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Framework of Horizontal Collaboration Implementation in the Indonesian Courier, Express, and Parcel Industry

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Abstract - **Horizontal collaboration could generate mutual benefits for competing companies through complementing each companies' capabilities. However, the implementation of this strategy is limited among the Courier, Express, and Parcel (CEP) companies in Indonesia and has not much been discussed yet. This research aims to develop a framework that is based on 3 case studies of CEP companies in Indonesia, which identify the important consideration toward the implementation of horizontal collaboration, which includes different factors that act as the drivers, enablers, and barriers of horizontal collaboration, as well as to figure out the suitable model of horizontal collaboration to be implemented. The framework in this study indicates that the potential benefit to increase the number of orders significantly and strengthen market position in a shorter period become the main driver to conduct collaboration. Furthermore, it is suggested for the collaboration to be implemented directly by 2 companies that have an equal position within the collaboration; willing to share their asset and exchange orders to create a mutual benefit; and have the readiness in technology for the collaboration process.**

Keywords – **Courier Express and Parcel Service, Framework Development, Horizontal Collaboration,**

I. INTRODUCTION

The Courier, Express, and Parcel (CEP) industry in Indonesia has a very potential and growing market due to the major trend of e-commerce transactions [1]. The demand for the Indonesian CEP companies is furtherly risen due to the occurrence of the COVID-19 pandemic, in which it has a 30 percent increase due to greater activity in e-commerce transactions [2]. However, the current industry experiences stiff competition, both between local and foreign companies that just enter the industry due to the occurrence of globalization that makes an even more competitive business ecosystem [3].

The companies within the industry currently have to compete to serve a highly demanding customer in today's era, by doing price war and generating the greatest value to the customer in its delivery service [4]. Furthermore, this issue of tough competition is becoming worse since high transportation cost is still a problem for the logistics and transportation sector in Indonesia [5].

Facing these predicaments, companies may continue to adopt a competitive strategy, which is considered as short term, provide little value, and develop mistrust among companies within the industry, or to try a collaborative strategy in which these companies could complement each other's capabilities and generate a greater value for both companies [6].

The collaboration between companies within the same level of the supply chain that serves a similar market refers to horizontal collaboration[7]. Within the horizontal collaboration, companies share their resources to complement each partner's capabilities, which create a mutual benefit for all of the parties involved [8]

Within the transportation industry, different research has shown that the implementation of horizontal has shown various benefits to the companies involved in it, such as generating significant cost savings, increasing service levels, and reducing carbon footprints at the same time [9]. With the issues faced by Indonesian CEP companies, horizontal collaboration is very potential to be implemented by the Indonesian CEP companies, in which it could help them to achieve mutual benefits by allowing companies to realize additional revenue opportunities or cost reduction through sharing the resources and information [17].

Unfortunately, the implementation of horizontal collaboration in the Indonesian CEP industry is very limited in its occurrence, which could be explained by the current business ecosystem in Indonesia in which mistrust between competing firms still commonly existed as well as lack of transparency. Meanwhile, the implementation of horizontal collaboration requires transparency and information sharing between companies for the collaboration to work well and achieve mutual benefits for all companies [18].

Besides its limited occurrence, a previous study that discusses horizontal collaboration specifically in the Indonesian CEP industry cannot be found. Most of the studies that cover the horizontal collaboration topic, discuss its implementation in other industries, such as trucking, aviation, etc. Therefore, this research intends to fill the research gap by developing a conceptual framework that identifies the important consideration which influences the implementation of horizontal collaboration in the Indonesian CEP industry, which covers different factors that could : (1) motivate companies within the CEP industry to conduct horizontal collaboration, (2) act as the enabler and barriers that could influence the implementation of the horizontal collaboration itself, and also to identify the suitable model of horizontal collaboration to be implemented by the Indonesian CEP companies.

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With that being said, the research question of this study is formulated as follows:

1. What are the drivers of horizontal collaboration in the Indonesian CEP companies?
2. What are the enabler factors of the implementation of horizontal collaboration in the Indonesian CEP companies?
3. What factors could act as the barrier toward the implementation of horizontal collaboration in the Indonesian CEP companies?
4. How is the suitable model of horizontal collaboration to be implemented by Indonesian CEP companies?

The limitation of this study is that it onlycovers the implementation of horizontal collaboration that existed in the Indonesian CEP companies. However, it only focuses on the contribution of horizontal collaboration from a conceptual point of view in the form of a framework model, with the exclusion of practical implication, due to the unavailability of historical data and limited implementation of horizontal collaboration in the specific industry. For the conceptual framework in this study to be applied in real practice, empirical research has to be done to create a refinement toward the conceptual framework. Furthermore, for this study, the data collection is obtained by conducting semi-structured interviews with 3 representatives from 3 different Indonesian CEP companies, in which the representatives must have a managerial or upper management position within the industry, and 1 senior practitioner from the Indonesian Logistics Association. The data collection was done from March until April 2021.

II. LITERATURE REVIEW

A. The driver of Horizontal Collaboration

The occurrence of horizontal collaboration that has been implemented by lots of companies in other industries must be driven by specific factors. The trigger that drives companies to conduct horizontal collaboration is usually caused by the benefits or synergy, a supernormal profit that only could be obtained through a collaboration between each company, and cannot be generated when the company acts alone [10]. Reference [10] has grouped these benefit opportunities into 3 main drivers of horizontal collaboration: cost and productivity, customer service, and market position.

Cost and productivity define the benefit to increase operation productivity for companies that conducted horizontal collaboration. As expensive transportation costs in Indonesia as well as the small volume of shipments with the widely distributed delivery area create a challenge for Indonesian CEP companies, the motivation to reduce cost and increase operational efficiency is very relevant to be put as the driver. The second driver is customer service, which refers to the potential benefit of improving the service offering to the customer or reaching a wider customer reach geographically. With tense rivalry among Indonesian CEP companies, the researcher assumes that to have a better service to the customer is the ultimate factor to win the customer heart within the market, and thus companies are sure would probably consider implementing the horizontal collaboration strategy to achieve that benefit. Lastly, market position, which refers to the potential benefit to strengthen market position through collaboration. With tense competition in todays' CEP industry, companies may struggle to secure their position in the market, and this condition may trigger them to collaborate with their competitor to jointly increase their competitiveness within the market or industry.

B. Horizontal Collaboration Model

The horizontal collaboration model could be viewed based on its leadership style and its collaboration process. Based on its leadership style, horizontal collaboration is divided into 3 types: convened collaboration, primus inter-pares collaboration, and inter-pares collaboration [11]. Convened collaboration occurs when the collaboration of multiple companies is being facilitated by a neutral party or third-party logistics provider (3PL). Primus inter-pares collaboration is a collaboration in which one collaborating partner takes the lead in facilitating the collaboration due to its size and critical mass. Lastly, inter-pares collaboration is a collaboration in which all collaborating parties with similar-sized operations work collectively to enable collaboration.

