

ESSENTIAL DRIVERS OF SUCCESS IN MODERN HORIZONTAL LOGISTIC COLLABORATION

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ABSTRACT

In transportation and logistics research, vertical collaboration—such as supplier-customer collaboration—has been the main focus, while horizontal collaboration—such as between competitors—has gotten less attention. While motivations, opportunities, antecedents, and outcomes have been highlighted in collaboration literature, researchers have given far less focus to the growth stages of horizontal collaboration—that is, the process by which collaborations are formed, started, and run. In addition, prior logistic research has mostly overlooked an examination of crucial success factors like shippers' motivations and willingness, their difficulties, partner selection, and the network broker's role in initiating and establishing horizontal collaboration.

Thus, the goal of this case study is to close these gaps and look into the crucial elements that contribute to success in the early phases of a horizontal logistic collaboration. This work is guided by the following research question:

RQ1: How may the early phases of a horizontal logistic collaboration teach us about important success factors?

This study advances the development of theory by proposing a five-step procedure for horizontal collaboration and highlighting the crucial elements that make this process successful. In particular, it has been determined that the network broker's function is crucial to the effective establishment of a horizontal collaboration.

This research is an illustration of actual producer collaboration that has led to the creation of a new green transportation corridor. As a result, this particular case provides significant fresh perspectives into the process of creating a horizontal logistic partnership.

Keywords: network broker, five-stage process, crucial success elements, and horizontal logistic collaboration

1. INTRODUCTION

The location of collaboration within the value chain must be taken into consideration. Researchers have been investigating inter-organizational collaborations, strategic alliances, and partnerships for a long time. Vertical collaboration, or businesses from various supply chain levels collaborating, for instance to optimize their logistical operations, has been the main focus of the logistic literature. There has not been much focus on horizontal collaboration in logistics and transportation, such as cooperation between rival businesses.

Collaboration in horizontal logistics is crucial for transportation and logistics for two reasons. First, organizations are more likely to become more cost-effective and service-effective by engaging in horizontal collaboration (Cruijsen et al., 2007). Secondly, increasing the efficiency of operations (such as consolidating flows) will result in more environmentally friendly transportation (Audy et al., 2010).

A great deal of research has been done on the process of partnership development. The development processes of horizontal logistic collaboration and its crucial success criteria, however, have received far less attention from scholars, with a few notable exceptions. The function of a neutral network broker in this process is also poorly understood (Cannatelli et al., 2012).

According to this study, there are a few actions a network broker should do in order to properly start and develop a logistic horizontal collaboration. Specifically, it entails: 1) an in-depth knowledge of the businesses (such as their obstacles and goals); 2) a selecting the appropriate partners (fit or match), and 3) knowing how to start the process of horizontal collaboration.

2. EFFECTIVE COOPERATION IN HORIZONTAL LOGISTICS

Key elements for success

Only when the business is prepared to put in the time and effort should a horizontal partnership be formed (Audy et al., 2010). The degree to which a corporation is willing to work with another company—even a direct rival—to develop logistical or transportation solutions that will help their businesses is known as their willingness to collaborate. Establishing an effective horizontal partnership between businesses is a difficult task. First and foremost, determining the key success elements that increase the shipper's desire to engage in horizontal logistic collaboration is highly

pertinent.

According to research, the driving reasons behind business decisions are both external (such as regulations, consumers, and competitors) and internal (such as financial incentives and future profits, as well as the reputation of partner organizations) (Jepsen et al., 2011).

A horizontal partnership could include two or more rival businesses with dissimilar histories, cultures, and outlooks on the future. Accordingly, trust is essential to successful horizontal collaboration (Cannatelli et al., 2012). Potential disputes and opportunism can be avoided when parties have mutual trust. According to researchers, the most trusted partners are typically the ones who are most preferred (Li et al., 2008). In other words, if the ideal partners are chosen for the horizontal logistic collaboration, confidence can be established.

It has also been discovered that choosing partners is crucial to the effectiveness of horizontal collaboration (Benford, 1993). According to research, it's critical to determine whether two businesses are a good fit before launching a horizontal partnership. This idea is described as the alignment of strategy, the broader environment, as well as the externally agreed-upon target or project goals, and the internal fit between the company's organizational structure and its personnel, both domestically and internationally.

