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Exploring logistics service quality in Hai Phong, Vietnam

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ABSTRACT

Paper explores different stakeholder perceptions of logistics service quality in Hai Phong, Vietnam, one of the country's most important port complexes and largest logistics hubs. Semi-structured interviews were conducted with customers, logistics service providers and port operators. Fourteen important variables were found with delivery time and shipment condition perceived by all groups as most important. Variables related to human factors were considered important by customers but not by logistics service providers. The paper contributes to our knowledge of what logistics service quality entails in a developing country that is lower on a logistics maturity scale, such as Vietnam, and provides managers with insights on what logistics service quality factors to address to enhance customers' perceptions regarding their expectations.

1. Introduction

In contemporary business, logistics is considered a differentiator that builds on key logistical competencies to fulfil customer needs and build a firm's competitive advantage. Further, logistics and supply chain management (SCM) activities share some features with marketing, particularly an interface with customer service as logistical activities are essentially services that are for example intangible and require different strategies as opposed to physical products whose features can be easily justified to reflect product quality (Grant, 2012). Hence, consideration of logistics service quality (LSQ) can assist firms in differentiating not only their services but also their credibility towards customers.

Customer expectations and subsequent perceptions of LSQ are important regarding a country's logistics capability (Grant, 2004). For example, ineffective customs procedures and slow-acting border crossings will underlie perceptions about a country's customs performance which in turn may affect perceptions about timeliness. The use of the customer service expectancy-disconfirmation paradigm has been shown to confirm the importance of factors affecting service quality which shape customer perceptions relative to initial expectations and ultimately affect customer satisfaction (Parasuraman, Zeithaml, & Berry, 1985).

Logistics also plays an important role in national economies of many countries, especially developing countries like Vietnam. However, Vietnam's logistics efficiency, as demonstrated by its ranking of 39th in the 2018 Logistics Performance Index (LPI) with a score of 3.16 out of 5.0, is still quite low compared to other countries in the ASEAN region (Arvis et al., 2018). Banomyong, Huong, and Ha (2014) explored issues related to Vietnamese firms' logistics costs and performance, i.e. LSQ, and found that both customers and logistics service providers (LSPs) may have a lack of understanding related to logistics service concepts. Service level capability was the most important issue with lower levels of performance when compared with neighbouring countries. Pham and Yeo (2019) found that within Vietnam, service quality of the Hai Phong container terminals is behind that of its Southern competitors.

This paper explores differences of logistics service quality between customers and LSPs in the Hai Phong region of Vietnam, one of the country's most important port cities and largest logistics hubs. While much consensus has been provided in the logistics literature over the past 20 years about what factors constitute LSQ, there has been little research on these topics in the context of Vietnam, particularly from both customer and LSP perspectives.

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This aim of this exploratory research is to understand whether the mindset towards LSQ of logistics users i.e. customers and LSPs in Hai Phong is similar or different businesses in other parts of the world, and to determine whether LSQ improvement is affected by any other parties, particularly port operators. As a result, this paper's contribution comes from finding those factors that are important for both groups to assess and improve LSQ and provide suggestions for firms to do so. Additionally, such factors provide a set of measures for future empirical studies in Hai Phong and other cities in Vietnam, and other Southeast Asian countries.

This paper is structured as follows. The next section contains our literature discussion and is followed by a section on methodology and method used for the empirical study. The fourth section details our findings and discusses their implications and introduces issues emerging from the empirical study. Finally, the fifth section concludes the paper and discusses limitations that are a source for further research.

2. Literature review

2.1. Origins of customer service quality

We begin the literature review in this by discussing the origins of customer service quality in general and in logistics and SCM specifically. From the view point of a firm, quality of service may be simply seen as how well its operational performance has been carried out to serve their customers. Suppliers have thus long built their own service quality specifications according to this approach to align performance with their capabilities (Thai, 2013). However, in the 1980s the services marketing literature became the first field to argue that customer perspectives also need to be added. Parasuraman et al.'s (1985) seminal work posited that service quality can be determined through a comparison between customer expectations and perceptions of the actual service performance enjoyed.