On the other hand, based on its collaboration process, horizontal collaboration could be categorized into manual DIY (Do It Yourself), semi-automated DIY, and Outsource to 3PL [12]. In the manual DIY collaboration, the collaboration process is still done manually, which is done by persons instead of machines/systems. The process of this collaboration is similar to single-carrier collaboration schemes which are mainly used by package carrier companies [13]. In this model, after customers create orders on one of the companies within the collaboration, the 2 collaborating companies conduct information sharing toward customer orders and exchange orders to be executed by their partners with the purpose to enhance operational efficiency, serving for customer orders which are unable to be executed individually. The second type is semi-automated DIY collaboration. The major differences to Manual DIY are that information sharing and order assignment is not conducted manually, but with the use of technology. Lastly, outsourced to 3PL is similar to the convened collaboration, which enables multiple companies that cannot facilitate or orchestrate collaboration to enter into horizontal collaboration through outsourcing the collaboration platform function.

C. The barrier of Horizontal Collaboration

Although horizontal collaboration gives multiple potential benefits to companies, in reality, lots of companies failed during the collaboration process due to

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the complex activity of horizontal collaboration [10]. Thus, it is indisputable that impediments or barriers to implementing horizontal collaboration exist and must be considered by companies who want to implement such a strategy.

Barriers to horizontal collaboration are factors that act like the threat of the implementation of horizontal collaboration. Reference [10] has grouped the ultimate barrier that is mostly found on the implementation of horizontal collaboration, which is divided into 4 areas: partners, determination and dividing the gains, negotiation, and coordination, and information and communication technology (ICT). The elaboration for each of the barrier areas is explained in the table below.

TABLE 1
IMPEDIMENTS OF HORIZONTAL COLLABORATION [10]

Barrier Area	**Impediments/Barrier**
Partners	Difficulty in findings reliable and suitable partners, the difference in interests and opportunistic behavior, risk of losing market share, high coordination cost due to differences in operating procedures
Determiningand dividing the gains	Difficulty in determining and distribute cost-benefit fairly to all parties, difficulty in establishing a fair allocation of the shared workload
Negotiation	Unequal bargaining positions due to size differences of the collaborating companies, little value to be shared due to fierce and negative attitude toward the negotiation
Coordination and ICT	High indispensable ICT cost, increased operational complexity, High additional coordinating and controlling cost

D. The Enabler of Horizontal Collaboration

Enablers of horizontal collaboration are defined as the factors that could increase the attractiveness of companies to collaborate. In this research, the enabler of horizontal collaboration uses the key enabler of the human side, which determines how well the companies that lie within the horizontal collaboration could work together, both internally or with the collaborating partner, which could determine the success of the collaboration [14]. The key enablers consist of 6 factors: common interest, transparency, prioritization, clear expectation, leadership, and cooperation, and benefit-sharing. The definition of all of the key enablers is summarized as follows.

TABLE 2
KEY ENABLER OF HORIZONTAL COLLABORATION [14]

Key Enabler	**Description**
Common interest	Ensuring all of the collaborating parties share the same interest and commit to the outcome of the collaboration
Transparency	The behavior in which all of the collaborating parties are all openly toward their practices, resources, and all of the required information for the collaboration
Prioritization	Every collaborating party should have to always keep in mind what is considered to be the essential things and always seek the common goal
Clear Expectation	All of the collaborating partners should have a bold understanding toward the contribution of the goal of the collaboration and having the same commitment to chase the goal
Leadership	The significant outcome should be achieved in the collaboration with the existence of a dominant party that drives the collaboration forward
Cooperation and Benefit Sharing	Distributing cost and profit in equity for all collaboration partners.

Meanwhile, in another research, trust among partners happened to be the most essential outset consideration factor before implementing a horizontal collaboration [15]. According to Ref [15], Trust is needed to be developed within companies that collaborate because most companies have different cultures and values. Furthermore, in the latest research, it is found that the key enabler of horizontal collaboration has a significant influence on the development of trust, in which the occurrence of all of the key enablers may create a faster development of trust between the collaborating companies [16].

E. Conceptual Framework

From the literature review of horizontal collaboration, the researcher combines and synthesize all of the theories to develop a conceptual framework that consists of all of the important factors to be considered toward the implementation of horizontal collaboration in the Indonesian CEP industry

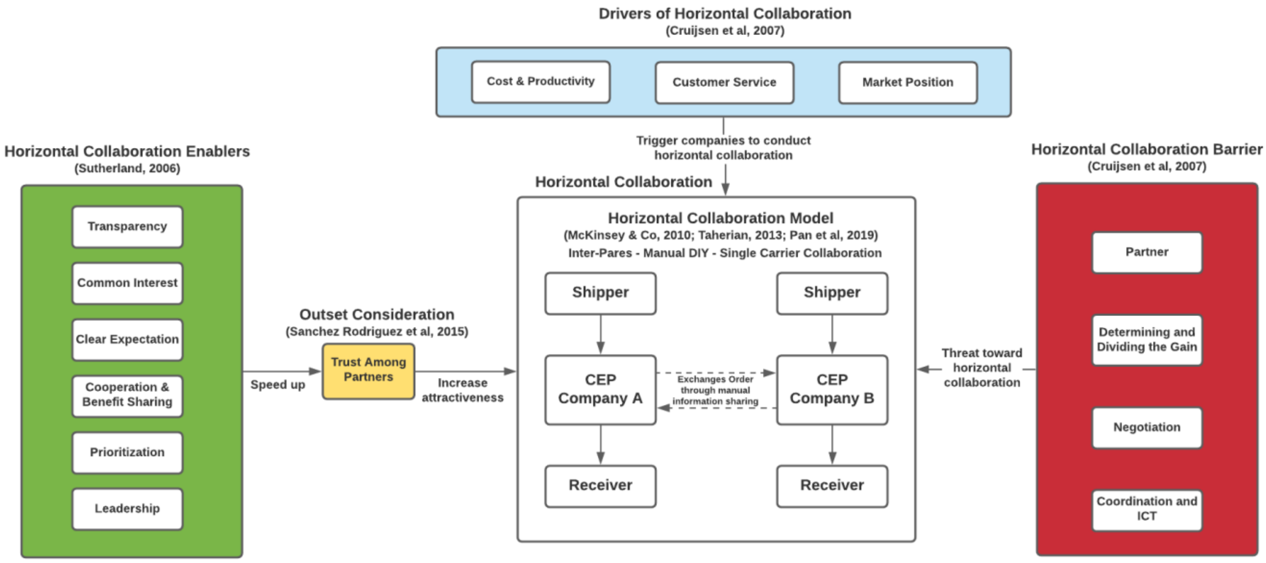

Fig 1. Conceptual Framework
Fig 1. Conceptual Framework

The framework consists of 4 essential elements for the consideration toward the implementation of horizontal collaboration, which includes the drivers of horizontal collaboration, enabler of horizontal collaboration, the barrier of horizontal collaboration, and horizontal collaboration model, which are considered to be essential toward the occurrence of the implementation of horizontal collaboration in the Indonesian CEP industry, which currently is still limited to several companies only.

