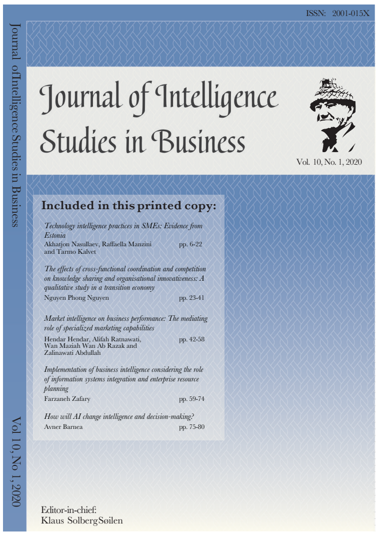
Journal of Intelligence Studies in Business



Journal of Intelligence Studies in Business

Publication details, including instructions for authors and subscription information: https://ojs.hh.se/index.php/JISIB/index

The effects of cross-functional coordination and competition on knowledge sharing and organisational innovativeness: A qualitative study in a transition economy

Nguyen Phong Nguyen[a]*

[a]University of Economics, Ho Chi Minh City, Vietnam
*nguyenphongnguyen@ueh.edu.vn

To cite this article: Nguyen, P.N. (2020) The effects of cross-functional coordination and competition on knowledge sharing and organisational innovativeness: A qualitative study in a transition economy. *Journal of Intelligence Studies in Business*. 10 (1) 23-41.

Article URL: https://ojs.hh.se/index.php/JISIB/article/view/518

JISIB

Journal of Intelligence Studies in Business
Vol. 10, No. 1 (2020) pp.23-41
Open Access: Freely available at: https://ojs.hh.se/

The effects of cross-functional coordination and competition on knowledge sharing and organisational innovativeness: A qualitative study in a transition economy

Nguyen Phong Nguyen[a]*

[a]*University of Economics, Ho Chi Minh City, Vietnam*

**Corresponding author:* nguyenphongnguyen@ueh.edu.vn

Received 29 March 2020 Accepted 15 April 2020

ABSTRACT Adopting a coopetition framework and a qualitative study using depth-interviews of mid- and top-levels managers in Vietnamese business organisations, this study examines the potential significance of different coordination mechanisms (decentralisation, formalisation, lateral relations, informal networking, and shared vision) in fostering knowledge sharing between marketing and other departments in the presence of cross-functional competition. This study reveals the potentially significant effect of coopetition (i.e., simultaneous coordination and competition) on the degree of knowledge sharing between marketing and other departments in business organisations. The enhanced knowledge sharing can, in turn, positively improve organisational innovativeness. These findings add to limited research on intra-firm coopetition and shed light on how cross-functional coordination and competition can be managed to foster intra-organisational knowledge sharing towards enhancing innovation in the context of Vietnam, an emerging Asian country.

KEYWORDS Coopetition, coordination, competition, cross-functional knowledge sharing, organisational innovativeness, transition economy

1. BACKGROUND

Cross-functional knowledge sharing is a process of sharing knowledge between departments within an organisation. This definition is based on that of Argote and Ingram (2000, p.151), who view knowledge as 'a process through which one unit (e.g., group, department or division) is affected by the experience of another.' Cross-functional knowledge sharing is necessary because departments need to exchange knowledge to perform their tasks. At the cross-functional interfaces, the interactions between marketing and other departments involve the sharing of different types of knowledge, including market knowledge, technological knowledge, and financial knowledge (Homburg, Jensen, and Krohmer, 2008; Atuahene-Gima and Evangelista, 2000). Knowledge sharing between marketing and other departments enables the integration of different pools of interdisciplinary knowledge, which is a prerequisite for an organisation to develop collective intelligence (Søilen, 2019). The developed collective intelligence, in turn, becomes a useful tool for early warnings and detection of weak signals in organisations in a turbulent business environment (Almeida and Lesca, 2019).

However, knowledge sharing between marketing and other organisational functions is said to be difficult (Luo, Slotegraaf, and Pan, 2006). Among the main barriers to knowledge sharing is cross-functional competition (Maltz and Kohli, 1996; Houston et al., 2001), which refers to the extent to which departments compete for limited internal resources and power. In numerous situations, competing departments are often reluctant to share knowledge (Luo, Slotegraaf, and Pan, 2006). A question is whether organisations can effectively manage the conflicting processes of coordination and competition to enhance knowledge sharing between marketing and other departments to achieve superior performance.

Although previous studies have emphasised the importance of coordination within an organisation, few studies have systematically investigated the role of both formal and informal coordination mechanisms in fostering organisational knowledge sharing. For example, Ghoshal, Korine and Szulanski (1994) investigated only formal mechanisms including centralisation and lateral relations; Tagliaventi, Bertolotti and Macrì (2010) and Fey and Furu (2008) examined only informal mechanisms, respectively informal networking and shared vision. Although some studies, such as those of Tsai (2002) and Willem, Buelens and Scarbrough (2006), investigated both formal and informal mechanisms, they included only centralisation and informal networking and did not focus on other mechanisms such as formalisation and shared vision. Little is known about the differences in the effects of various coordination mechanisms on knowledge sharing. Under resource constraints, managers need to know whether various coordination mechanisms have different powers in promoting knowledge sharing. In this way, they will be able to use limited resources effectively to coordinate different organisational units to share knowledge and ultimately develop an effective knowledge management strategy. Therefore, a systematic investigation of the effects of various formal and informal coordination mechanisms on organisational knowledge sharing in a single study is needed.

A review of the knowledge sharing and organisational coordination literature found that many studies focus on knowledge sharing between subsidiaries or divisions within multinational corporations or large organisations (e.g. Gupta and Govindarajan, 2000; Willem, Buelens, and Scarbrough, 2006). Little research has been done to investigate knowledge sharing among departments such as marketing, research and development (R&D) and production within a business organisation (e.g. Luo, Slotegraaf, and Pan, 2006; Ruekert and Walker, 1987). The Belgian study by Willem and Buelens (2007) may be one of the few studies on departmental knowledge sharing. However, their study is in the context of public sector organisations rather than business organisations. This raises the need for a study that systematically investigates the effects of both formal and informal coordination mechanisms on knowledge sharing between departments within a business organisation.

In addition, a literature review regarding intraorganisational knowledge sharing found that few studies have investigated the effect of coordination on knowledge sharing in the presence of competition (e.g. Tsai, 2002). Moreover, little research has been done to examine how knowledge sharing between marketing and other departments (in the presence of cross-functional coordination and competition) can enhance organisational performance. In other words, how marketing and other competing departments are coordinated to share knowledge to enhance performance is another gap that should be bridged.

In terms of research venue, most of the studies on cross-functional knowledge sharing have been conducted in developed Western countries rather than in Asian developing countries such as Vietnam, China or Thailand. Asian countries may differ from Western countries in terms of a culture that influences knowledge sharing (Chow, Deng, and Ho, 2000). People from Western countries are more individualistic than those in the East; they tend to be loosely organised, place less emphasis on rank and status, and have a tendency towards self-enhancement (Hofstede, 2007). In contrast, in Asian countries, which have a collectivist culture, communication is dependent on the rank or gender of the actors. Asian people emphasise order and harmony, avoid conflict and respect the senior members of organisations. They are also in-group oriented and often hostile towards out-group members (Bhagat et al., 2002). In a collectivist culture, it may be more difficult for an employee in an organisation to share knowledge with out-group members (e.g. employees from other departments) (Chow, Deng, and Ho, 2000). Therefore, a study on cross-functional knowledge sharing in the context of an Asian country can add more insight to the literature.

