The Impacts of Collaboration on Relational Performance: Evidence from Furniture SMEs in a Developing Country

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Abstract

Business and marketing literature has documented collaboration improves performance in the supply chain context, including within small-medium enterprises (SMEs). However, little studies have been done in capturing the impact of collaboration on relational performance and the linkage paths among them. In addition, little has been done in the context of developing economies. This study aims to fill the voids by empirically investigating the impact of collaboration on relational performance between small-medium furniture manufacturers and their retailers at Jepara District, a main furniture cluster in Indonesia. Researches reveal furniture SMEs across Jepara experience continuous drawback and as such collaboration may become a solution. Using Structural Equation Modeling analysis on 199 usable responses, the study finds collaboration influences firm's agility, relational performance, and opportunism. On the contrary, agility and opportunism do not influence relational performance. This likely indicates manufacturers prefer to collaborate with their retailers even in a minimum level, regardless the presence of risks from opportunism. The absence of the influence of opportunism and agility on relational performance provides avenue for future research.

Keywords: SMEs, collaboration, agility, opportunism, relational performance, Indonesia

JEL code: M31

1. Introduction

Business and marketing literature has acknowledged the importance of collaboration within supply chain in improving channel performance (González-benito, Muñoz-gallego, & García-zamora, 2016; Narayanan, Narasimhan, & Schoenherr, 2015; Ralston, Richey, & Grawe, 2017). In this area, small-medium-enterprises (SMEs) and large-sized businesses likely exhibit different responses. SMEs gain more advantage of channel collaboration, while large-sized companies benefit more from consulting advice collaboration (González-benito et al., 2016). The difference may be related to most SMEs' preference to group in a closely geographic region (intra-network ties), especially in emerging-economy settings, which enable them to more effectively share knowledge and market access (Berry, Rodriguez, & Sandee, 2001; Gunawan, Jacob, & Duysters, 2016).

Despite the positive impact of collaboration on performance, Ralston et al. (2017) identify some collaboration projects failed. These may stem from a merely focus on financial objectives of collaboration, instead of also analyzing beneficial factors like external partner pressure, IT incompatibility, innovation developed, or operational efficiencies achieved (Kampstra, Ashayeri, & Gattorna, 2006; Richey, Adams, & Dalela, 2012). As such, Ralston et al. (2017) suggest relational performance perhaps also be valuable. To date, little empirical studies on supply chain collaboration emphasize the impact of collaboration on relational performance.

In addition, Ralston et al. (2017) note former research shares little consensus on the linkage paths between collaboration and performance. A thorough investigation is warranted to capture either there is direct impact from collaboration to performance or there is other factors interplay within both constructs.

In SMEs' context, Clercq, Dimov, and Thongpapanl (2013) and Gunawan et al. (2016) find collaboration diminishes risk that channel partners will behave opportunistically. However, Zhou, Zhang, Zhuang, and Zhou (2015) further reveal such collaboration has a contingent effect on a channel partner's opportunism. A dimension of collaboration inhibits opportunism when the level of relational norms is low. On the contrary, the other dimension of collaboration exacerbates opportunism. Since Zhou et al. (2015)' study was conducted in the large-sized businesses context, the role of partner opportunism warrants further investigation in the context of SMEs.

Collaboration may also interplay with agility (Gligor, Esmark, & Holcomb, 2015; Gunawan et al., 2016; Narayanan et al., 2015). In the emerging-economy SMEs' setting, Gunawan et al. (2016) find SMEs who collaborate with their extra-cluster ties successfully stimulate their pro-activeness in improving performance. Pro-activeness, which mainly refers to active management of new opportunities (Lumpkin & Dess, 1996) may include a firm's ability to meet customer-related objectives, the very core of agility (Gligor et al., 2015). As such, collaboration could relate to agility.

Furthermore, Gunawan et al. (2016) note there were only limited SMEs' studies pertaining to collaboration with extra-cluster ties in developing country setting. The members of extra-cluster ties in Gunawan et al. (2016)' study also was too varied. A thorough research on a firm's collaboration with a specific partner within extra-cluster ties therefore may be of importance.