The literature gap of this research is that none of the previous research discusses the implementation of horizontal collaboration in the specific Indonesian CEP industry, in which this research wants to contribute by providing a better understanding of the important considerations for Indonesian CEP companies to implement horizontal collaboration strategy, by incorporating factors that act as the drivers, barriers, and enablers and also figure the suitable horizontal collaboration model to be implemented.

III. METHODOLOGY

This research uses a qualitative approach since the researcher wanted to get an in-depth understanding of the phenomenon of the implementation of horizontal collaboration in the Indonesian CEP industry. The research design in this study is depicted in the following figure.

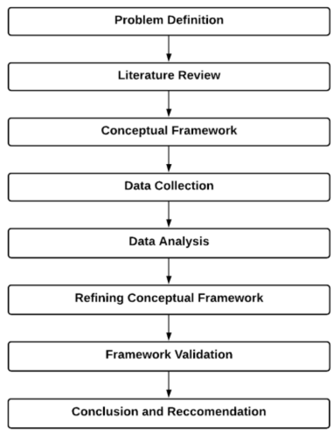

Fig 2. Research Design

A. Problem Identification

In the beginning, problem definition is aimed to explore the general areas and aspects of the current problems. In this study, the researcher uses information from secondary data from journals and open sources to identify the issue in the business environment. As mentioned in the previous chapter, the problem stated in this research is related to the limited occurrence and implementation of horizontal collaboration in the Indonesian CEP industry

B. Literature Review

In this research, the literature review is conducted to summarize the previous research related to horizontal collaboration in the transportation industry which has a usable context of the framework that can be adapted to this research.

C. Conceptual Framework

The next step of the research is to develop a conceptual framework tailored for horizontal collaboration implementation in Indonesian CEP companies based on the theories and findings from the literature review. In this research, the conceptual framework combines the hypothesis element of drivers, barriers, enablers of horizontal collaboration with a suitable scheme for horizontal collaboration implementation between companies in the CEP industries, which is driven by the literature review. The proposed framework will be the proposition of this research which will be proposed during the case study.

D. Data Collection

The data collection for this research is done through obtaining qualitative data through direct semi-structured interviews with 3 organizational actors from 3 different CEP companies in Indonesia, which is used as the case study within this research. Furthermore, another interview with a senior practitioner from the Indonesian Logistics Association to validate the perspective about horizontal collaboration and ensure bias was incorporated into the result of this research. The respondents of the interviews all follow the specific criteria as follows: (1) Hold a manager or upper management position within the company, (2) Minimum 2 years of experience in the CEP industry. Furthermore, these are the brief of the companies selected as the case study in this research as well as the reasoning behind the selection for each company:

1. *Company A*

   Company A is a new startup company that offers parcel delivery services since 2019. Its value proposition lies within the advanced technology that is brought by the company within its delivery service offering. The company has experienced significant growth in sales on 2020 with an increase of 200,000 parcel delivery per day from only 100,000 packages per day in 2019. The research of this company as one of the case studies to get the insight from a newcomer in the industry which has significant growth, but still trying to compete more toward the existing market leader, however, has not extensively conducted horizontal collaboration strategy.

2. *Company B*

   Company B is a public-owned company that is the pioneer and one of the oldest CEP companies in Indonesia. Currently, this company has the widest coverage service area throughout Indonesia with more than 58.700 points that are located all across Indonesia. However, with the fierce competition in the CEP industry, the company gets overwhelmed and has difficulties competing with other competitors and having a decreased market share over time. Company B has conducted horizontal collaboration with one of the private companies that have a strong customer base in the e-commerce segment. With the selection of the company, the researcher wanted to get insight into the implication of horizontal collaboration from an experienced and established large-size government-owned company that has existed in the CEP industry for a long period, but is struggling to compete in the current market.

3. *Company C*

   Company C is also a startup technology-based delivery company that is newly operated in the CEP industry for just 3 years from 2018. Different from the previous 2 companies, the company's key offering lies in its instant and same-day delivery service with flat rate and the guaranteed delivery time of a maximum of 8 hours. However, the coverage area of its service is still limited in big cities in Java, Bali, Sulawesi, and Sumatra. The company was also one of the pioneers of the implementation of horizontal collaboration in the industry. Therefore, the researcher selects the company as the case study to understand the implication of horizontal collaboration from a new player with a unique offering to the market that has extensively conducted a horizontal collaboration strategy.

E. Data Analysis

In this research, all of the qualitative data obtained from the interview is analyzed by comparing the conceptual framework from the theory to the real practice in the field. Firstly, the researcher will identify similarities and differences of the answer from all of the 3 respondents. Then, the insight from the 3 company representatives will be matched with the second stage interview with the President of ILA for validation purposes between company perspective and expert perspective.

F. Refining Conceptual Framework

Following this, the analysis regarding the similarities and differences from the interview result will be used to draw meaning from the data in the form of conceptual framework refinement.This new framework is an

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adjustment from the developed framework that is based on the theories from the previous research with the real-world condition on the CEP industries from the practitioner's insights based on the interview result.

G. Framework Validation

After the refined framework is developed through inputting all of the analysis by combining all of the insight from the data collection with the conceptual framework from the theory, the refined framework will go into a validation process by doing a re-interview with all of the interview respondents both from the first and the second stage. In this interview, the procedure is to show the result of the refined framework with the data collected from all of the interview sections on the data collection stage and compare it to their working experience or any other related knowledge that they have. Lastly, all of the interview respondents were asked to give feedback regarding the validity of the framework. There are 3 possible answers to this validation process: (1) Valid, (2) Partially valid, but need to be revised in some particular area, (3) Rejected due to major invalidity

H. Conclusion and Recommendation

In this last stage, all of the data collected and analyzed in the previous stages is being concluded. Through this procedure, the researcher wants to determine whether the conceptual framework built based on the theory can be proven and applied with real practice in the industry. Both the theory and the field practice should have a mutual relationship, so both need to be set in line. After the conclusion is stated, the researcher will give recommendations regarding the future research that could be implemented to improve the framework that is resulted from this research.

IV. RESULTS

Below is the elaboration of the result from each of the interviews with each of the organizational actors from the 3 companies which are selected as the case study.