The research gaps mentioned above suggest a need to investigate the effect of both formal and informal coordination mechanisms on knowledge sharing between marketing and other departments. These departments usually compete for an organisation's scarce resources; therefore, they are often reluctant to share information because they want to prevent competing departments from gaining knowledge (Luo, Slotegraaf, and Pan, 2006). This raises the issue of whether organisations can use different coordination mechanisms to coordinate knowledge sharing between the marketing department and other departments, especially when they are competing with one another. Accordingly, two research questions have been proposed:

RQ1: What is the effect of coordination on cross-functional knowledge sharing in an organisation?

RQ2: What is the effect of coordination on cross-functional knowledge sharing in the presence of cross-functional competition?

From a managerial perspective, it is necessary for managers to pay more attention to the link between organisational knowledge sharing and its outcomes. Previous studies have repeatedly emphasised the value of organisational knowledge sharing in terms of innovation (e.g. van Wijk, Jansen, and Lyles, 2008; Calantone, Cavusgil, and Zhao, 2002; Tsai, 2001). This means organisational innovativeness is a possible outcome of cross-functional knowledge sharing (van Wijk, Jansen & Lyles, 2008). Moreover, authors from the marketing literature (e.g. Calantone, Cavusgil, and Zhao, 2002; Salomo, Talke, and Strecker, 2008) suggest that organisational innovativeness is among the important antecedents of organisational performance. This line of reasoning shows that cross-functional knowledge sharing could affect organisational performance through organisational innovativeness. In this study, the question is how knowledge shared at the interfaces between marketing and competing departments in the governance of coordination mechanisms affects organisational performance by improving organisational innovativeness. This question is significant because answering it provides a better understanding of whether these above performance outcomes of cross-functional knowledge sharing are still likely to occur even in the presence of competition among marketing and other departments. The third research question is as follows:

RQ3: How does cross-functional knowledge sharing affect organisational innovativeness?

2. RESEARCH METHODS

2.1 A semi-structured depth interview

To answer the three research questions, this study conducted semi-structured depth interviews. The purpose was to obtain an overall understanding of cross-functional knowledge sharing between marketing and other departments and to develop a coopetition model that can explain the effect of the interaction between cross-functional coordination and competition on cross-functional knowledge sharing and organisational innovativeness in the context of Vietnamese firms.

In this study, semi-structured depth interviews with managers of Vietnamese business organisations were used. A semi-structured depth interview commonly refers to an interview in which the interviewer has a list of pre-prepared questions in a general form, and he or she can adapt or vary the sequence of questions according to the response of the interviewee. Depth interviews were chosen rather than a focus group because this technique is less costly (Adams and Cox, 2008). Moreover, depth interviews were more feasible because inviting people with high social status (e.g. top managers) to participate in a focus group can prove difficult (Krueger and Casey, 2009; Morgan, 1988). This study used a semi-structured approach to depth interviewing rather than a structured approach because the semi-structured form is more flexible than the structured form and allows key issues not identified before the interviews to emerge through the discussion. The use of semi-structured interviewing encouraged informants to express their views without being constrained by a limited set of preconceived questions in the structured interview.

2.2 Sample organisations and informants

For the depth interviews, purposeful sampling was adopted. Organisations were selected if they were considered 'information rich' to maximise understanding about the research issues (Onwuegbuzie and Leech, 2007). The organisations selected for the depth interviews needed to be large-sized firms. According to

Degree 56 ND-CP of the Vietnamese government, the conditions for being a large business organisation are as follows. For the manufacturing industry, organisations need to have total capital of more than VND 100 billion, or more than 300 full-time equivalent employees. For service and trading industries, organisations need to have total capital of more than VND 50 billion, or more than 100 full-time equivalent employees (Vietnamese-Government 2009). The reason for including only large organisations in this study is that large organisations tend to have sufficient financial resources to implement adequate knowledge management systems (Kuan Yew and Aspinwall, 2004; Serenko, Bontis, and Hardie, 2007) to support cross-functional knowledge sharing, whereas small- and medium-sized organisations are less advanced at launching formalised knowledge management programs.

Organisations participating in the depth interviews needed to have marketing departments and other functions (including sales, R&D, manufacturing, and accounting and finance). The purpose was to ensure rich information about cross-functional knowledge sharing and related research issues could be provided. In addition, the depth interviews were conducted in different types of organisations, including state-owned enterprises, joint stock companies, joint venture companies, limited proprietary companies and private companies. Moreover, the organisations selected for interviews represented different industries in Vietnam (manufacturing, service and trading). The purpose of this selection was to identify whether the proposed model was applicable across different types of organisations and industries.

To overcome budget and time constraints, the study used the convenience-sampling approach to select data. This approach involved selecting organisations that were accessible and were willing to participate in the study. Following this, organisations with headquarters located in Ho Chi Minh City, the largest business centre in Vietnam where the principal researcher was living and working, were selected. The sample size for depth interviews was seven, which is within the range of six to twelve, as suggested by earlier studies (Guest, Bunce, and Johnson, 2006; Carter and Henderson, 2005).

Midlevel (department heads or vice department heads) or top managers (members of the management team) were the potential informants. Moreover, they were selected from various departments (e.g. marketing, sales, R&D, manufacturing or production, finance and accounting) because these departments are likely to share knowledge with one another.

Table 1 List of participants and demographic information. Comp = company, *Company names and participant's names are anonymous, YC = years of experience at the company; YCP = years of experience at the current position Own = ownership type. FO: Organisation with foreign capital/ownership (including 100% foreign-owned enterprise or joint venture), DO: Organisation with domestic ownership (limited enterprise or state-owned enterprise), Size = number of employees at the company. Value = company size (paid-in capital) in AUD million. **: No information about company size in terms of number of employees and paid-in capital was provided, daily sales figure was obtained.

Comp*	***Participant's position****	***YC***	***YCP***	***Own***	***Industry type***	***Size***	***Value***
A	Finance manager	8	5	FO	Real estate	50	50
B	Chief financial officer	3	3	FO	Manufacturing (consumer products)	5,000	125
C	Marketing manager	5	2	DO	IT-services	240	Daily sales of AUD 1.5 million**
D	R&D manager, production manager	9	5	FO	Life insurance	1,500	75
E	Accounting manager	10	5	DO	Construction	10,400	380
F	Planning manager, financial controller	10	5	FO	Manufacturing (beverage)	3,000	200-300
G	Chief financial officer	11	8	DO	Trading (medicine and equipment)	140	10

According to previous studies (e.g. Evangelista and Hau, 2009; Luo, Slotegraaf, and Pan, 2006; Nguyen et al., 2018), targeted participants need to have at least two years of working experience within their current organisations to ensure that they have adequate knowledge about the research issues. Potential participants were initially contacted by email. If they agreed to participate in the project, a meeting was scheduled. Participants were selected based on the following criteria: (1) ownership (domestic and foreign), (2) industry type, (3) presence of a marketing department, and (4) organisational size. The list of participants and demographic information is shown in Table 1.