This study aims to fill the voids of the former research on collaboration, within Indonesian SMEs context. The furniture industry in the Jepara District (Java Island)-a creative industry with low to intermediate technology-is chosen as a research setting since this cluster is considered to be the center of furniture cluster in Indonesia (Purnomo et al., 2016). Nevertheless, Jepara SMEs experience significant decrease since 2005 in term of the number of manufacturers, export volume, and employment (Purnomo et al., 2016). Prestvik (2009), as cited in Melati, Purnomo, and Shantiko (2013) identified 50% of small-scale furniture manufacturers perceived market access to be their main problem. As such, Purnomo, Achdiawan, Parlinah, Irawati, and Melati (2009) suggest collaboration activities along the value chain to produce new products or services and to ensure improvements in value added. Major furniture retailers, which commonly reside outside Jepara cluster, are the first gate in gathering customer information to the furniture manufacturers. Against the background, this study captures the impacts of collaboration on relational performance between small-medium manufacturers within Jepara and their retailers.

2. Literature review

Social capital theory may justify the relationships between collaboration, agility, opportunism, and relational performance. Social capital refers to a valuable asset that stems from access to resources provided through social relationships (Granovetter, 1992). Nahapiet and Ghoshal (1998) derive social capital in three dimensions: cognitive, relational, and structural. The cognitive dimension entails shared meaning and understanding between members; the relational dimension refers to trust, friendship, respect, and reciprocity developed through a history of interactions; and the structural dimension describes the pattern of relationships among members (Villena, Revilla, & Choi, 2011). This recent study reviews

the literature pertaining only to relational dimension of social capital as it only focuses on the continuous development of relational bonding between channel members.

In the relational dimension, Sukresna et al. (2016) and Villena et al. (2011) argue through repeated transactions, the channel members have attained trustworthiness and affirmed norms of friendship and reciprocity within the relationship. Trust is likely synergistic with collaboration in curbing uncertainties within the relationships (Dyer, 1997; Narayanan et al., 2015) and therefore collaboration is a construct that may deliver positive impacts within channel relationships.

2.1. Hypotheses development

2.1.1 The effects of collaboration on agility, opportunism, and relational performance

In the supply chain context, collaboration refers to a long-term relationship where members generally cooperate and share information and even modify their practices aiming to improve join performance (Ralston et al., 2017; Whipple, Lynch, & Nyaga, 2010). The definition imply such collaboration possesses less degree of formalization and control than other inter-organizational structures like contractual supply chain partnerships, supply chain operational integration, or join ventures/strategic alliances (Ralston et al., 2017).

Increased collaboration between manufacturer and its retailer facilitates a more focused effort in responding to customer needs, better resource allocation, and stimulates an intensive information exchange (Narayanan et al., 2015). It may enable a firm to be flexible and responsive in dealing with the business environment changes, developing new products, driving agility performance, and optimizing transaction value (Chen, Li, & Arnold, 2013; Gunawan et al., 2016; Narayanan et al., 2015). As such, this study proposes the following hypothesis:

H1. Collaboration positively influences agility.

Better collaboration also reduces partner's opportunism, contingent to the degree of relational norms (Zhou et al., 2015). Here, positive outcomes occur when actual activities match the expectations formed via relational norms and vice versa. Moreover, as collaboration improves trust and relational aspects between channel members, it could inhibit opportunism in the long-run (Narayanan et al., 2015; Wang, Li, Ross Jr, & Craighead, 2013). Thus, the following hypothesis is advanced:

H2. Collaboration negatively influences opportunism.

Brito, Brito, and Hashiba (2014) find some parts of collaboration improve several dimensions of channel performance. In this sense, collaboration with suppliers and customers

improves growth and profitability. Other studies corroborate consistent results, in which collaborative activities increase collaborative performance (Cao & Zhang, 2011) as well as improve productivity and growth (Allred, Fawcett, Wallin, & Magnan, 2011). Against the backdrop, a following hypothesis is proposed:

H3. Collaboration positively influences relational performance.

