRDM.

[See 'Introduction', whole paper]

Comment RI/3:
Definitions: As I mentioned above, I miss clear definitions of the **key concepts** you are working with, which makes your research findings hard to judge (perhaps this is the reason for why I do not think there are any new information in your research?). For instance, you seem to think that KSRM includes operational processes on p. 3, but later on in the paper you discuss strategic issues of KSRM?

Answer RI/3: According to the reviewer's suggestions we now present clear definitions around the key concepts of our paper. We now clearly define SCM, SCM execution, KSRM, capability and resource in the introduction and the conceptual model section. Furthermore, we provide the required information on the measurement/operationalisation of the constructs in the conceptual model and the applied scales sections.

Regarding your critique on the "operational character" of the process of KSRM, we went back to the work of Lambert et al. (1996). They consider the highest level of partnerships to be amongst parties "who share a significant level of operational integration". Unfortunately they do not define the term "operational integration". We interpreted this as business process integration and consequently show this now in our definition. We hope that this interpretation is satisfactory.

[See 'Introduction'; 'Conceptual model'; 'Applied scales and analysis']

Comment RI/4:
Another thing that I disagree with you is your statement that there is **not literature on KSRM available**. I think there is an awful lot of literature on **supplier relationships,**

alliances, etc within the SCM literature...Again, what do you mean when discussing KSRM?

Answer RI/4: Based on the reviewer's comments we now embed our argumentation in the wider literature on buyer-supplier relationships.

[See 'Introduction']

Comment RI/5:
3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: As a result of **poor definitions, the hypothesis become too general**. They are not enough clear cut and needs further elaboration.
4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: **See above.**

Answer RI/5: Thank you for this comment. We hope that through defining our core concepts and thus constructs in our hypotheses better we can overcome this issue of the hypotheses being unclear.

[See 'Introduction'; 'Conceptual model'; 'Applied scales and analysis']

Comment RI/6:
5. Implications for research, practice and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?:
In its current form, this **paper does not contain any new information**. However, as I suggested above, perhaps the reason for my view is the **lack of clear definitions**. Therefore, I suggest a **major revision**. The two most critical things to do is to **(1) present clear cut definitions of all important terms you are investigating**, and (2) **get rid of some of the more superficial references in the text and instead focus on a clear presentation and justification of the investigated constructs**. Thereafter, I hope you can convince me that there actually is a contribution in your empirical findings. I wish you good luck!

In another paper I recommend the authors to **focus more on the concept of KSRM and less on the link between KSRM and SCM**. Perhaps that could be a more valuable contribution of the empirical data.

Answer RI/6: Many thanks for summarising the main concerns. We consequently present definitions around the key concepts and terms in the first part of our paper and reduced the literature used to support our argumentation to the most important sources.

[See 'Introduction'; 'Conceptual Model'; whole paper]

Comment RI/7:
6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: I am not a native english speaker myself, but I find the language **quite nice and easy to read**.

Answer RI/7: Thank you for your positive feedback on these evaluation criterion. We believe that there is no action required here.

Answers to the comments of REVIEWER II

Comment RII/1:
Comments:
The paper examines a topical and interesting issue. I have few issues to suggest in order to strengthen the paper:

1. It will be useful to **clarify whether there are any differences between the various sectors involved and the issues under examination**. I can definitely mention that supply chain and KSRM issues are very different between manufacturers, retailers etc.
2. **Why** was **Austria** chosen for this? How representative is for the context under investigation?
3. It will help to **discuss the managerial implications** emanating from this work.

Answer RII/1: Many thanks for summarising the suggestions to improve our paper.
Differences between sectors: We actually tested for sector specific differences but have not found any. For that reason we included a control variable in the model (please refer to the section 'Applied Scales and Analysis') so the reader sees that sector affiliation does not moderate the results and thus do not confound our model.
Why Austria? We now make the reason clearer why Austria was chosen. Besides the exceptionally good access to supply chain managers we see Austria as representing a highly developed, typical central European supply chain environment. Nevertheless, we refer to this as a limitation of our study.
Practical implications: We now better highlight the practical implications of our work in our conclusion section.

[See 'Methodology'; 'Discussion and conclusions'; 'Limitations and future research']

Comment RII/2:
Additional Questions:
1. Originality: Does the paper contain new and significant information adequate to justify publication?: This is an original piece of work.
2. Relationship to Literature: Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: Strong!
3. Methodology: Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: Very detailed.
4. Results: Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: Good presentation of results.

Answer RII/2: Thank you for your positive feedback on these evaluation criteria. We believe that there is no action required here.

Comment RII/3:
5. **Implications for research, practice** and/or society: Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the

body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: **Good although they can be improved**.

Answer RII/3: Based on the reviewer's comment we now better highlight the practical implications in our conclusion section.

[See 'Discussion and conclusions']

Comment RII/4:
b>6. Quality of Communication: Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: Yes

Answer RII/4: Thank you for your positive feedback on these evaluation criterion. We believe that there is no action required here.