2.3 The interview process

A semi-structured interview, as suggested by Creswell (2009), was adopted. Since the research site was Vietnam, Vietnamese was the language used in most of the interviews. Due to the sensitivity of the topic of coordination and competition between functional departments (Massey and Dawes, 2007), the interviews were conducted in a safe and convenient location that could protect the participants' privacy to the greatest extent possible (e.g. the participant's office or a quiet, private room in a café bar).

On average, the interviews lasted about one hour, plus 15 minutes to confirm the participants' responses. The questions for the in-depth interviews were mostly open-ended to encourage unstructured talk from the participants about their experiences and opinions and to obtain as many details on the research issues as possible. The information obtained during the interview was tape-recorded (subject to the agreement of the participants) and then was transcribed. The transcripts served as the primary source of data for the qualitative analysis. The depth-interview guide is shown in Appendix 1.

3. RESEARCH RESULTS

To investigate knowledge sharing between marketing and other departments, this study focused only on the relationships between marketing, sales, manufacturing or production, accounting and finance, and R&D. This is because these departments are likely to share and receive knowledge from the marketing department (Luo, Slotegraaf, and Pan, 2006). Knowledge shared between these departments can be classified as knowledge inflows (received) and outflows (shared) from the perspective of the marketing department. Knowledge includes information and know-how (experience) (Kogut and Zander, 1992); therefore, it should be noted that the term *knowledge* adopted in this study includes *information*, particularly in the context of the informants in the depth interviews.

3.1 Knowledge received by the marketing department

Consistent with the literature, the knowledge inflows of marketing departments according to the informants include (1) market knowledge (customer and competitor information, and customer feedback) from sales departments, (2) technological knowledge (product information and product customisation) from manufacturing or production and R&D departments, and (3) financial knowledge (funding, product costing and pricing) from accounting and finance departments.

Regarding the purpose of the cross-functional shared knowledge, the exchange of technological and product knowledge during interactions with other departments can help marketing departments to develop effective marketing plans and make various marketing decisions. The head of R&D and production of company B discussed the interaction between the marketing department and the R&D and production departments:

> "My production department and R&D department have to share technology and product information with the marketing department and make sure it understands the purposes of products designed for related groups of customers, and why we have to sell these products to these groups of customers. Thus, the marketing department can develop efficient and effective advertising plans without misleading customers. It has to design advertising slogans and describe the rights of customers; to make sure they understand about the products and to attract them via many channels such as brochures, television, newspapers or customer meetings."

In terms of financial knowledge, marketing departments receive financial knowledge from the accounting and finance departments for market segment decisions and pricing schemes. An example was provided by the financial controller of company F:

> "The marketing department has to work with the finance department to receive information about the costing, pricing, cost of goods manufactured so that they can analyse and make decisions for each market segment."

Similarly, the chief financial officer of company G talked about the use of financial information from the marketing department:

> "The marketing department usually contacts the accounting and finance departments to receive financial information relevant to its work, such as developing their functional product lines. Financial knowledge received from the marketing department includes banking information, funding needs, and credit lines offered from banks. Therefore, the marketing department can participate in some bidding programs. The purpose of financial knowledge is to improve the competitiveness of pricing schemes as compared with the competitors."

This information sharing relationship at the interface between marketing and accounting and finance is also linked to budgets. Accordingly, marketing departments receive budget information from finance departments. This was highlighted in the words of the marketing manager from company C:

> "The marketing department also needs information about allocated budgets; although the amount of the budget allocated to our department has been predetermined by the board of management, we need to know how much budget is left for us so that we can propose good business alternatives during the financial year."

3.2 Knowledge shared by the marketing department

The information shared by the marketing department mostly includes market demands, market movements, consumer market insights, customer preferences and feedback, and product information. The receivers of the

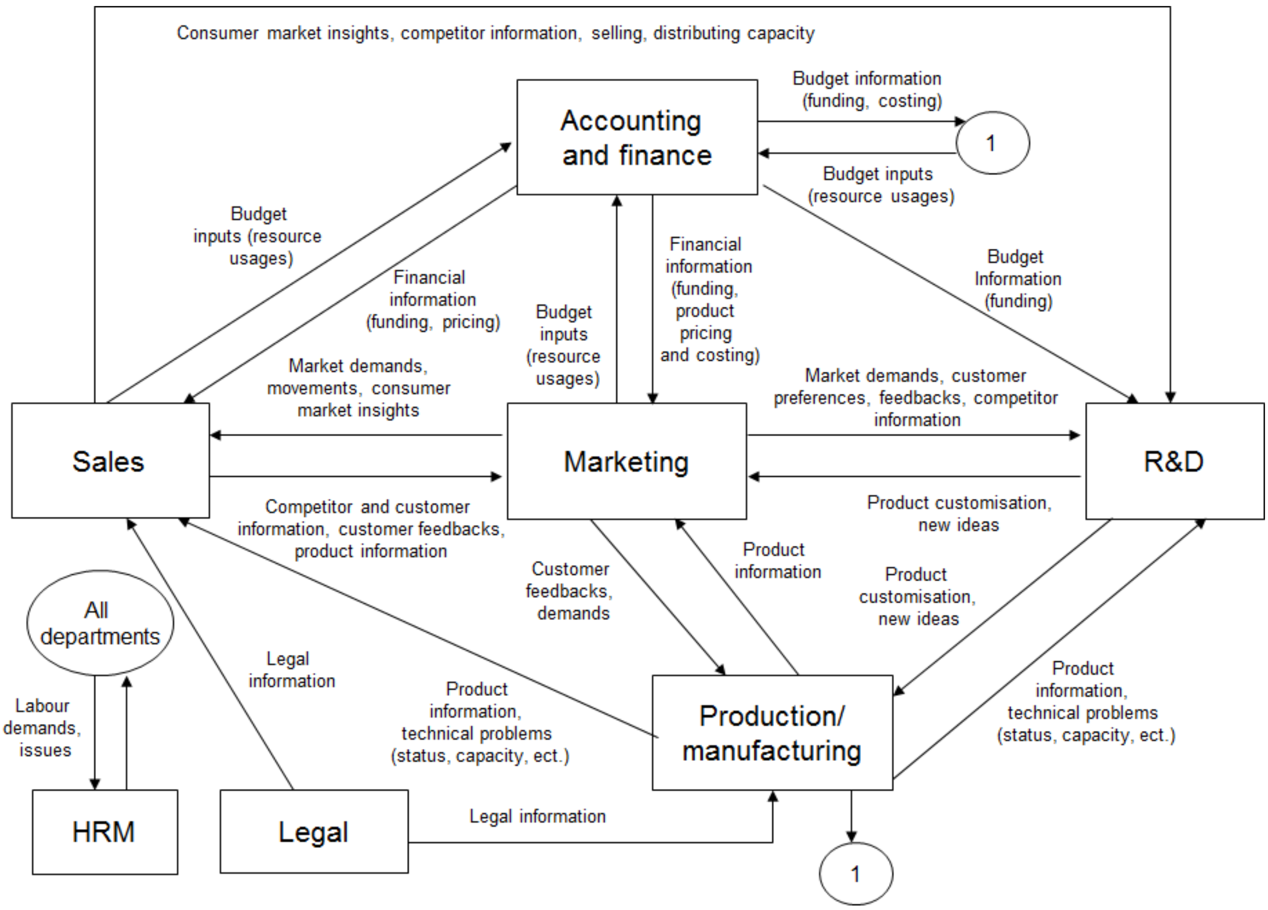


Figure 1 Cross-functional knowledge sharing between marketing and other departments from the depth interviews.

information include the sales, R&D, and manufacturing or production departments. The marketing department also shares budget information (e.g. sales budget) and resource usages (labour, capital needed) as part of the financial knowledge shared with the accounting and finance departments. The resources used by marketing departments include labour, and the financial resources needed to perform their activities (e.g. advertising and marketing campaigns). This information is internally developed by the marketing department or received from other departments (see Figure 1). These observations were reflected in the words of the marketing manager from company C:

> "My marketing department supplies internal reports to other departments monthly. The purpose is to describe market demands, market trends, the size of the market as well as the purchasing power of customers, the partners we have contacted, and the potential of future partners. The other purpose of the shared information from the marketing department is to show the department's potentials to other departments, to let them know what we have done, what we have achieved, and how we have succeeded."