There are two primary approaches to measuring service quality. One is subjective or internal where firms build up specifications for assessing their services (Thai, 2013). The other is more objective and compares customers' perceptions during and after a service experience compared to their a priori expectations in what

is termed the expectancy-disconfirmation paradigm similar to customer satisfaction measurement comparing 'pre-event expectations' and 'post-event evaluations' (Parasuraman et al., 1985).

The latter approach has been embraced by logistics and supply chain academics and various studies along those lines have been conducted in developed economies, see for example Emerson and Grimm (1996), Mentzer, Flint, and Hult (2001), Grant (2004) and Rafiq and Jaafar (2007). Grant (2012) adapted Parasuraman et al.'s (1985) conceptual model of service quality for LSQ as shown in Fig. 1, which details how an overall difference or 'gap' between expected service and perceived service is affected by four other operational 'gaps'. Parasuraman et al. (1985) also determined there are five dimensions or themes related to service quality: tangibility, reliability, responsiveness, assurance and empathy.

First, firms need to determine their customers' expectations for a given service. The customers' mindset towards the service may originate from communication with previous users through word-of-mouth, reviews on websites, etc., personal requirements and past experiences. Then, these expectations are interpreted into specific service specifications. Third, the firm provides the service based on these designed specifications. Lastly, the firm communicates with customers, which may take place in various forms, for instance, complaining, claiming, review, feedbacks and so on. Differences or 'gaps', may occur between phases depending on how well ideas and activities are transferred.

This detailed model is also useful to trace back the source of problems when evidence of service quality failure is revealed. What is missing in many service firms, especially logistics and SCM, is an appreciation for aspects at the end of the service process, i.e. post-event, or aspects of service recovery if there is a service failure (Grant, 2012). Spreng, Harrell, and Mackoy (1995) argued that service failures are not failures of the service per se. Instead, the propensity for service failure is in the service system design built on assumptions derived from other business models such as manufacturing where human resources are not encouraged or incentivized to deal with a potential failure or event. This suggests a temporal nature to services, particularly failure and recovery, and indicates factors concerning failure should also form part of the overall service strategy. Grant (2012) provides some 'best practice' steps to enable proper service recovery from a failure event:
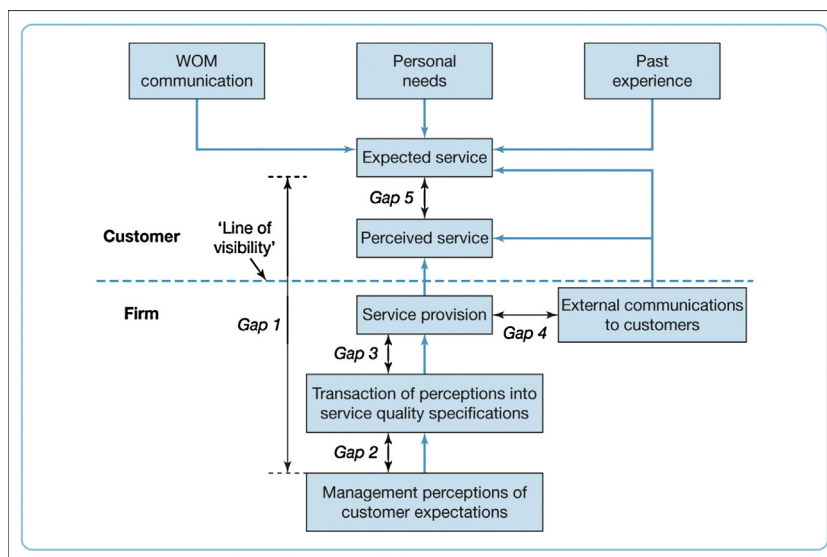

Fig. 1. Model of logistics service quality.