Inter-organizational collaboration and the significance of selecting the right partner based on internal fit between firms in terms of talents and management philosophy, among other factors, are also studied by Liu et al. (2006). Collaboration projects benefit from the personal dedication and participation of individuals, especially supply chain managers and management (Hanna et al., 2000). Setting up individuals and teams for success and having a clear understanding of each party's motivation for participating in collaborative initiatives are crucial (Hammant, 2011). It has been discovered that interpersonal relationships both within and outside of businesses affect how well partnerships work (Hammant, 2011). A person may benefit personally from improved reputation, improved social relationships, preferential access to social relationships, and other advantages. Stated differently, the internal fit between the various organizations' employees are essential to success.

Additionally, a competency evaluation process is linked to two categories of competency: hard competencies and soft competencies, according to Rosas et al. (2011). While soft competences refer to a general aptitude to conduct a behavior, such the ability to exchange knowledge, hard competencies refer to an organization's ability to carry out activities or tasks aimed at reaching a specific number of results. When choosing the proper partner, both of these qualities should be taken into account.

THE BEGINNING AND DEVELOPMENT OF HORIZONTAL COOPERATION

Similar procedures are followed when establishing inter-organizational collaborations. Gonzalez (2001) recommends forming alliances using a five-step procedure. Initially, the collaboration strategy is established, including the company's unique requirements, the goals of the collaboration, etc. The couples are then chosen. Third, the relationship's legal foundation is set. The partnership must then be appropriately managed, based on numerous inter-organizational gatherings and dispute resolution procedures. In the fifth step, the relationship's success or failure is assessed. The three-stage model proposed by Das et al. (2002) comprises three stages: formation, operation, and outcome. Establishing and growing a horizontal collaboration is challenging. The manager of this kind of collaboration needs to be able to see beyond the bounds of the organization and handle the complexity that comes with it. Each side must defend its own interests. An independent network broker can help with difficult decisions including what information to disclose, which truths to accept, and how much to commit, particularly in the beginning of a relationship (Cannatelli et al., 2010). The function of a broker has been examined and analyzed by several scholars, and knowledge institutions have been determined to serve as an impartial and reliable partner to profit companies (Winch et al., 2007).

3. METHODS

This research was conducted as an exploratory longitudinal case study. The Interreg IVB project Connecting Food Port Regions – Between and Beyond (Food Port) (www.food-port.eu), which attempts to increase the efficacy, sustainability, and efficiency of the food supply chains within the North Sea Region, served as the impetus for the empirical case study. Knowledge organizations (such as universities) from the various North Sea Regions conducted interviews with food producers (shippers) as part of the Food Port initiative in order to gain an understanding of shippers' freight flows. Finding green transportation corridors and establishing new alliances for cooperation in the food and logistics industries were the goals.

The effective creation of a horizontal partnership between four Danish food production enterprises is the main subject of the field case analysis that was conducted. The goal of theoretical sampling, which concentrates on situations with

"rare" characteristics and whose dynamics may be readily observed, is congruent with gaining internal access to a shown successful initiative. This allows processes that can occur in other contexts to emerge sharply (Eisenhardt, 1989). As a result, I had access to data that addressed the research topic. Leading a thorough case study enables the investigation of causal relationships that are too intricate to be examined, for instance, in a survey (Yin, 1994; Eisenhardt, 1989). In fact, taking a longitudinal approach aligns with the goal of the study, which is to investigate the conditions that lead to horizontal collaboration.

Once more, a crucial instrument for advancing fresh perspectives in the logistics industry is the longitudinal perspective. In-depth semi-structured interviews with logistic or supply chain managers from 22 food production enterprises, direct observations by the author during two workshops, four follow-up in-depth interviews, and three brief telephone interviews form the basis of the study. The process of gathering data is continuous. The most recent interview was conducted in June 2014; it began in November 2011.

4. FINDINGS

The success factors for a successful horizontal logistic partnership are supported by the case study. In addition, the case study identifies four key phases in the horizontal collaboration development process. Figure 1 depicts the five stages, which are examined in the sections that follow. According to reports, excerpts from the interviews offer insight into the crucial success factors at every phase of the procedure.