These findings were also evident during the interview with the head of R&D and production from company D:

> "Usually, the marketing department has to do market research about the new products of competitors. The marketing department gives feedback on the market information to the R&D department so that the R&D department can create ideas about new and competing products."

Similarly, the financial controller of company F shared his/her own view about the knowledge outflows from the marketing department in terms of both strategic and operational levels:

> "At the strategic level […], the marketing department has to share its market information, such as their forecasts about the potential developments or movements in the market, consumer preferences, and their changes. If a given strategy of the company is to catch the market trends, this information will be shared by the marketing department. Based on this information, the marketing department has to identify the products' positions in the market [….]. Thus, it has to work out its aims and product target outputs […]. The marketing department shares this information with other departments. With this information provided by the marketing department, other departments, such as production and sales, will determine whether their capabilities can meet the target outputs.
>
> "From the operational level, the marketing department shares information regarding the aims or the objectives of the products' specifications with other departments, such as R&D, so that R&D will work for it. Even for the case of a wrapping design for a product, the marketing department needs a unique wrapping design; it will share the related information about the ideas of wrapping with the R&D department. Also, the finance department needs to receive this piece of information so that it can work out the cost of wrapping as a component of production costs."

Moreover, there is a strong knowledge-sharing relationship between marketing departments and accounting and finance departments in terms of financial information. The chief financial officer of company G stated that:

> "The marketing and sales departments usually contact the accounting department to share operating information via the customer order system and the relationships between them and customers concerning the debt collection information […] and customer credit lines."

Figure 1 summarises the depth-interview results, indicating overall cross-functional knowledge sharing between marketing and other departments such as sales, accounting and finance, R&D, and production and manufacturing, during their interactions.

3.3 The antecedents of knowledge sharing

3.3.1 Cross-functional coordination

The purpose of the depth interviews was to determine whether the coordination mechanisms stated in the proposed model, including decentralisation, formalisation, lateral relations, informal networking and shared vision, are adopted in organisations. The depth interviews also identified whether these mechanisms promote cross-functional knowledge sharing. This section presents the responses of the informants during the depth interviews regarding the presence of these coordination mechanisms in their respective organisations and the effects of the coordination mechanisms on cross-functional knowledge sharing.

3.3.2 Decentralisation

One of the key mechanisms identified in the literature used for cross-functional knowledge sharing is decentralisation. As explained earlier, decentralisation refers to the extent to which major decisions are made at lower levels of the organisational hierarchy. Therefore, decentralisation is measured by the level of autonomy of employees in terms of making decisions. The observations from the depth interviews showed that the level of decentralisation varied among participant organisations. Some organisations, for example company G, maintain a decentralised structure. These organisations allow their departments to communicate and share knowledge freely. For instance, one of the informants, the chief financial officer of company G, pointed out that:

> "Basically, people can share information and knowledge freely as long as they don't go too far, for example, sharing the company's confidential information with outsiders that can cause loss to the company or ruin the company's reputation."

The interview results showed that there are some organisations with a centralised structure (e.g. companies B, C, D and F). These organisations have established rules that govern cross-functional knowledge sharing according to many levels of confidentiality. The marketing manager of company C described his/her company practice:

> "There are many layers of information sharing to protect confidential information. For example, normal information that can be publicised can be shared among employees from different departments. [....] we divide the levels of confidentiality into different colours according to different layers, blue, yellow and red. For example, the information with a red colour label can be shared only among the members of the management team; on a rare occasion, it can be passed to senior managers or people who are authorised. The lower-level employees, depending on their duties, can obtain and know information with a yellow label. [...]. Information relating to a particular project is restricted to only the members of this project, and is not shared with anyone."

However, in some organisations (e.g. companies B, D and F), a lower level of decentralisation has been chosen to control the knowledge flows between departments. The financial controller of company F highlighted that:

> "Actually, there is no knowledge sharing in a spontaneous way. Knowledge sharing should be under the control of some procedures. Not all information can be shared between employees at all levels. Private or highly confidential information can only be shared between top managers."

Another informant, the R&D and production manager of company D, insisted that:

> "Our company requires departments to share only relevant knowledge. Our company defines some levels of information sharing; for example, the strictly confidential level refers to information that cannot be shared with everyone. There are polices that clearly define which information can be shared and which cannot be shared as there are many information sharing levels."

Another example of the use of limited decentralisation to control the information flows between departments was given by the chief financial officer of company B:

> "My company also has various information sharing levels such as 'red status', 'strictly confidential', 'for internal use', or 'information that can be publicised'. Even if a piece of information can be publicised, only some departments, not all the departments, have a right to publicise it."

It was observed that in the organisations with a decentralised structure, departments have more flexibility to share knowledge with others. It could be inferred from the data from the depth interviews that decentralisation has a positive relationship with cross-functional knowledge sharing. This means that a higher (lower) level of decentralisation can increase (decrease) the level of cross-functional knowledge sharing.

3.3.3 Formalisation

As defined earlier, formalisation refers to the extent to which policies, rules, task descriptions and procedures are written down in manuals and established as standard routines (Willem and Buelens 2007). The depth-interview data showed that some organisations (e.g. companies B, D, E and F) have adopted standardised working manuals, agendas and work procedures. For example, the R&D and production manager from company D asked:

> "What does this working manual cover? It does not specify how to share information cross-functionally; however, it specifies the departments' responsibilities and which types of information departments can share to accomplish their assigned tasks."

In these organisations with some level of formalisation, information and knowledge exchange between departments is supported. It was observed that organisations with a high level of formalisation with standardised work procedures can encourage communication between departments. For example, the financial controller from company F noted that:

> "We have specified the roles and tasks for each department and who will share information. They are documented and then sent to related departments so that the departments can follow up, coordinate and share information."

Another example was given by the accounting manager from company E, who argued that formalisation allows departments to understand and cooperate with each other, acting as a vehicle for knowledge sharing:

> "Our company [...] has implemented an internal network and the ISO [International Organisation for Standardisation] system. Thus, information can be shared cross-functionally [...]. Information shared in our internal network also includes details of daily working schedules, procedures and predetermined tasks. Using the internal network, departments will know which information other departments need so that they can coordinate more effectively via information and knowledge sharing."