A. Case Study of Company A

Company A has not implemented horizontal collaboration. According to the interview, the company is not currently implementing the collaboration on a large scale since the company is currently focusing on the expansion of its coverage service area network in Indonesia, to firstly increase its competitive advantage, which may help to strengthen the company's position toward conducting horizontal collaboration strategy in the future.

However, the interviewee considers horizontal collaboration in the CEP industry is very potential to be implemented with the main driver to increase the market position in a shorter period, through a significant increase in order volume. Furthermore, another driver is related to the potential for a company to bring an improvement within its service offering. Regarding this driver, the interviewee gives an illustration: There is a company that has a robust infrastructure to serve inter-city delivery service within a broad coverage service area. Meanwhile, its partner just could afford an intra-city delivery that is limited in some big cities. Through horizontal collaboration, the partner could obtain the benefit to broaden its service offering to reach for some particular areas that initially could not be reached. Lastly, the interviewee added that threat from other competitors in the market also could be a driver for companies in the CEP industry to consider conducting a horizontal collaboration strategy as soon as possible, in which more and more players within the industry have started to conduct horizontal collaboration, which needs a direct response to utilize the same strategy for the company to stay in the competition

Furthermore, when discussing the suitable model of horizontal collaboration, firstly the interviewee mentioned that the collaboration is conducted directly between 2 companies without any involvement of any neutral party as the facilitator. However, initiation should have come from a company with a bigger size. Furthermore, the collaboration would be more likely to happen between 2 companies which have a slightly different in its service offering, in which they could benefit each other by improving each service offered by the company. Moreover, the interviewee mentioned the importance of technology within the horizontal collaboration process, since information sharing is the center of the collaboration process. Companies could utilize API (Application Programming Interface) systems to share and assign orders that they need to inform to their partner.

Based on the interview,the interviewee also mentioned that trust between collaborating partners must be developed for the collaboration to happen. Furthermore, the interviewee also said that trust among partners could be built faster through the occurrence of these 4 most significant enablers within the companies that want to collaborate: common interest, clear expectation, transparency, and cooperation and benefit-sharing. The interviewee stated that common interest and clear expectation is aligned with each other, in which every company that collaborates should understand the goal that they want to get in the future from the collaboration. From this understanding of the benefit, it could motivate companies to maintain the commitment to realize the goal that is shared from the collaboration, whichdetermines the success of the collaboration. Furthermore, transparency is also crucial in horizontal collaboration, since information and resource sharing are the keys toward horizontal collaboration. With the willingness to openly inform each of the company's resources and information in the first place, then companies could decide whether the collaboration is suitable to be conducted or not. Lastly, determining each

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of the roles and contributions of each company in the first place is also crucial toward a successful implementation of the collaboration, in the purpose to prevent some issues about the division of roles that may cause a constraint within the operation of the collaboration. With the development of trust that is helped to be created through the 4 crucial enablers, the attractiveness to conduct collaboration for the companies is getting bigger. However, the other 2 enablers (prioritization and leadership) are considered as less relevant and could not significantly influence the development of trust among partners.

For the barrier of horizontal collaboration, the interviewee confirmed all of the 4 areas of barrier to horizontal collaboration: partner, negotiation, determining and dividing the gains, and coordination and ICT cost, in which the occurrence of these barriers could be the threat that which explains the limited implementation of horizontal collaboration in the CEP industry. The barrier to finding a suitable partner is the main barrier, in which companies need to find a partner that could bring benefit to the collaboration from the competitive advantage owned by the partner, which is very hard to find. Furthermore, the interviewee added that barriers not only occur before the agreement of horizontal collaboration but also during the execution of the collaboration itself, especially related to role allocation and cost and profit distribution. This activity creates an issue for companies to have to be able to divide roles and fairly share cost and profit. However, the issue could occur again during the implementation, in which there is a threat that companies within the collaboration do not comply with the agreement on the terms that have been agreed before when the horizontal collaboration is on its implementation. This surely will create a negative impact on the execution of the collaboration itself.

B. Case Study of Company B

Company B conducted an extensive horizontal collaboration strategy, in which the company collaborates with Company X, an express expedition company that has a strong customer base within the e-commerce segments. This collaboration was an effort conducted by both companies to acquire more market share and improve their service offering for the e-commerce market.

The collaboration happened to build synergy in the effort to increase the asset optimization of Company B and the improvement of business value for both companies. With a robust infrastructure that could cover the delivery service all across Indonesia, Company B enabled its partner to serve for delivery service for customers that initially could not be reached by them due to its limited network coverage, especially in the rural area. Therefore, the collaboration enables the company to improve their service offering by reaching a wider market and providing more points of services to be accessed by the customer. Based on the interview, through the collaboration, Company B sees the opportunity to increase its operational efficiency through enhancing asset optimization through maximizing the capacity of shipment in each delivery, while also helping the company to generate more orders through the customer from its partner, which could help Company B to increase its market competitiveness in the industry.

Towards the collaboration model, the interviewee mentioned that the occurrence of a neutral party to facilitate the implementation of horizontal collaboration is unnecessary, in which collaboration could be directly implemented by 2 companies, as long as these companies could both provide benefits toward the collaboration by the capabilities that they own. Furthermore, the interviewee also mentioned that there is no constraint regarding any size difference of the company to do the initiation of the collaboration. Furthermore, from the collaboration between Company B and Company X, the collaboration model lies in the form of sharing resources, in which Company B provide their infrastructure of point of services for Company X which enable Company X's customers to drop off packages on Company B's point of services and the delivery will be executed by the officer from Company B. This means, exchange of orders between companies is happening. Through the collaboration, one companies' delivery order could be executed by the other company, with a profit-sharing agreement before the collaboration.

Moving on to the enabler of horizontal collaboration, the interviewee said that the occurrence of trust is crucial toward the implementation of horizontal collaboration in the CEP industry. Furthermore, it is mentioned that transparency, common interest, clear expectation and cooperation, and benefit-sharing are the most influential and significant enablers to occur within companies that are willing to collaborate. According to the interview, transparency is important. The companies should be transparent and openly inform about some essential information and resources so the partner could trust the company to conduct horizontal collaboration together. Meanwhile, common interest and clear expectation are also crucial, in which companies that engage within the collaboration should both have a clear expectation on the benefit that they will obtain after implementing the collaboration, and all should share the same commitment to fulfill all of the shared goals that are already determined in the first place. Meanwhile, cooperation and benefit-sharing are also crucial since there has to be a clear and fair distribution of roles within each partner toward the collaboration scheme to ensure that the collaboration runs successfully without any issue of ambiguity of responsibility of each company that may create problems on the implementation of the collaboration. However, the interviewee considers prioritization and leadership as less relevant to be considered as the enabler of horizontal collaboration, especially for leadership, in which the interviewee mentions that all companies should have the same and equal position and no party becomes the more dominant party that leads the way of the collaboration.