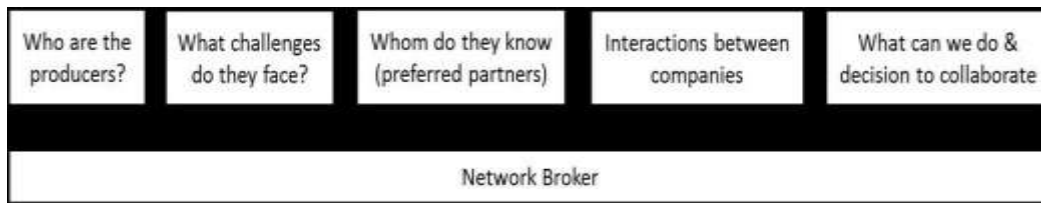


Fig. 1: The approach by which horizontal logistics collaboration is developed

THE PRODUCERS' OPENNESS AND WILLINGNESS

The author (in this case, the network broker) uses Food Port to identify a wide-ranging economic opportunity (the formation of a horizontal partnership), which triggers the first stage. 22 interviews with various Danish food producers (shippers) were conducted at this point in order to determine their identities.

It demonstrates that a number of Danish food sector producers are amenable to horizontal cooperation. In particular, manufacturers in the bread, meat, dairy, and vegetable sectors are quite receptive to horizontal cooperation.

The results also demonstrate that the organizations surveyed had little to no experience with horizontal collaboration. However, the producers are highly enthusiastic about collaboration as long as the partners are willing and open to investing in it: "We have no past experience with this kind of partnership. But we are certain that horizontal collaboration will succeed as long as people come up with anything. "We have no problems in cooperation vertical or horizontal around practical problems," says another business. "We are very open and we have always been," the supply chain manager adds. and "I have witnessed individuals seeing ghosts on numerous occasions. When we tell things as they are, we feel most at ease. We don't conceal anything.

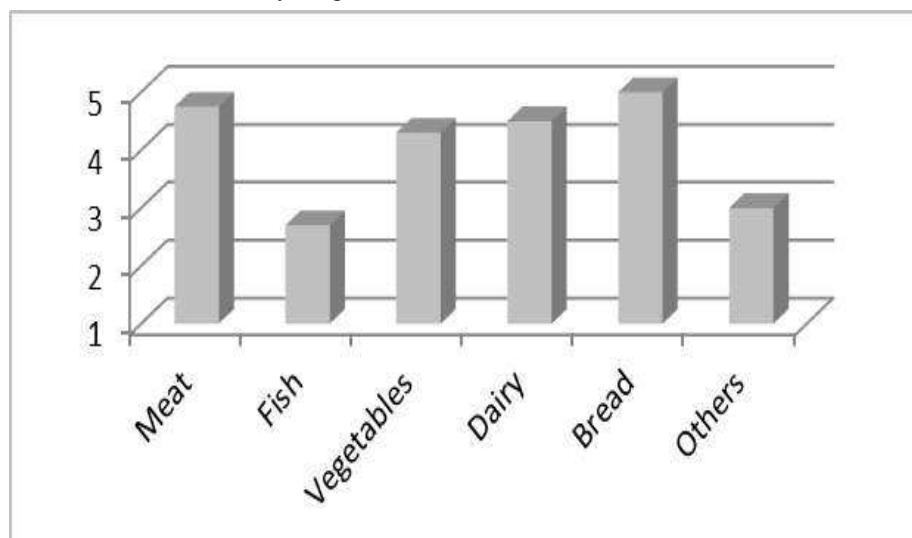


Fig. 2: The willingness to horizontal collaboration

What difficulties do they encounter?

Initially, the producers were questioned regarding the reasons behind their horizontal collaboration, both internal and external. Second, they were asked to list a number of difficulties and, consequently, chances for horizontal cooperation. The results demonstrate that internal incentives for engaging in horizontal collaboration are operational, transactional, and recurring, including cost savings. Due to weight restrictions, several of the producers who were interviewed are unable to fill the trucks. "We need to address specific challenges related to the transport of heavy goods," says one company. In other words, costs could be decreased if this shipper could combine freight. Some of the primary drivers of horizontal collaboration are also identified as improvements in customer service quality (speed, such as on-time delivery, damage prevention), and the delivery of special freight. Additional motivations are also discerned from the interviews pertaining to horizontal collaborative participation. According to one of the producers: "The justification for engaging in this type of cooperation was that it would allow us to sit at the table and truly create a new setup." The main force behind it was not the environmental aspect.

Customer needs resulting from a shorter product life cycle or the need for new packaging, which may need new modes of transportation, are the external motives revealed by the interviews. One of the businesses noted that "because the shelf life is so extremely important for the large retailers, our customers put more and more pressure on the transport-related setup." Customers set the agenda: "They dictate the market," and case companies concur that many cooperation activities are driven by client requirements.