Similarly, the chief financial officer of company B emphasised the importance of formalisation for information and knowledge sharing within his/her organisation:

> "If the procedures are formalised, the information will be transferred to the right people and the right places where it should go to."

The interview results from companies B, E and F showed that the formalisation of policies and procedures could help companies coordinate different departments to share knowledge.

3.3.4 Lateral relations

Most of the informants reported that lateral relations used in their respective organisations are in the form of cross-functional teams or projects, such as new product development and information system development (Willem and Buelens, 2007). For example, the R&D and production manager from company D noted that:

> "There are some projects, for example, a project for developing a new product. This project includes many people from different departments such as R&D, marketing and production. Another example is a kind of project to improve customer services. [...]. This project involves many departments, including production, IT [Information Technology], R&D and customer services. The focus of this project depends on the strategy of our company at the given time. For each project, there is a project leader who coordinates related departments."

The interview results showed that lateral relations in companies B and G, such as cross-functional teams, lead to cross-functional knowledge sharing. The chief financial officer from company G talked about a system development project in his/her company that requires information and experience sharing between marketing and other departments:

> "Currently, we are developing an ERP [Enterprise Resource Planning] system with ORACLE software. To develop the system

successfully, our company has formed a project team including some key persons from IT, marketing and accounting and related departments. [...]. They have to share experiences and information during the project development."

The role of lateral relations in promoting information and knowledge exchange between marketing and other departments was also observed during the interview of the chief financial officer from company B:

"Cross-functional knowledge sharing can be promoted as the company organises many project teams with a lot of input from different departments. For each project, we nominate a person as the project sponsor and other members who are from different departments. This is because decisions relating to a project can be made based on the input from many functions. The project members, of course, are the people who have to participate and share information and knowledge. Temporarily, there are some cross-functional training sections, for example, when the marketing department needs knowledge about management accounting so that they can apply what they have learned to manage products in a flexible way."

The depth interview results from companies B and G showed that these organisations do share knowledge by using lateral relationships or lateral interactions.

3.3.5 Informal networking

Informal networking refers to the informal relationships between employees from different departments. When interviewed about informal networking, most of the informants focused on the corporate social events that their companies organise for their employees. The finance manager of company A commented that:

"According to the regulations of our company, a family event is organised once per year. This event can be held somewhere far from the city. Family members of our employees from different departments are encouraged to participate."

Talking about corporate social events, the accounting manager from company E indicated that:

"As a state-owned enterprise, our company has to follow the government policy to let our people have many social events during the years, for example, lunar New Year and public holidays. Our company provides employees with not only money but also spirit [non-monetary benefits such as encouragement] so that they can have refreshment and gain a strong commitment to work. Sometimes, people can go out for picnics combined with some classes about technology transfer."

Similarly, the marketing manager from company C noted that:

"Our company provides a lot of opportunities for people from different departments to participate in various events, meetings, holiday trips at the end of each year, and cross-functional parties so that we can have stronger connections to work with each other easily."

The role of informal relationships between employees from different departments in exchanging information and knowledge was observed during the interview with the finance manager from company A:

"People can have strong connections during social events. During work, maybe they do not understand each other; however, after the picnics, company parties, or other social events, they can learn from each other to have a better understanding. Thus, they can share more work-related information and knowledge via these social activities."

The above statements of companies A, C and E showed that informal networking could help create mutual understanding between employees from different departments, thereby contributing to cross-functional information sharing. These observations suggest that there is a positive relationship between informal networking and cross-functional knowledge sharing.

3.3.6 Shared vision

Shared vision was defined as the agreement on the organisation's vision across all hierarchical levels. According to the views of most of the informants, shared vision refers to 'sharing goals', 'common corporate goals', or 'organisational targets' following organisational strategies, which is determined by and shared by the top managers with the lower levels of the organisational hierarchy. Examples of shared vision were evident in the interviews of some of the informants, as follows:

> "Shared vision is sharing goals, relating to the strategies developed every year, depending upon the strategy for each year. Every year, our company develops different key performance indicators with targeted numbers." [The R&D and production manager from company D]

> "At the departmental level, departments have their objectives; however, there is a shared vision at the organisational level. They have to follow the common goals of our company." [The marketing manager from company C]

> "[...] people, at least one time per quarter have to be informed about the company's shared vision. At the beginning of each year, the board of management formulates a corporate vision. Our company has an overall ODSM [Objectives, Goals, Strategies and Management] model to develop visions as well as corporate strategic plans." [The chief financial officer from company B]

> "The company organises some briefings on a six-month basis. The purpose is to summarise the overall business performance and make a plan and targets for the forthcoming periods. The company allocates work to departments and provides a guideline to them so that they can coordinate towards common goals." [The chief financial officer from company G]

Interview data showed that shared visions could provide departments with mutual understanding and align their efforts towards organisational common goals, allowing knowledge to be shared smoothly. For example, the chief financial officer from company G indicated that:

> "Of course, shared vision is good for knowledge sharing between business units. First, shared vision creates a friendly environment for people to interact directly and show their ideas and opinions. Through seminars and meetings, all people from all departments can share and receive information in a formal way so that they can understand the company's business thoroughly."

The financial controller from company F noted that shared vision has a role in disseminating information and experience between departments:

> "At the beginning of the year, we have our plans… the targets for the year… and the departments have to sit together, we can call the meetings "cascade meetings" … and the targets will be transferred from the top level to the lower level of the organisational hierarchy. During the meeting, departments will share their information and experience about how to support others towards achieving mutual goals."

The observations from the depth interviews of companies F and G suggested that shared vision can promote cooperation and interaction between departments and thus enhance the sharing of information and experience. This provides additional insight into the effect of shared vision on cross-functional knowledge sharing.

3.4 Cross-Functional Competition

3.4.1 Types of cross-functional competition

Cross-functional competition was defined as the extent to which departments compete for limited tangible and intangible resources (Luo, Slotegraaf, and Pan, 2006). The observations from the depth interviews reflected these aspects of cross-functional competition. Competition can be for internal resources relates to labour, funding and capital. The resource allocation decisions of the board of management can be a cause of competition across departments. An example was given by the CFO of company G:

> "Besides assigning business targets to operating departments, the board of management also provides these departments with resources such as labour, capital and services. Of course, some departments may have more priorities in terms of capital allocation, labour and policy. The consequence is that the remaining departments may raise their voices, and then cross-functional competition occurs."

The marketing manager from company C claimed that cross-functional competition in his/her company was the consequence of the conflict of interests between departments regarding limited tangible resources:

> "The marketing department is competing with other departments when many events are going to be held. The marketing programs and advertising campaigns need a lot of money, and sometimes we get into trouble with our budget that is predetermined by the finance department. Other departments are not happy. They claim that our marketing expenditure is too high. The finance department requires us to specify our costs in detail, and they provide money to us in 'dribs and drabs', and thus slow down the progress of our marketing programs […].
>
> "In addition, the competition is in terms of budgeting. Every year, our company implements a cost-cutting program, then the company's resources, for example, IT capacity or money allocated to departments, are limited. Departments are competing for these resources. They need a lot of support from the company in terms of resource allocation. However, the accounting and finance departments control the budgets tightly. Thus, there are conflicts of interest between departments during the sharing of the common resources as there is a big difference between what they need and what they have."