Lastly, regarding the barrier of collaboration, the interviewee also agreed to all of the 4 areas of impediments: partner, negotiation, determining and dividing the gains, and coordination and ICT cost, in which these 4 areas threaten and potentially inhibit the occurrence of horizontal collaboration. However, the interview has more emphasis on selecting a partner as the major issue. According to the interviewee, in conducting collaboration, a company must have a suitable partner that shares the same vision and mission and can be fully trusted, since this partner will also be responsible to maintain the confidentiality of any information owned by the company.

C. Case Study of Company C

Company C is extensively involved in a horizontal collaboration on a strategic scale with 2 companies: Company Y and Company Z. Company Y offers instant delivery service, which initially only offers intra-city delivery. The limitation on the service offering is due to the limited resources of infrastructure owned by Company Y in the form of inter-city feeders and hubs. Meanwhile, company Z is a conventional taxi company that has the problem of unproductive taxi armadas in a certain period of working hours.

Based on the interview, the driver of conducting horizontal collaboration for CEP companies is mainly to scale up the market. For instance, in the collaboration with Company Y, Company C was triggered to tap in the large customer base owned by company Y to quickly increase the order for Company C. The other driver is related to the improvement of service offering. For instance, with the collaboration with Company Y, Company Y could add inter-city delivery to its service offering to the customers with the help of resources from Company C. Similar to this, from the collaboration with Company Z, Company C could add its offering toward their customer by offering the delivery service of large-sized packages, through the help of taxi armadas from Company Z which act as the feeders to transport these packages between hubs of Company C. Lastly, the interviewee mention about the potential to increase operational efficiency as the driver for the collaboration. This acts as the driver for Company Z to collaborate with Company C, in which they could increase the asset utilization of their taxi armadas to transport packages for Company C.

Move on to the model of collaboration, similar to the response from the 2 previous case studies, the interviewee reject the requirement of a neutral party to be the facilitator of horizontal collaboration between CEP companies, in which the interviewee stated that horizontal collaboration between CEP companies can be executed directly between 2 CEP companies as long as the companies have a deep and strong willingness to collaborate. However, these 2 companies must have a different strength point that could contribute to the collaboration and benefit their partner with the strong point that they have. Furthermore, the interviewee does not see there is a requirement for a company with a bigger size to initiate and lead the horizontal collaboration, while collaboration should be worked on together in which every company involved have an equal position.

In terms of the collaboration process, the interviewee explains the model of the collaboration process that has been conducted by the company. Within the collaboration between Company C and Company Y, order for intercity delivery that is made from Company Y's customer on its application is assigned to Company C through API integration, in which the order will be hands on to Company C to be executed, from the pick-up of the packages on the sender address until the last-mile delivery to the receiver address. This model has been used by both companies since the collaboration took place.

Adding to this, the interviewee mentioned the importance of the readiness of technology infrastructure within the company that wanted to conduct horizontal collaboration. From the collaboration model that has been explained, the collaboration relies on API integration to exchange the customer order information and linked order from Company Y to be assigned to Company C within the system. Thus, the use of technology is essential toward the success of the horizontal collaboration model., since manually conducted horizontal collaboration in terms of customer order information exchange is no longer relevant in the current industry trend.

Furthermore, for horizontal collaboration to happen, the interviewee stated that trust is an important consideration that could positively increase the attractiveness of the implementation of horizontal collaboration. However, the development of trust is currently easier to be enhanced with the existence of a couple of agreements to rule out essential things for both companies, such as data confidentiality and service level to the customer. Apart from that, the interviewee mentioned that the development of trust could be helped through the occurrence of the enabler of horizontal collaboration, in which the interviewee also considers that transparency, common interest, clear expectation, and cooperation and benefit-sharing, as the significant enabler toward the implementation of horizontal collaboration. Clear expectation and common interest are important since, toward horizontal collaboration, all of the companies involved should be able to see a clear benefit to be expected after the collaboration happens. Furthermore, the companies also must have the same level of effort and commitment to chase for the shared goal to reach the full benefit potential after the collaboration has happened. Transparency is important since to collaborate, companies must willingly be open and truthful about their resources and information that is essential toward creating an effective collaboration scheme, especially toward the order exchange and assignment between each company. Furthermore, cooperation and benefit-sharing are also crucial because, within the collaboration, a clear role assignment and continuous cooperation within the collaboration are crucial to the success of the collaboration. Meanwhile, the leadership and prioritization enabler factors are considered irrelevant according to the interviewee. Leadership enabler is considered to be highly irrelevant to be considered as the enabler, since all companies that are involved in horizontal collaboration should have equal position and authority, and all of the actions and decisions within the collaboration should be agreed upon by all collaborating companies. Adding to this, the interviewee also emphasizes ethics as another important enabler toward horizontal collaboration implementation in the CEP industry, in which companies within the collaboration are highly expected to comply with any agreement which is made before the horizontal collaboration implementation.

Lastly, regarding the barrier of horizontal collaboration, the interviewee also agreed to all of the areas of impediments (partners, determining and dividing the gains, negotiation, and coordination, and ICT) as the threat toward implementing horizontal collaboration. Furthermore, the interviewee assumed that the partners' area of an impediment as the most significant barrier, since in horizontal collaboration, selecting a partner tend to be a tough job, in which all partners in the collaboration has to feel that they value something that will be given by their partners. If this condition is not met, then the collaboration would never happen. Furthermore, the interviewee also gave another reminder toward the readiness of technology infrastructure as the barrier of collaboration, in which the level of readiness toward technology infrastructure by all companies that engaged within the collaboration is crucial toward the success of running the collaboration process. Furthermore, based on the interview, any kind of problems or barriers could not all be seen before the implementation of horizontal collaboration, meaning that some barriers may exist in the middle of the execution of the collaboration itself. If this condition is allowed to happen without any effort on resolving the barrier, it could cause one of the companies to opt-out from the collaboration. Therefore, continuous communication between the collaborating companies is important to resolve barriers.

V. DISCUSSION

Based on the interview, the following are the results and findings that are obtained about the drivers, models, enablers, and barriers of horizontal collaboration within the CEP industry, as well as the proposed framework.

A. Discussion of Horizontal Collaboration Model

Based on the interviews conducted by the researcher toward the horizontal collaboration model, before discussing which model is the most suitable to be implemented, all of the interviewees firstly emphasize the importance of selecting which companies to collaborate with. All of the interviewees mentioned that for a horizontal collaboration to happen, the companies within the collaboration should have different competitive advantages to be offered to the table, in which their partners could obtain the benefits from those competitive advantages from the collaboration. Therefore, within a horizontal collaboration, every company involved should bring benefits that are valuable to their partner and thus create a mutually beneficial collaboration.