According to the interviews, supply chain projects are also influenced by external competitors. According to one business, "we cannot offer a poorer setup than our largest competitor if we want to maintain our role in the market." Stated differently, the requirements imposed by the rival are essential.

Additionally, this study identifies the producers' motivations for engaging in horizontal collaboration as the need to lessen environmental impact. "The environment has not been a priority with the economic pressures that have been on us over the last two years," notes one of the supply chain managers. The corporation has solely profited from the benefits that environmental programs provided without charge.

The results demonstrate that many of the food producers surveyed regarded transportation issues and inefficiencies—such as high shipping costs, vehicle limits in Germany, branding, etc.—to be a major difficulty when it comes to getting their products to a particular nation.

Finding a shared objective for a horizontal collaboration was the network broker's next move after determining the goals and difficulties faced by various food producers. Stated differently, it was necessary to develop a feasible and advantageous business case (pilot project) for horizontal collaboration. As a business case, the network broker decided to establish a horizontal cooperation among food producers concerning their exports to this particular nation. Rather than developing a customs system, the primary emphasis was on logistical cooperation and carbon impact.

Who are they acquainted with (preferred partners)?

Following the identification of the particular business opportunity, the data was used to determine which producers were most receptive and eager to investigate joint venture prospects pertaining to the shipping of food to this particular nation. In order to identify possible partners with whom a relationship could be beneficial, new interviews were conducted with producers in the bread, vegetable, and meat industries.

Initially, the businesses listed the names of people they loved, trusted, and knew. To put it another way, businesses identified partners with whom they had previously interacted, for example, in a different setting. Only a small percentage of the organizations interviewed had horizontal collaboration experience with one another in the transportation sector, but some of the companies knew one another from previous collaboration experience. Second, they mentioned businesses that they knew a little bit about.

The logistic or supply chain managers from the various businesses also knew one another from Network Groups and as previous coworkers: "We can communicate." One of my coworkers is the supply chain manager at our rival. as well "We participate in the same Network Group". In other words, while choosing partners for collaboration, personal relationships are crucial.

When it came to horizontal cooperation with their rivals, the producers who were interviewed had no issues. One business is even prepared to consider the advantages of working with all of the other businesses: "We don't really care if we have to work with one of our biggest rivals. If it benefits everyone, we don't have any preferences.

The companies essentially select one another through the interviews. The needs for food transportation (such as refrigerated trucks) were one of the selection criteria for the possible partners: "All we need are a few things. There are restrictions on the kinds of food that can be combined with it because it is fresh food. Thus, it provides certain restrictions.

The significance of the companion match is being emphasized by the producers. "Finding someone with whom you have some synergy is important," said one producer. I believe it is crucial that we have similar appearances. Although we must face similar difficulties, it is not crucial that we look alike. I couldn't relate to a corporation that manufactures screws and nails if I had to work with them. The products must have the same lead time. Thus, "Producers of products that have the similar short shelf life challenges and just- in-time requirements" .

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After the interviews, the network broker selected the producers who were perceived as the best match in terms of external fit (food requirements etc.) and internal fit (personal relations).

Interactions among businesses

Investigating potential new collaborations between the chosen producers was the following stage. Stated differently, the producers received an invitation and agreed to attend a session. Stated differently, communication between the producers was started by the network broker. The network broker took part in the actual problem-solving at this point and kept a careful eye on the procedure.

Prior to the session, no specific objectives had been established. The workshop's main objective was to find commercial prospects for the establishment of a horizontal partnership amongst the chosen food producers with reference to their exports to this particular nation. Logistics and carbon footprint were the primary areas of concern.

During the workshop, the businesses talked about their experiences with this particular market's opportunities and problems. However, they also talked about their companies' advantages and disadvantages. Despite the fact that each producer had distinct interests and challenges, they were all willing to look for and take advantage of win-win scenarios and, consequently, opportunities for each partner. "This is our world and how we adapt," stated one of the corporations plainly.

Several recommendations came out of the workshop, such as the possibility of consolidating the manufacturers' product flows and shipping them via the current road-to-road or port-to-port connections. The third alternative was to establish a new green food port corridor—a new inter modal link that would include road, rail, and short-sea shipping—between Denmark and this particular nation.

It was determined that in order to identify the most sustainable logistical solution for the food producers, the network broker and colleagues should conduct a feasibility study. Thus, a comparison of the current and prospective food port scenarios was conducted, together with estimates of their carbon footprint and economic efficiency.