Similarly, the R&D and product manager from company D described cross-functional competition for limited tangible resources between marketing and other departments:

> "An example of cross-functional competition is in terms of IT capacity. In our company, IT resource capacity is a constraint; however, many departments need IT support. The marketing department needs technical support for various advertising campaigns; the customer services department needs IT supports to serve their customers better. The production department needs to improve its products. It also needs IT support to develop, maintain, and upgrade the product database systems for better production customisations and precise fee calculations. Three departments require IT support and at the same time the IT resources are limited."

Besides competition for tangible resources, there is competition for intangible resources, such as departments' status when their interests conflict. An example of competition for status was shown in the talk with the CFO of company B:

> "I think cross-functional competition does exist, or even if departments have common corporate goals, they all want to show that their performance and contribution are better than those of others. […] for my understanding, there is a competition between departments in terms of time, efficiency, and effectiveness, to show they perform better and quicker. […] this kind of competition reflects and shows a higher level of importance and status of departments in the company."

Similarly, the CFO of company G expressed that:

> "The marketing department always wants to show its status as a 'special child' or 'pet' of the company […]. Several years ago, there was strong competition between the sales and marketing departments. The purpose of the top management during this time was to develop the medicine market via many distribution channels in the nearby provinces and other satellite areas. During the implementation of the distribution channels, the marketing department had shown their power and 'put their foot' on the market of the sales department. It wanted to show its good face and competed strongly with the sales department. It sold similar products for lower prices than those of the sales department while it had more advantages in terms of customer contact and information."

An example of a conflict of interest between marketing and other departments was given by the CFO of company G.

> "Marketing and sales really want to improve sales to achieve their targets; they want to sell to customers on credit without being concerned about whether these customers have the ability to pay debts […]. The consequence is that bad debts increase, and the accounting and finance departments are

blamed for a considerable increase in uncollectable debts. Thus, these departments are conflicting in terms of customers' accounts receivable and bad debt management.

"Sometimes, departments have many ways of doing things differently or even competing for ideas. Take the case of the marketing and sales departments as an example. The sales department sells products to customers with competitive prices according to different categories of customers. It always makes sure the prices are low and stable. However, the marketing department only wants to develop market share and boost revenue without being concerned about profit. Thus, these two departments are competing in terms of ideas and business approaches."

3.4.2 The impacts of competition on cross-functional knowledge sharing

The depth interview of the production and R&D manager from company D reflected his/her negative attitude towards cross-functional competition. This manager claimed that cross-functional competition had impeded knowledge sharing:

"Actually, competition reduces knowledge sharing because people want to protect the rights of their departments; therefore, they do not want to share information or knowledge with other departments. If they share information, the competing departments will know more about their departments; thus, they will take advantage of the shared information, and they will lead the competition."

The CFO from company G expressed a more neutral view, suggesting cross-functional competition can be both good and bad for cross-functional knowledge sharing:

"Competition has both positive and negative sides. The positive side of competition is that it can promote learning and growth, searching for knowledge so that people can improve themselves. The negative side of competition is that some departments can be selfish. They hide information to hinder the work of other departments. Therefore, the top managers control all the activities and monitor all competing departments so that the competing departments can go on in the right way."

From a different perspective, informants from companies B, D and E claimed that cross-functional competition induces employees' positive behaviours towards knowledge sharing. The behaviours related to learning motivation during cross-functional interactions. One informant, the CFO of company B stated that:

"I think that if the competition is based on determining which function is saying it better or more correctly, basically, it is a form of knowledge sharing. This is because they have to justify that their ideas are better than those of others. Thus, from this aspect, I agree that competition can improve knowledge sharing."

How cross-functional competition promotes cross-functional knowledge sharing via encouraging learning is reflected in the view of the R&D and production manager from company D:

"Competition facilitates learning. They can learn from the competing departments, or they can self-study. When they learn in whatever way, they can improve their knowledge to understand their competitors better so that they can do their job better. In addition, competition can promote learning motivation. The more they learn or study, the more they will be confident in knowledge sharing. Therefore, certainly, competition improves learning and sharing knowledge."

In addition, the accounting manager of company E talked about the benefit of what he/she called 'positive' or 'constructive' competition in terms of organisational learning:

"If there is positive or constructive competition, people will try their best to get rewards from the company. From the whole company perspective, it is good. Because of positive competition between departments, people have to learn and study as much as possible so that they can improve themselves to contribute to the company."

For department behaviour in terms of knowledge sharing, most of the informants suggested that, in the presence of cross-functional competition, departments mostly want to receive knowledge from competing departments. The CFO from company B stated that:

> "You will not 'die' if you get more knowledge than normal. If you receive more knowledge, you will have more inputs for better planning and decision making. Thus, receiving knowledge from other departments will bring benefits to them. They can identify areas for improvements. They can listen to critics or attacking ideas from other departments. They can utilise them as inputs for their improvements."

In general, the observations from the depth interviews showed that the effects of cross-functional competition on cross-functional knowledge sharing are mixed because there are two different perspectives on cross-functional competition. The first perspective, consistent with previous studies (e.g. Narver and Slater 1990; Maltz and Kohli 2000), is that cross-functional competition is a barrier to cross-functional knowledge sharing. The informants from companies D and G suggested that, in the presence of competition, departments are likely to guard instead of share knowledge. This means that cross-functional competition eliminates cross-functional knowledge sharing, thus creating a real barrier to knowledge sharing. Moreover, the analysis of data from the interviews of the informants from companies B, D and E showed that cross-functional competition stimulates learning from competing departments when these departments are coordinated. Learning behaviour can be directed towards knowledge exchange between departments. This observation provides helpful qualitative insight into how cross-functional competition strengthens the effect of coordination on cross-functional knowledge sharing.

3.5 Innovativeness: The outcome of cross-functional knowledge sharing

The observations from the depth interviews showed that an important outcome of cross-functional knowledge sharing is organisational innovativeness. When interviewed about the relationship between cross-functional knowledge sharing and organisational innovativeness, most of the informants explained that, by combining different pools of knowledge and integrating various perspectives from marketing and other departments, organisations could improve their ability to innovate and adapt to market changes. For instance, the R&D and production manager from company D stated that:

> "Departments have different ideas, for example, in a product development project [….]. If the IT or accounting department shares knowledge or expertise about a work process, the work will flow smoothly and reduce the time to develop this new product. Another point is that, in a new product development project, we need information about what competitors are doing, such as the rights, the insurance premium, the insurance claim, etc. The marketing department can obtain this market intelligence and provide them to us so that we can analyse the information and provide new ideas to implement new products better. Knowledge sharing is good because we can have market information in advance so that we can approach the market carefully and respond quickly to market changes."

This above statement is in accord with the view of the accounting manager from company E, who praised the strength of knowledge combination and its effect on innovation:

> "There is an idiom: 'two heads are better than one'. When we combine the efforts and knowledge of many people from many departments, we can find a new way of doing things […]. For example, building high towers using new technologies transferred from overseas rather than using Ferro-concrete. The purpose is to shorten the build time by about two months."

The financial controller of company F added:

> "People just have only their own views; if they share knowledge with others from different departments, they can have a more comprehensive view of a problem that can satisfy many stakeholders. Thus, the innovation process is doable and relevant."