When discussing the collaboration model based on its leadership style, the interview results informed that all of the interviewees perceive that the inter-pares collaboration model is the suitable model to be implemented within the Indonesian CEP industry [11], in which the collaboration is conducted directly by the 2 companies without any involvement of any neutral party. However, there are different insights about who should initiate the collaboration. The interviewee from Company B and Company C has no concern about who should initiate the collaboration regarding the size of the company. However, the interviewee from Company A has a different perspective, in which a company with a bigger size should be the one who initiates the collaboration. This perspective could be explained by the status of Company A as a new player in the industry which is having less experience and knowledge in the industry. However, all of the 3 interviewees back on to agree on the same thing, in which all of the companies within the collaboration should have the same and equal position within the collaboration, by means no party is more dominant or act as the leader toward the collaboration. The selection of this model as the most suitable one could be explained since through this type of model, all companies involved, no matter their current size could obtain complete and fair benefits from the collaboration,

Furthermore, based on the discussion regarding the horizontal collaboration model based on its process, from the previous model that has been conducted by some companies in the case studies added with the explanation of all of the 3 interviewees, the scheme of the horizontal collaboration that is conducted within the CEP industry is pretty much following the single-carrier collaboration model [13], in which the collaboration is conducted by 2 independent CEP companies which are motivated to serve for the customer that they could not afford before, improve the service offering, or to improve operational efficiency just as shown with a couple of collaboration scheme in the case study. In the collaboration scheme, firstly they receive the delivery order from their respective customer. Then, similar to the single-carrier collaboration model, the 2 companies are willing to share their orders from their customers to be executed by their partners. Furthermore, these companies also allow their partner to utilize their asset or infrastructure in the form of hubs, points of services, transportation feeders, etc. to fulfill each of the customer delivery orders from both companies. After the order is being exchanged, the customer order will be responsible to be delivered by the partner until the package is being received by the receiver of the delivery order. Moreover, keep in mind that there might be a form of profit and cost-sharing, which has been agreed upon in the prior agreement toward the collaboration, toward the shared orders, and the sharing of resources.

Moreover, the collaboration process that has been implemented in the industry requires the use of technology. The implementation of horizontal collaboration is no longer relevant to be executed manually, in terms of information sharing and the exchange of customer orders. However, this action is conducted through the integration of the API system of both companies, which could automatically enable both companies to exchange customer order information and decide which order that is wanted to be assigned to their partner. Furthermore, API integration also enables real-time information sharing that could track the effort and performance of each company within the collaboration. This kind of data and information could be used toward better decision-making in the development of a more successful implementation of horizontal collaboration in the future. This type of collaboration process is similar to the semi-automated DIY collaboration [12], in which the model depicts the use of technology within the horizontal collaboration process.

B. Discussion of The Driver of Horizontal Collaboration

Based on the interviews, the opportunity to strengthen market position is mentioned by all of the 3 interviewees as the main drivers for CEP companies to conduct horizontal collaboration. Through horizontal collaboration, companies could widen their customer reach by tapping into their partner's market which could generate more orders volume for their company in a short amount of time. Ultimately, this could improve their competitiveness in the market and increase their market position. This driver is aligned with the driver of market position as proposed by Ref. [10]. Market position drivers refer to how companies could ultimately strengthen their position in the market through horizontal collaboration. Moreover, the researcher assumes that this driver is the motive for companies in the CEP industry with a relatively small market share that have the desire to increase market position or scale up their market in a shorter period.

Furthermore, the representatives from the 3 companies in the case study also agree upon the driver to increase service offering to the customer as an important benefit that may trigger them to implement horizontal collaboration, just as the customer service driver proposed Ref [10]. Based on the interviews, companies in the CEP industry could improve their service side to their customer both by reaching their service into a wider customer reach geographically and also by enabling them to offer new services which they could not offer before, with the help of resources of their partners. Thus, horizontal collaboration could help companies to generate more value for the customer by enhancing their service without spending too much money. For the Indonesian CEP companies, this driver is essential, especially for the newcomers in the industry, using their effort to acquire more customers the industry, they need to bring greater value to their customers by offering a better service and reach a wider customer to increase their competitiveness in the market.

The interview from the companies within the case study also mentioned that the implementation of horizontal collaboration by some companies is driven by the opportunity to increase their operational effectiveness through having a more optimized asset utilization. This could be done by letting their asset and infrastructure resources be utilized by their partner so they could earn more revenue from their assets. This driver is aligned with the driver of cost and productivity [10]. The researcher assumes that this driver is highly relevant for companies with high competitiveness in their assets and infrastructure, which have a desire to increase the utilization and productivity of their assets and to reduce operational costs.

Another finding from the interview regarding the driver of horizontal collaboration is that there is another driver that could trigger the implementation of horizontal collaboration besides the potential benefit, which is the threat of the market. With more players in the industry conducting the horizontal collaboration strategy, a company may see this phenomenon as a threat that may trigger the company to also conduct the same strategy to stay within the competition in the industry.

C. Discussion of The Enabler of Horizontal Collaboration

From the interviews, all respondents from the 3 companies agreed to the fact that trust among partners is crucial toward the implementation of horizontal collaboration, in which the absence of trust would not lead to any occurrence of the collaboration. This means that trust is truly the outset consideration of horizontal collaboration and has to be maintained to secure a long-term and successful collaboration [15].

Furthermore, the interviewees all agreed that the occurrence of trust could be developed faster through the occurrence of the 4 enablers that are considered as the key enablers of horizontal collaboration [14]. These 4 enablers are common interest, clear expectation, transparency, and cooperation, and benefit-sharing.

Common interest and clear expectation are considered as a unity, in which the company firstly being consent about the expectation on the benefit that will be obtained by the company in the future. Furthermore, these companies should possess the same effort and commitment to chase the shared goal from the implementation of horizontal collaboration with their partner. Both companies are expected to have the same high level of commitment since it is crucial to ensure all of the goal and potential benefit that is fully obtained from the collaboration.

Transparency is considered essential since to implement a successful horizontal collaboration scheme, companies must be willing to be truthful and open to all of their resources and information in the purpose to have

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better decision-making toward the successful operation of the horizontal collaboration. Furthermore, through the current information sharing through API integration as mentioned in the model of horizontal collaboration, information is shared in real-time and could be used to evaluate current performance and to figure out how to improve to implement a better operation of the collaboration

Furthermore, cooperation and benefit-sharing are also crucial because the interviewees have all agreed that a clear and fair division of the role of every company within the collaboration is crucial to the long-term success of the horizontal collaboration implementation. With an unclear role distribution within the collaboration scheme, lots of issues may appear within the execution of the collaboration, for instance, who should be responsible to execute a particular order, who manages to collect a payment, etc.