Prior to proceeding with the partnership, a non-disclosure agreement was signed by each partner, and a new workshop date was established. The network broker created a non-disclosure agreement shortly after the session, and the partners signed and circulated it.

What we can do and our choice to work together

The network broker presented the feasibility study's findings during the subsequent workshop, which was held at one of the participating businesses. The purpose of

The purpose of this session was to decide to commit to co-creating the new business opportunity.

Following the feasibility assessment, a shared objective was selected for pursuit, and the companies all decided to continue their horizontal partnership. A signed Letter of Intent was distributed.

According to recent discussions with the individual producers, they all stressed the importance of food and quality. Every one of them is certified in accordance with certain guidelines and protocols that need to be adhered to. If not, the businesses will receive a letter and need to re certify.

Therefore, a formal agreement and contract are still required prior to the start of operations. However, none of the creators see this as a barrier to the collaboration's launch.

The choice to work together is not solely motivated by cost-cutting considerations. The results demonstrate that performing horizontal collaboration in transportation and logistics has various advantages beyond cost savings, such as lowering CO2 and having an impact. Cost-cutting, however, is by far the most significant of the possible.

5. DISCUSSION

The findings highlight the need of learning as much as possible about the producers—their identities, levels of openness and readiness to collaborate, as well as their obstacles and motivations. Today's picky consumers demand that their products be delivered at the best possible price, in the appropriate quantity, at the right time, to the right location, and in perfect condition. Road transportation is therefore mostly used by participating producers. However, the issues and inefficiencies with road transportation today necessitate searching for alternatives.

Their transportation-related issues and motivations are similar in this particular country. Stated differently, I contend that the business's appeal in terms of cost savings and improved customer service has a beneficial impact on their openness and readiness to engage in horizontal collaboration. This conclusion is corroborated by Cruijssen et al. (2007). Nevertheless, this study also shows that incentives like reputation and creating new economic models, including "setting a new agenda for future transportation," are important.

Some of the companies have worked together in other business domains, despite the fact that they have no prior experience working together horizontally.

This result implies that the effective establishment of a horizontal collaboration is positively impacted by previous collaboration experience. Having close personal ties with previous coworkers and belonging to the same Network Group is also considered significant. To put it another way, businesses are more likely to engage in intense and transparent collaboration if they have a thorough awareness of the organizational culture, business goals, goods, and skills and capabilities of their possible partners.

This finding has been verified by Li et al. (2008), who contend that experienced partners are more likely to comprehend one another's operational procedures, managerial styles, and know-how. According to the case study's findings, participants will work harder if they like and trust the team they are working with, and if they think their contributions are significant to the success of the entire partnership.

The disadvantage of this self-selection process among former partners and coworkers can keep businesses from going outside of their own social networks and squandering possibilities (Ellis, 2000). This can be avoided, according to the research, by using a neutral network broker to locate partners that have several benefits but would not have been connected otherwise.

According to the results, consistent engagement over time is positively correlated with a greater desire to work together. However, establishing, sustaining, and growing business partnerships between companies requires time and resources (Anderson et al., 2000). This case demonstrates how a network broker, like knowledge organizations, can effectively persuade partners to join a horizontal collaboration, improve communication, and draft informal agreements or contracts (such as a letter of intent and non-disclosure agreement), all of which are necessary for the successful establishment of a horizontal logistic collaboration.

6. CONCLUSION

This case study has several different lessons to teach us. First, the case serves as a successful illustration of how a network broker can assist Danish food producers in the initial stages of establishing and developing a horizontal logistic partnership (some of which are even competing in the same sector in foreign markets). Key success elements for this outcome include the producers' openness and desire, shared goals and difficulties, the ideal mix of partners, and engagement with strong executive support from a network broker.

Second, in contrast to previous studies (e.g. Das et al., 2002), the case demonstrates that the collaboration process begins with (1) identifying willing and open partners, (2) identifying common challenges and motivations, (3) selecting partners, (4) interacting, and (5) defining the task and deciding to collaborate.

Third, the results indicate that the following success conditions are necessary for the partnership to advance from one stage of growth to the next: (1) The members must be each other's chosen partners, (2) have a high level of openness and readiness to work together, and (3) see the chance for mutual gain.

Fourth, the results indicate that the companies respect the network broker's ability to initiate, participate, and contribute to the partnerships through their expertise and knowledge role. Additionally, the participation of an independent network broker leads to commitments and relational agreements for the horizontal collaboration.

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