The CFO of company G emphasised the relevance of cross-functional knowledge sharing for innovativeness in terms of new product development and business process improvement:

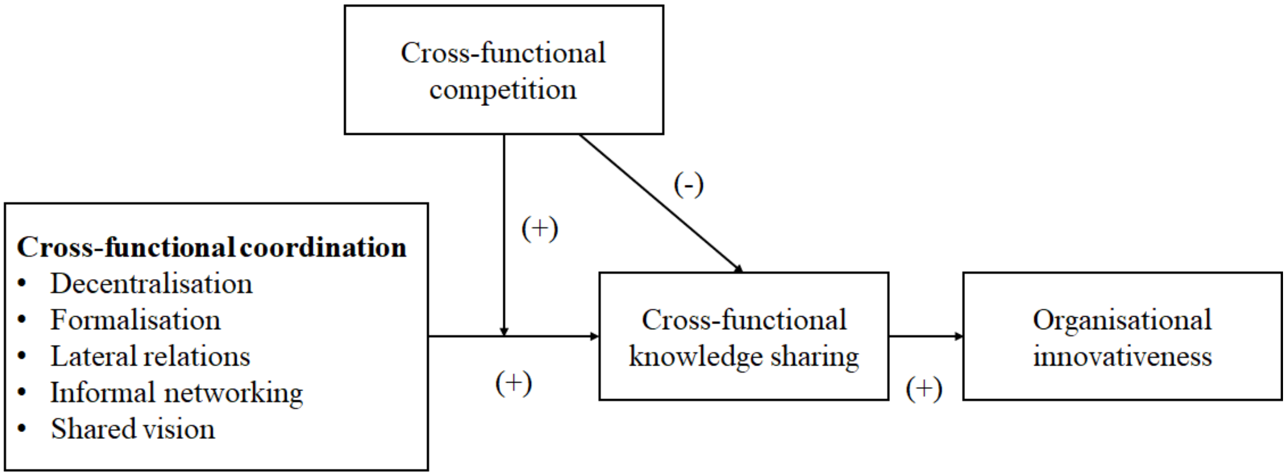


Figure 2 The coopetition model of knowledge sharing.

> "Knowledge sharing between departments can allow new ideas to be developed. […] The knowledge sharing process can facilitate our learning from the market to search for new products or new equipment to widen our market share and improve our revenue."

The depth interviews from companies D, E, F and G provided additional insight into the positive relationship between cross-functional knowledge sharing and organisational innovativeness.

From the qualitative analysis results, the coopetition model of knowledge sharing was developed (Figure 2). The model shows the interaction between five different cross-functional coordination mechanisms (decentralisation, formalisation, lateral relations, informal networking, and shared vision) and cross-functional competition, which can promote cross-functional knowledge sharing, which in turn, enhance organisational innovativeness. Interestingly, cross-functional coopetition can be viewed as a double-edged sword, while it can strengthen the effect of cross-functional coordination in enhancing knowledge sharing; however, it eliminates knowledge sharing at the same time.

4. CONCLUSION AND IMPLICATIONS

This study led to two main conclusions about cross-functional knowledge sharing in the context of Vietnam. First, the observations from the depth interviews showed that cross-functional competition could positively moderate the relationship between coordination mechanisms and cross-functional knowledge sharing. Second, knowledge sharing that promotes organisational innovativeness was observed in most of the interviews. The qualitative results indicated that the joint effect of coordination and competition potentially promotes knowledge sharing and innovativeness, and this effect can be applied in the context of Vietnam.

The study's results with the proposed model and hypotheses can help to answer the study's research questions: (1) the potential effect of different coordination mechanisms on cross-functional knowledge sharing was found (RQ1); (2) a coopetition framework could be built and applied to explain the level of knowledge sharing (RQ2), and (3) knowledge shared between competing departments under the governance of various coordination mechanisms can enhance organisational innovativeness (RQ3).

From a theoretical perspective, this study is significant because it adds to a debate over the value of cross-functional competition. There is a notion that competition between organisational functions is always unfavourable and should be avoided (e.g. Narver and Slater, 1990; Maltz and Kohli, 2000; Jaworski and Kohli, 1993). Conversely, there is a claim that cross-functional competition is not always unfavourable and can even generate competitive benefits in terms of learning, innovation and performance (Luo, Slotegraaf, and Pan, 2006; Lado, Boyd, and Hanlon, 1997). Adopting a coopetition framework, this study examines the potential significance of coordination in fostering knowledge sharing between marketing and other departments to improve organisational performance in the presence of cross-functional competition.

This study is also necessary from a practical standpoint because organisational performance may depend on the capability of departments to share knowledge in the presence of competition (Luo, Slotegraaf, and Pan, 2006). If the potential value of coordination in knowledge sharing between marketing and competing departments is tested and confirmed, organisations should be able to manage these conflicting processes of coordination and competition to achieve superior performance.

To extend the current body of literature, further avenues for research are suggested. First, this study focused only on the extent of cross-functional knowledge sharing, assuming that knowledge sharing is unidimensional. Future research should be undertaken to investigate multi-dimensions of cross-functional knowledge sharing beyond the extent, such as quality and speed. Quality of knowledge sharing refers to the relevance, accuracy, reliability and timeliness of the chain of wisdom of knowledge shared (Low and Mohr, 2001); the speed of knowledge sharing relates to how quickly and efficiently knowledge is shared (Hansen, 2002). These two dimensions are worth investigating because they would provide a more comprehensive understanding of knowledge sharing. Second, this study did not specify the two significant processes of knowledge sharing: knowledge donating and knowledge collecting. Knowledge donating refers to communicating information to others while knowledge collecting relates to consulting others to share their knowledge (van den Hoof and De Ridder, 2004). Further studies to investigate these two processes are needed because they may provide more insight into the knowledge flows at the interfaces between marketing departments and other departments. Finally, the proposed coopetition model of knowledge sharing should be further tested quantitatively using longitudinal research designs in future research.

5. REFERENCES

Adams, A., & Cox, A.L. (2008). Questionnaires, in-depth interviews and focus groups. In *Research Methods for Human Computer Interaction*, edited by P. Cairns and A.L Cox, 17-34. Cambridge, UK: Cambridge University Press.

Argote, L., & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. *Organizational Behavior & Human Decision Processes,* 82(1), 150-169.

Atuahene-Gima, K, & Evangelista, F. (2000). Cross-functional influence in new product development: An exploratory study of marketing and R&D perspectives. *Management Science,* 46(10), 1269-1284.

Bhagat, R.S., Kedia, B.L., Harveston, P.D., & Triandis H.C. (2002). Cultural variations in the cross-border transfer of organizational knowledge: An integrative framework. *Academy of Management Review,* 27(2), 204-221.

Calantone, R.J., Cavusgil, S.T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management,* 31(6), 515-524.

Carter, S., & Henderson, L. (2005). Approaches to qualitative data collection in social science. In *Handbook of health research methods: investigation, measurement and analysis*, edited by A. Bowling and S. Ebrahim, 215–30. UK: Open University Press.

Chow, C.W., Deng, F.J., & Ho, J.L. (2000). The openness of knowledge sharing within organizations: A comparative study of the united states and the People's Republic of China. *Journal of Management Accounting Research,* 12(1), 65-95.

Creswell, J.W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 3 ed. Los Angeles; London: Sage.