Source: Grant (2012: 30).

1. Measure recovery costs versus not doing so, i.e. to reputation, image and future sales;
2. Actively encourage customer feedback to get a sense of what customers are concerned about;
3. Anticipate recovery needs by being pro-active in service design and operations;
4. Respond quickly to any service issue;
5. Educate personnel and employees in the art of service provision;
6. Empower boundary-spanning personnel to make appropriate decisions to recover a situation at source; and
7. Close the loop to ensure the issue has been properly resolved and the customer is satisfied with the outcome, process, or both.

We now turn to the development of LSQ in the logistics and SCM academic literature including a consensus of the important variables of LSQ in the next sub-section.

2.2. Logistics service quality (LSQ)

Logistics activities can be grouped into five principal categories: transportation, inventory management, warehousing, information technology management, and production and are either performed in-house or outsourced to LSPs. Further, consideration of the 'mix variables' between logistics and marketing concludes that logistics activities are services since they meet the usual criteria differentiating service from products, e.g. intangibility, inseparability and heterogeniety (Grant, 2012).

To measure LSQ, several authors began with a viewpoint of physical logistics operations, for example variables of timeliness, availability and condition (Emerson & Grimm, 1996). Mentzer et al. (2001) introduced a model with nine variables: information quality, ordering procedure, ordering release quantity, timeliness, order accuracy, order quality, order condition, order discrepancy handling and personnel contact quality. Grant (2004) investigated LSQ in UK food processing. Grant's model adapted ideas of Mentzer et al. (2001), including core variables like availability, time (order cycle time and delivery time), but also included variables examining customer service experience and satisfaction as outputs for a structural path model based on an actual service experience; e.g. general assessment of supplier quality, feelings towards suppliers, and future purchase intentions from that supplier.

Grant also extended notions of LSQ and satisfaction towards customer loyalty which has been an ongoing discussion in the outsourcing and relationship literature (Juga, Juntunen, & Grant, 2010; Juntunen, Juga, & Grant, 2010). This is critical in researching service quality as the firm's goal is to enhance performance to retain current customers and attract new ones and suggests a notion of developing long-term relationships as opposed to transactional activities (Grant, 2005). Considering this point of view, questioning customer loyalty is in line with Hill, Brierley, and Macdougall (2003) who argued that customer satisfaction research could be more valuable in the context of comparing it with other competitors.

Mentzer et al.'s (2001) model was also adopted by Rafiq and Jaafar (2007) to examine perceptions of LSP customers but replaced variables of information quality and ordering procedures with variables of communication including timeliness, accuracy, completeness and credibility. They also added more variables to the ordering procedure, namely simplicity, flexibility, and time and effort.

In summary, while there is much consensus in the logistics and SCM literature over the past 20 years about what constitutes logistics service quality (LSQ), customer perceptions and satisfaction, there has been little research on these topics in the context of Southeast Asia including Vietnam. Thus, based on these works

Table 1
List of LSQ variables.

LSQ1	Requested services or products are available
LSQ2	Order cycle time is appropriate
LSQ3	Order cycle time is consistent
LSQ4	Issued invoices are accurate
LSQ5	Delivery is on-time as promised
LSQ6	Product quality is consistent
LSQ7	Orders are completely accurate
LSQ8	Delivered shipment is in good condition (undamaged)
LSQ9	Product arrive to specification
LSQ10	After-sale support is available
LSQ11	There is provision of ongoing information and status of shipment
LSQ12	LSP's customer service representatives are helpful
LSQ13	There are customized services for customers' requests
LSQ14	LSP's performance can be trusted
LSQ15	LSP commits to provide good logistics service
LSQ16	There is an integrity in LSP's business

Source: Compiled from Grant (2004), Mentzer et al. (2001) and Rafiq and Jaafar (2007).

we selected sixteen variables that best describe LSQ as an a priori foundation for our empirical study and which are shown in Table 1.