2.1.2 The effects of agility and opportunism on relational performance

Agility refers to an effective response to change (Holsapple & Jones, 2005) and associated with the extent to which customer-related objectives have been met (Gligor et al., 2015). Agile firms who operate under higher levels of environmental munificence, dynamism, and complexity could improve their channel performance than they who act within lower levels (Gligor et al., 2015). This reinforces Swafford, Ghosh, and Murthy (2008)' finding that supply chain agility directly increases performance. As such, the proposed hypothesis is:

H4. Agility positively influences relational performance.

Finally, opportunism may relate with relational performance. Channel partner's opportunism refers to a self-interest seeking with guile (Williamson, 1975) and this involves the risk of parties not acting in the interest of the relationship (Narayanan et al., 2015). The risk causes the focal firm to obtain a lower level of benefits from the relationship (Wang et al., 2013) as the firm loses significant level of trust and commitment toward its partner (Mysen, Svensson, & Payan, 2011). Thus, the proposed hypothesis is:

H5. Opportunism negatively influences relational performance.

The hypothesized pathways are depicted in Figure 1.

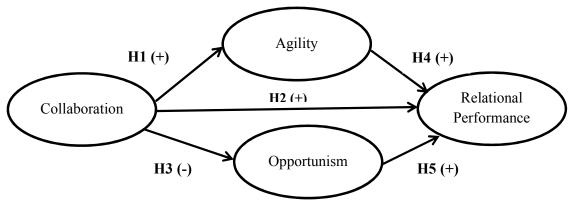


Figure 1. The hypothesized pathways of collaboration, agility, opportunism, and relational performance.

3. Research method

3.1. Measures

This study deploys four constructs: collaboration, agility, opportunity, and relationship performance. Collaboration acts as antecedent while the rest are posited as outcomes of channel relationships. All measures are anchored in 5-points Likert scale (totally agree-totally disagree). The agility construct captures perceptions of the manufacturer about itself, while the rest record the manufacturer's perceptions about the relationship with its connecting retailer.

Adapted from literatures (Claro, Hagelaar, & Omta, 2003; Liu, Wei, Ke, Wei, & Hua, 2016; Narayanan et al., 2015), collaboration consists of eight items. Based on the measures from Gligor et al. (2015), agility encompasses seven items. Opportunism consists of five items adapted from Wang et al. (2013) and Zhou et al. (2015). Relational performance refers to the extent to which the manufacturer receives benefits as a result of the relationship with its connecting retailer. The measure adapts the scale of Sanders (2008) and Villena et al. (2011) and it consists of five items.

The measures development started from pooling existing measures from relevant literatures. Such collections were then underwent face validity test by discussions with the academic experts, followed by in-depth discussions with three eligible manufacturers. Prior to the in-depth discussions with the manufacturers, the measures were translated into Indonesian language by a trained translator. These steps ensure relevancy of items as well as words clarity of the questionnaire instrument.

3.2. Sampling and data collection

The unit of analysis for this research is the firm and the preferred target respondents are senior-level managers or owner with knowledge of business relationship with the firm's connecting retailer. A non-random purposive sampling is employed since the directory of Jepara's small-medium-manufacturers was incomplete. Based on Hair et al. (2010)' suggestion on sample for Maximum Likelihood (ML) estimation (100-200 samples), the research targets 200 respondents as sample. Such respondents are the small-medium-manufacturers which sell their products in at least an external retailer or an external shop (a retailer that is not involved in one group of company with the manufacturer).

The questionnaires are delivered in-hand by five trained surveyors. They accompany the respondents in filling the questionnaires in accordance to avoid misperceptions and thus this method ensures a very high response rate. All 201 distributed questionnaires are returned, in which only one questionnaire does not meet the criterion (a big-sized company). Hence, the final and usable questionnaires are 200 units.