Evangelista, F., & Hau, L.N. (2009). Organizational context and knowledge acquisition in IJVs: An empirical study. *Journal of World Business,* 44(1), 63-73.

Fey, C. F., & Furu, P. (2008). Top management incentive compensation and knowledge sharing in multinational corporations. *Strategic Management Journal,* 29(12), 1301-1323.

Ghoshal, S., Korine, H., & Szulanski, G. (1994). Interunit communication in multinational corporations. *Management Science,* 40(1), 96-110.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods,* 18(1), 59-82.

Gupta, A.K., & Govindarajan, V. (2000). Knowledge flows within multinational corporations. *Strategic Management Journal,* 21(4), 473-496.

Hansen, M.T. (2002). Knowledge networks: Explaining effective knowledge sharing in multiunit companies. *Organization Science*, *13*(3), 232-248.

Hofstede, G. (2007). Asian management in the 21st century. *Asia Pacific Journal of Management* 24(4), 411-420.

Homburg, C., Jensen, O., & Krohmer, H. (2008). Configurations of marketing and sales: A taxomomy. *Journal of Marketing,* 72(2), 133-154.

Houston, M.B., Walker, B.A., Hutt, M.D., & Reingen, P.H. (2001). Cross-unit competition for a market charter: The enduring influence of structure. *Journal of Marketing,* 65(2), 19-34.

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

Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science,* 3(3), 383-97.

Krueger, R.A., & Casey, M.A. (2009). *Focus groups: A practical guide for applied research*. 4th ed. Thousand Oaks: Sage Publications.

Kuan Yew, W., & Aspinwall, E. (2004). Characterizing knowledge management in the small business environment. *Journal of Knowledge Management,* 8(3), 44-61.

Lado, A. A., Boyd, N.G., & Hanlon, S.C. (1997). Competition, cooperation, and the search for economic rents: A syncretic model. *Academy of Management Review,* 22(1), 110-141.

Lescab, H. (2019). Collective intelligence process to interpret weak signals and early warnings. *Journal of Intelligence Studies in Business*, *9*(2), 19-29.

Low, G. S., & Mohr, J. J. (2001). Factors affecting the use of information in the evaluation of marketing communications productivity. *Journal of the Academy of Marketing Science*, *29*(1), 70-88.

Luo, X., Slotegraaf, R.J., & Pan, X. (2006). Cross-functional coopetition: The simultaneous role of cooperation and competition within firms. *Journal of Marketing,* 70(2), 67-80.

Maltz, E., & Kohli, A.K. (1996). Market intelligence dissemination across functional boundaries. *Journal of Marketing Research,* 33(1), 47-61.

Maltz, E., & Kohli, A.K (2000). Reducing marketing's conflict with other functions: The differential effects of integrating mechanisms. *Journal of the Academy of Marketing Science,* 28(4), 479-492.

Massey, G. R., & Dawes, P.L. (2007). The antecedents and consequence of functional and dysfunctional conflict between marketing managers and sales managers. *Industrial Marketing Management,* 36(8), 1118-1129.

Morgan, D.L. (1988). *Focus groups as qualitative research*, *Qualitative research methods*. Newbury Park, Calif: Sage Publications.

Narver, J.C., & Slater, S.F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing,* 54(4), 20-35.

Nguyen, N.P, Ngo, V.L., Bucic, T., & Nguyen, D.P. (2018). Cross-functional knowledge sharing, coordination and firm performance: The role of cross-functional competition. *Industrial Marketing Management,* 71, 123-134.

Onwuegbuzie, A.J., & Leech, N.L. (2007). A call for qualitative power analyses. *Quality and Quantity,* 41(1), 105-121.

Ruekert, R. W., & Walker Jr, O. C. (1987). Marketing's interaction with other functional units: A conceptual framework and empirical evidence. *Journal of Marketing* 51(1), 1-19.

Salomo, S., Talke, K., & Strecker, N. (2008). Innovation field orientation and its effect on innovativeness and firm performance. *Journal of Product Innovation Management* 25(6), 560-576.

Bontis, N., Bart, C. K., Serenko, A., & Hardie, T. (2007). Organizational size and knowledge flow: A proposed theoretical link. *Journal of Intellectual Capital,* 8(4), 610-627.

Solberg Søilen, K. (2019). Making sense of the collective intelligence field: A review. *Journal of Intelligence Studies in Business*, 9(2), 6-18.

Tagliaventi, M. R., Bertolotti, F., & Macrì, D. M. (2010). A perspective on practice in interunit knowledge sharing. *European Management Journal,* 28(5), 331-345.

Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of Management Journal,* 44(5), 996-1004.

Tsai, W. (2002). Social structure of coopetition within a multiunit organization: Coordination, competition, and intraorganizational knowledge sharing. *Organization Science, 13*(2), 179-190.

van Den Hooff, B., & De Ridder, J. A. (2004). Knowledge sharing in context: The influence of organizational commitment, communication climate and CMC use on knowledge sharing. *Journal of Knowledge Management*, 8(6), 117-130.

van Wijk, R., Jansen, J. J., & Lyles, M. A. (2008). Inter- and intra-organizational knowledge transfer: A meta-analytic review and assessment of its antecedents and consequences. *Journal of Management Studies,* 45(4), 830-853.

Vietnamese-Government. (2009). 56 ND/CP- On assistance to the development of small- and medium-sized enterprises. The Vietnamese Government. Hanoi.

Willem, A., & Buelens, M. (2007). Knowledge sharing in public sector organizations: The effect of organizational characteristics on interdepartmental knowledge sharing. *Journal of Public Administration Research & Theory,* 17(4), 581-606.

Willem, A., Buelens, M., & Scarbrough, H. (2006). The role of inter-unit coordination mechanisms in knowledge sharing: A case study of a British MNC. *Journal of Information Science,* 32(6), 539-561.

APPENDIX 1. Depth interview guide

Knowledge sharing	**Key question 1** Can you please describe the process of sharing information and experience between different departments in your company? <u>Potential follow-up questions</u> • What kinds of information or knowledge are being shared between marketing and other departments in your company? • How do they share the information or knowledge? • How do they use the information or knowledge?
Coordination	**Key question 2** Can you please describe how your company encourages or supports different departments to share information or knowledge with each other? <u>Potential follow-up questions</u> • Are departments allowed to share information or knowledge without getting approval from top management? • Are there policies, rules, task descriptions, or procedures used in your company to promote knowledge sharing between different departments? • Does your company organise any social events (e.g. company picnic or party)? • Does your company organise project teams that include people from different departments? • Is there an agreement on the company's vision across all departments? • Do you think these above activities promote knowledge sharing?
Competition	**Key question 3** I have heard some people in the business community say that competition between different departments (e.g. for example, for status, capital, and labour) normally happens in multi-unit companies. What do you think? <u>Potential follow-up questions</u> • Can you describe some situations where there is interdepartmental competition in your company?

	Key question 4 Some people say that competition between departments eliminates knowledge sharing between them, and others say that competition promotes knowledge sharing between departments. What do you think? Potential follow-up questions • In the presence of competition, how do the departments behave in terms of knowledge sharing? • Do they want to seek knowledge from each other even if they are competing with each other? Why or why not?
Innovativeness	**Key question 5** What do you think about the relationship between cross-functional knowledge sharing and the extent to which your company adapts to new ideas (or willingness to change)? Can you explain your view?