We use these variables for our empirical study in Vietnam, the context of which follows in the next sub-section.

2.3. Context of Vietnam

Some work on LSQ has been conducted in the Southeast Asia region, see for example Banomyong and Supatn (2011) related to Thailand logistics and SCM and based on Grant's (2004) measures; Yeo, Thai, and Roh (2015) related to Korean ports; Thai (2015) related to Port of Singapore, and Shin, Thai, and Yuen (2018) related to Singaporean logistics 'players'; Karim, Abdul Rahman, and Syed Johari Shah (2018) related to Malaysian logistics service with a focus on warehousing productivity issues. In a Vietnamese context, Banomyong et al. (2014) surveyed 159 Vietnamese companies about their logistics performance based on nine key logistics activities used by Banomyong and Supatn (2011) related to three performance measures of cost, time and reliability. Reliability was a key variable and Banomyong et al. (2014) found an inverse relationship between logistics service quality levels and logistics costs, i.e. logistics costs were high but service performance was low.

Grant, Huong, and Lalwani (2017) interviewed 24 logistics 'actors' and six external stakeholders in the Hanoi region as a pilot study for a larger survey of over 1200 firms and found that seven LSQ variables were most important to their respondent group. Those variables, in no particular order, were efficiency of customs and border clearance, ease of arranging shipments, quality of logistics services, timeliness, cost, employee skills, and reliability. The first four relate to the LPI and provide additional support at the firm level regarding Vietnam's external performance.

While these studies are useful, they all lack a comprehensive view of differences between logistics customer or users and LSPs, or other logistics providers such as port operators. Perceptions of important factors or variables can also be correlated with perceptions of the logistics capability of a country as noted in the Introduction. We use Parasuraman et al.'s (1985) expectancy-disconfirmation paradigm to investigate LSQ and provide guidance for logistics-related firms and other stakeholders to meet customer expectations and thus shape their perceptions (Grant, 2004). The research objective here then is to determine which factors or variables are most important to customers and firms in the context under consideration – Hai Phong in Vietnam.

The authors chose to conduct an exploratory empirical study in Hai Phong for two reasons. Firstly, Hai Phong's ports complex is the largest in the north and second largest in the country behind Ho Chi Minh City. In Vietnam, annual logistics activity growth in recent

years has been noticeable at approximately 24% (VNN, 2016) thanks to a surge in trading and outsourcing for MNEs like Samsung, LG and so on (Tsui, 2017). However, extant research has not delved deeply into LSQ issues in this important area. Secondly, Hai Phong is also a regional logistics 'hub' and is receiving investment to become a national one (CBRE, 2016) as part of the Vietnamese government's Vietnam National Logistics Action Plan (VNLAP) which was developed in 2016 to address logistics and supply chain issues by 2025 (Anon, 2017). There are six objectives within the VNLAP, one of which is increasing logistics outsourcing that will require better knowledge of LSQ. Two tasks to attain these objectives include developing the logistics service market and improving enterprise capability and service quality, both of which also require better knowledge of LSQ (Anon, 2017).

Banomyong et al. (2015) observed that Vietnamese logistics and SCM is still fragmented and only partly capable of meeting customers' needs. Further, they argue the Vietnamese government's previous understanding of logistics development has largely been one of providing infrastructure that are generally lacking necessary integration but consider that position understandable as logistics and SCM are not separate nodes of activity and represent integrated systems for facilitating the effective and efficient trading and movement of goods.

Dang and Yeo (2018) found that reducing logistics costs was the most important factor for the improvement of Vietnam's logistics system, following closely by logistics services. They noted the importance of LSPs but also argued that Vietnamese logistics companies lack international competitiveness.

In summary, our paper addresses gaps in understanding the importance and interaction of LSQ expectations and perceptions among Vietnamese customers or users and LSPs, including potential enabling or inhibiting of LSQ by port operators. The research questions for our empirical study follow in the next section.