Moreover, the researcher found that prioritization and leadership are not being mentioned at all as it is considered irrelevant to act as the enabler of horizontal collaboration, especially on the leadership as the enabler. Leadership refers to the existence of a dominant party who leads and drives the collaboration forward [14]. Meanwhile, as mentioned earlier related to the horizontal collaboration model, all companies within the collaborations should have an equal position and work collectively, without the occurrence of any parties that become more dominant and have more powerful authorities that could direct the collaboration.

Besides the 4 crucial key enablers, the researcher also gets an insight from one of the interviews, in which there could be another factor that could be added inside the enabler of horizontal collaboration. The new enabler is ethics which is proposed by the interviewee from company C. Ethics is important since it is expected that the companies that are engaged within the horizontal collaboration could comply with any agreement that is made before the execution of horizontal collaboration. This matters to the companies that are conducting horizontal collaboration, since within the horizontal collaboration they may share any confidential information that must be handled carefully, in which this kind of thing is being ruled inside the agreement.

D. Discussion of The Barrier of Horizontal Collaboration

The barrier of horizontal collaboration which consists of the 4 areas: partners, determining and dividing the gain, negotiation, and coordination, and ICT, are perceived by all of the interviewees as the threat that explain the limited occurrence of horizontal collaboration within the CEP industry [10]. Selecting the suitable partner for the collaboration is perceived as the most significant barrier. Based on the interview, it is hard to find partners which share the same value or vision within the same industry, in a competitive industry that is filled with companies that have different interests [7]. Furthermore, as mentioned in the discussion about the model of horizontal collaboration, selecting a suitable partner also highly depends on whether the company could bring significant benefit to another company or not. To decide on this aspect, the company must analyze the tangible asset, intangible assets, and organizational capabilities, which tend to be complex tasks.

The barrier of determining and dividing the gain is indeed an issue before collaboration, in which every party needs to have a fair distribution of cost incurred, as well as the fair allocation of workload. However, based on the interview, the threat also occurred during the execution of the collaboration, in which whether every party could comply with the agreement regarding this distribution of cost and allocation of role in the execution of the collaboration. Problems will occur if companies do not have the ethics and integrity to comply with those agreements.

Regarding the barrier of coordination and ICT cost, as discussed in the horizontal collaboration model, technology is essential toward the process of horizontal collaboration. Thus, to implement horizontal collaboration, companies within the CEP industry must be sure about their readiness of its technology infrastructure, since a gap between technology infrastructure between 2 companies could lead to various problems toward the process of the collaboration. Meanwhile, not every company in the industry has the same level of technology infrastructure.

Lastly, the findings from the interview suggested that any kind of problems or barriers may occur not only prior but also during the execution of the collaboration. Therefore, clear communication and a great relationship between partners are essential to ensure that all of the barriers could be solved together to maintain the level of success at the end of the collaboration.

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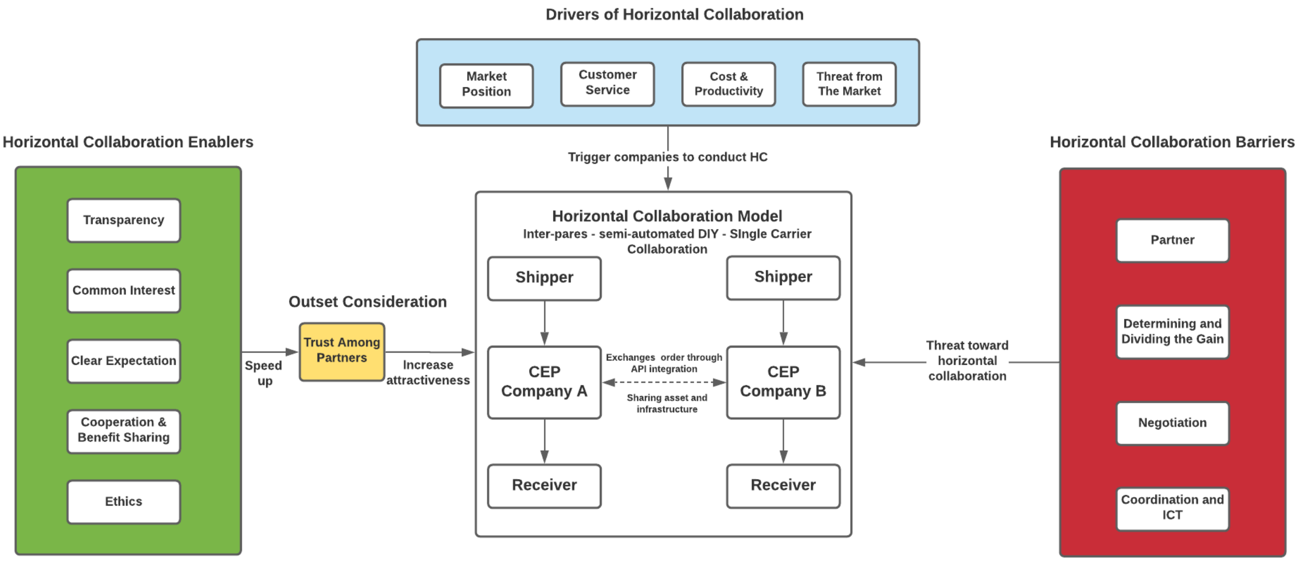

Fig 3 Proposed Framework

E. Proposed Framework

After the researcher synthesis all of the interview data, the researcher creates a refinement toward the conceptual framework that has been made within the literature review part of this research, by adding and remove different factors within the drivers, enablers, barriers, and model of horizontal collaboration, in which all action is derived from the insights from all of the interview. Furthermore, to ensure the validity of the framework, a second interview with the 3 organizational representatives from Company A, Company B, and Company C is conducted. From the interviews, all 3 respondents agreed that the refined framework is valid and indeed reflects the reality of horizontal collaboration implementation within the Indonesian CEP industry. The refined and proposed framework is depicted in the figure below.

The framework encompasses all of the findings from this study in which put the important consideration of horizontal collaboration based on the perspective of real practitioners within the industry in which answer all of the research question through the identification of factors that act as the drivers, enablers, and barrier, as identifying the suitable horizontal collaboration n

Fig 3. Proposed Framework

Fig 3. Proposed Framework

VI. CONCLUSION

A. Conclusion

This research was conducted due to the limitation of horizontal collaboration implementation in the Indonesian CEP industry and the lack of research that discusses horizontal collaboration specifically in the Indonesian CEP industry. Thus, this research is conducted to get a better understanding of the important consideration of horizontal collaboration in the Indonesian CEP industry. In doing this, the researcher developed a conceptual framework that consists of different factors related to horizontal collaboration which includes the drivers, enablers, barriers, as well suitable models toward horizontal collaboration implementation. Furthermore, the primary discovery from this research will be elaborated and discussed by answering each of the research questions which is proposed at the beginning of this research.