3.3. Data analysis

The data analysis starts with data cleaning to avoid missing data and outliers. Only one missing data was found and this is remedied by supplying an average value to the particular data. Only one outlier is considered as a serious problem and must be dropped for further analysis. Next, the normality check is performed since the statistical process uses ML estimation (Cunningham, 2008). All indicators reveal proper linearity and tolerable range of skewness (close to 0) and kurtosis, and thus these indicate accepted normality. Hence, the final sample is 199 responses.

The analysis then underwent two-steps Structural Equation Modeling (SEM) by conducting Confirmatory Factor Analysis (CFA), followed by structural analysis (Anderson & Gerbing, 1988).

4. Results

Demographics show 95% are male and the majority is high-school graduates (60%). Most respondents are the owner of the business (85%) while the rest are senior managers. Most companies aged more than 10 years (70%) and small-sized business with the number of employees between 10-20 people (71%). Their sales mostly below 100 million rupiah (81%) which may indicate they are mostly small-sized business. The majority of the manufacturers engage with 1-5 retailers (83%) with relationship duration of 1-5 years (90%). The connecting retailers mostly contribute a minimum of 20% total sales of the manufacturers (86%) and hence this may indicate a greater dependence of the manufacturer toward its connecting retailers.

The CFA processes reveal four Eigenvalues higher than 1.0 and this show accepted factors. Moreover, the standardized residual covariances, model fit, construct reliability, discriminant validity, and average-variance extracted also display a valid model. Table 1 summarizes the CFA results. All item loads are sound and suitable for SEM analysis.

Table 1. Scale items.

| Measures | Mean SD | Loadings |
|---|-----------|----------|
| A. Agility (Cronbach's alpha: 0.68) | | |
| We: | | |
| 1. Can quickly detect changes in business environment*. | | |
| 2. Are successfully able to obtain the information we demand from our customers*. | | |
| 3. Can make definite decisions to address business opportunities. | 2.02 0.65 | 0.57 |
| 4. Can make firm decisions to respond the business threats. | 2.13 0.67 | 0.91 |
| 5. Can adjust our operations required for executing decisions. | 2.12 0.72 | 0.53 |
| 6. Can increase short-term production capacity as needed (e.g. increasing work hour)*. | | |
| 7. Can adjust the specification of orders as requested by our customers*. | | |
| B. Collaboration (Cronbach's alpha: 0.77) | | |
| Regarding our working relationship with this retailer: | | |
| 8. We are commiting to deliver a successful collaboration*. | | |
| 9. There are significant efforts (e.g. adding fund or facilities) to develop a sustainable collaboration*. | | |
| 10. We create joint working plan. | 2.23 0.69 | 0.62 |
| 11. We jointly deal with problems that arise in the collaboration*. | | |
| 12. We routinely exchange information through informal mechanisms*. | | |
| 13. We conduct regular meetings to evaluate business progress*. | | |
| 14. We share information that likely benefit the retailer. | 2.37 0.68 | 0.72 |
| 15. We ensure that both of us always receive information about events that may influence each party. | 2.34 0.72 | 0.85 |
| C. Opportunism (Cronbach's alpha: 0.92) | | |
| Regarding our working relationship with this retailer: | | |
| 16. Sometimes, the retailer lies about certain things in order to protect their interests*. | | |
| 17. The retailer sometimes promises to do things without actually doing them later. | 3.24 1.04 | 0.87 |
| 18. The retailer sometimes tries to breach our agreements to their benefit. | 3.19 1.06 | 0.90 |
| 19. The retailer tries to take advantage of 'holes' in our agreements to further their own interests. | 3.26 0.97 | 0.89 |
| 20. The retailer sometimes uses unexpected events (e.g. products delivery) to extract concessions from us*. | | |
| D. Relational performance (Cronbach's alpha: 0.76) | | |
| In our cooperation with this retailer, we have successfully: | | |
| 21. Created new generation of products*. | | |
| 22. Opened up new markets*. | | |
| 23. Learned about customers' wants*. | | |
| 24. Improved products quality. | 1.84 0.60 | 0.85 |
| 25. Improved quality of the production processes. | 1.86 0.65 | 0.72 |

*Dropped during the CFA processes

Table 2 shows the results of SEM analysis. The normed chi-square (CMIN/DF = 1.80), CFI (0.96), TLI (0.95), RMSEA (), GFI (0.94), and AGFI (0.90) indicate an excellent model (Hair et al., 2010). Model validation is approached with 2000 bootstraps, and again an excellent p (Bollen) of 0.148 indicates a valid and excellent fit model.