RQ 1: What are the drivers of horizontal collaboration in the Indonesian CEP companies?

Based on the research conducted while reviewing the theory from the literature review, the drivers of horizontal collaboration refer to the potential synergy (benefits) that a company could obtain through collaboration with the other company, in which these benefits could not be obtained if the company worked alone. These drivers are summarized into 3 factors: market position, customer service, and cost and productivity [10]. Based, on the interview result, the finding that the researcher obtain is that all of the 3 drivers are indeed the factors that trigger Indonesian CEP companies to implement horizontal with the market position as the main driver, izontal collaboration strategy is ultimately used to generate a significant order increase and scale up the market of the company which could lead to a stronger position in the market. However, customer service and cost and productivity drivers are still also considered as important triggers mentioned by the interviewees. The customer service driver refers to the fact that horizontal collaboration could help companies in the CEP industry to reach a wider customer geographically or improve one's company service offering through the shared resources from its partner, which prevent the company from investing in lots of new assets. Meanwhile, the cost and productivity explain potential benefits to improve operational efficiency through maximizing the utilization of assets which increase the company's productivity as the trigger for companies to conduct horizontal collaboration. Furthermore, besides the potential benefit, another driver is obtained from the interview, which is related to the threat of the market, in which a company could engage into conducting a horizontal collaboration if the company is triggered by a condition in which lots of players within the industry if there are lots of companies who also conducting such strategy, in which indicate that the competition has evolved into a different level.

RQ 2: What are the enabler factors of the implementation of horizontal collaboration in the Indonesian CEP companies?

The important factor that must occur for horizontal collaboration could happen in the CEP industry is the occurrence of trust among partners. However, the trust could be helped to be developed faster through the occurrence of some enablers, which is proposed by Sutherland (2006) as the key enabler of CTM, which indicate how well the companies within the collaboration could work together, internally and externally, which will determine the success level of the horizontal collaboration. However, from the 6 enablers proposed by Sutherland, it turns out that only 4 enablers are truly considered significant toward the implementation of horizontal collaboration based on the interview's result, which is: transparency, common interest, clear expectation, and cooperation and benefit-sharing. Furthermore, there is 1 additional enabler that is considered as crucial to occur from the interview result, which is ethics. The occurrence of trust which is developed through the occurrence of all of the enablers mentioned before could increase the attractiveness of Indonesian CEP companies to conduct horizontal collaboration

RQ 3: What factors could act as the barrier toward the implementation of horizontal collaboration in the Indonesian CEP companies?

The barrier of horizontal collaboration indicates some factors that could act like the threat toward the implementation of horizontal collaboration, which is summarized through the 4 areas of impediments of horizontal collaboration which consist of: partners, determining and dividing the gains, negotiation, and coordination, and ICT [10]. Through the data collected from the interviews, all of these barriers are approved and validated to be considered as barriers. However, selecting a suitable partner is agreed on as the most significant barrier due to the complex task to identify all of the partner's tangible and intangible assets as well as its capabilities, to analyze whether the company could bring benefit toward the collaboration or not, as well as whether the company shares the same value or interest that is essential toward the implementation of the collaboration. Next, the allocation of task and cost distribution is also a threat not only to create a fair allocation of role and cost distribution, but also the threat that the companies involved may not comply with the agreement toward this topic when the collaboration has already been executed. Furthermore, regarding coordination and ICT cost area of barrier, the readiness of technology infrastructure becomes the main constraint toward whether companies could implement the horizontal collaboration or not, since the implementation of horizontal collaboration requires the same level of readiness toward technology infrastructure for the successful implementation toward its process. Lastly, any kind of barriers may occur throughout the implementation of the collaboration, not only in the beginning but also during the execution and operation of the collaboration itself. Thus, clear communication and a great relationship between the collaborating companies are crucial.

RQ 4: How is the suitable model of horizontal collaboration to be implemented by Indonesian CEP companies?

Based on the findings gathered from the interviews, when discussing the right model, firstly it is important to determine the companies that will become partners within the collaboration. These companies that engage within the collaboration should have a different competitive strength in their resources that is brought to the table, in which each of the companies could benefit each other through their respective competitive strength and thus create a mutually beneficial horizontal collaboration between companies in the CEP industry.

Furthermore, in terms of the suitable horizontal collaboration model, for the leadership style, the inter-pares collaboration model is considered as the most suitable one, in which the collaboration is conducted directly between companies within the industry without any occurrence of a neutral party that facilitated the collaboration and no company act as the leader toward the collaboration, by mean all parties work collectively within the same and equal position in the implementation of the collaboration, with the purpose of every company involved could obtain complete and fair benefits through the collaboration.

Meanwhile, for the collaboration process itself, the suitable collaboration model follows the single-carrier collaboration model as the main horizontal collaboration scheme, in which the collaboration is occurred between 2 companies within the industry and these companies collaborate by exchanging orders to be executed by one another and sharing asset and infrastructure between one another with the purpose to serve the customer that they

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could not reach before, improve their service offering, or increase operational efficiency.

Furthermore, added to the collaboration process, it turns out that the role of technology is important toward the implementation of horizontal collaboration within the CEP industry, especially toward information sharing process, in which companies use API system integration for data sharing that enables a real-time information sharing related to a customer order that could generate a fast response toward order assignment and execution between the collaborating partner, and thus a great customer experience. Thus, the semi-automated DIY collaboration is considered as the proper model of collaboration based on its collaboration process.

B. Implication

The implication of the framework that is developed in this research could be beneficial for Indonesian CEP companies to understand the important consideration for the implementation of horizontal collaboration, which is derived from the perspective of companies who have and have not implemented the strategy. When the companies start to think of possibilities to conduct horizontal collaboration, Indonesian CEP companies could follow the driver of horizontal collaboration to identify the right motivation to start conducting the horizontal collaboration strategy.

In conducting collaboration, trust among partners must be built first since it will increase the attractiveness to collaborate, in which to develop trust in a shorter amount of time, it requires for the enabler of horizontal collaboration mentioned in the framework. On the other hand, when implementing horizontal collaboration, Indonesian CEP companies must give a high concern to factors that could threaten them in conducting a successful horizontal collaboration, which is summarized within the framework in the barrier of horizontal collaboration. By ensuring that all of the enablers is possessed by all parties within the horizontal collaboration and all of the barriers is being tackled will lead to a successful implementation of horizontal collaboration

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