SEM analysis shows only three paths are significant and two paths are insignificant. Collaboration positively influences agility (H1), positively influences relational performance (H2), and negatively influences opportunism (H3). In the final outcomes, agility and opportunism does not influence relationship performance (H4 and H5).

| Standardized | Hypothesis testing |
|-------------------|---|
| path coefficients | |
| 0.394*** | Supported |
| 0.461*** | Supported |
| -0.15* | Supported |
| -0.007 | Not supported |
| -0.077 | Not supported |
| | path coefficients 0.394*** 0.461*** -0.15* -0.007 |

Table 2. Results of testing the research hypotheses.

*p < 0.1

**p < 0.05

****p < 0.01

5. Discussion

The central theme of this research is collaboration contributes to relational performance between furniture manufacturer and its connecting retailer. This study empirically demonstrates that collaboration has more direct effect to relational performance than its indirect effects. Specifically, collaboration has positively influences relational performance, while agility and opportunism do not influence relational performance.

This study makes several contributions to the field. First, the direct effect of collaboration on relational performance, instead of through agility and opportunism as mediating variables, is in line with the findings of Swafford et al. (2008) and Gunawan et al. (2016). This likely indicates manufacturers prefer to collaborate with their retailers even in a minimum level, regardless the presence of risks from opportunism. The manufacturers seem highly aware of the increasing intensity of business threats and opportunities. Hence it is imperative to build closer relationship with their extra-cluster ties, including retailers.

Second, the absence of agility-relational performance relationship may be related to this research setting. Agility measures deal with manufacturer's perceptions about itself, while relational performance captures manufacturer's perceptions toward its retailer. It is probable that manufacturers are over confidence in assessing their agility performance and this may not in line with the manufacturers' achievement pertaining to the relationship with retailers. Here, the findings that the performance of furniture SMEs across Jepara have not yet achieve satisfied results to date (Purnomo et al., 2016) may be less connected with the manufacturers' over assessment on their agility performance.

Third, the insignificant relationship between opportunism and relational performance may imply that manufacturers view opportunism as a given state in their relationship with retailers. Most of Indonesian SMEs' working relationship with their partners are informal and do not necessarily require a formal contract (Berry et al., 2001; Gunawan et al., 2016). As such, this may stimulate perceptions that most opportunistic behaviors are acceptable to a certain level.

Fourth, the main managerial implication is the manufacturer owners or managers should increase their collaboration level with their retailers, especially within extra-cluster ties. Such intense collaborations may help the manufacturers to gain timely and beneficial market information which in turn could improve their competitive advantage.

6. Limitations and future research

As with any research, this study has some potential limitations, which also reflect possible directions for future research. First, self-report measures presenting the possibility of common method bias. Therefore, future research may design measures from the connecting retailers to address this concern.

Second, this study is purely quantitative. Although the results mostly support the proposed relational paths in this study, the lack of a deeper investigation on the processes across the paths prohibits the study to find thorough answers based on the context of the study. Hence, future work may involve a mixed methods design to provide a more holistic perspective of the proposed model.

Third, the insignificant relationship between opportunity and agility on relational performance raises concern that may be there are several variables might interplay. Thus, future research may incorporate constructs such as relational norms since Zhou et al. (2015) has revealed contingent effects of relational norms in mitigating opportunism.

Finally, the generalizability of the results is limited since the study utilized survey data from Indonesian furniture manufacturers. Future research could extend its research scope to different research settings.

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