2.4. Research questions

The sixteen important LSQ variables derived from the literature selected as the basis for our study enabled us to develop the three research questions (RQs) that address our research objective to understand the importance and interaction of LSQ expectations and perceptions among Vietnamese customers and LSPs.

RQ 1: Which of these LSQ variables are provided by LSPs in Hai Phong? Are there any variables that are not relevant or other variables not included?

RQ 2: Which of these LSQ variables in the literature are important customer/logistics users in Hai Phong? Are there any variables that are not relevant or other variables not included?

RQ 3: How well do the port operators in Hai Phong enable the successful implementation of these LSQ variables for both LSPs and customers/logistics users?

Findings for these questions were expected to not only reveal the relevance of the sixteen variables for LSQ in Hai Phong but also indicate whether perceptions by customers (including foreign businesses) of LSPs (particularly local ones) meet their expectations according to the expectancy-disconfirmation paradigm shown in Fig. 1. Another issue expected to be addressed was the cooperation of port operators in Hai Phong to enable LSQ, i.e., how aware are they of their role in enabling and improving LSQ?

The methodology and methods used for our empirical study to explore these issues are outlined in the next section.

3. Methodology and methods

3.1. Theoretical and methodological background

Our empirical study was conducted through the theoretical lens of extant customer service research discussed in Section 2.1 and given the paucity of research on this topic in the Vietnamese context was exploratory to add to that research by investigating the importance and relevance of extant LSQ variables and discovering patterns, ideas, relationships (Robson, 2002). Fig. 2 presents a two-stage framework for the development and validation of variables and constructs that contains five steps in such an exploratory methodology and was compiled from two seminal works in this area: Churchill (1979) in the marketing discipline and Dunn, Seaker, and Waller (1994) in the logistics discipline.

In the first stage, the first step specifies appropriate latent constructs and for this paper include logistics customer service, customer satisfaction and relationships among the three actors in the Hai Phong; LSPs, customers and port operators. The second step generates variables related to these latent constructs for investigation and for this paper sixteen dominant variables were identified from the literature review as discussed in Section 2.2. and shown in Table 1. Step three consists of using interviews, focus groups or a pilot survey to verify these variables as appropriate for further research and we conducted and analyzed interviews as detailed below. Due to exploratory nature of this paper we did not conduct a pilot survey nor proceed to the second stage where variables from a pilot survey are purified and latent constructs confirmed in a fourth step prior to conducting and analysing a major empirical study in the fifth and last step.

3.2. Qualitative research method

We adopted a qualitative approach to obtain perspectives and rich insights using semi-structured interviews (Robson, 2002). Three groups were targeted for interview: logistics customers or users (manufacturers and traders), LSPs, and port operators. After revising logistics context of Hai Phong, we realized that the majority of logistics business in Hai Phong are 2PLs (e.g. transporter, customs broker, freight forwarders). As a result, within the scope of our research, these subjects will be surveyed, representing LSPs in Hai Phong market. In addition, this could also help to achieve a more precise comparison of the gap between expectations of CUS and perceptions of LSP in the later part of the research. Port operators also have a role as intermediates in the process between customers (shippers, traders, etc.) and LSPs.

Interviews, specifically face-to-face and computer-mediated (e.g. video calls), were used to collect primary data for two reasons. One is flexibility especially in terms of locations and time (Robson, 2002), which assisted the researchers in arranging meetings with interviewees who are mostly logistics managers and have busy work schedules. The other is that the possibility of participation is relatively high in comparison to other methods as the researchers could explain the study as well as its values and contribution to the targeted interviewees. In facts, interviewees expressed their interest and shared the same concerns with the authors about the quality of logistics in Hai Phong and took very seriously their participation in responding to questions and deeply reflected on their experiences to give precise comments.

Another benefit of interviews is synchronous communication which can reveal a great deal of social cues, for example, voice tone, body languages or even emotions. In the specific context of Vietnam, where relationships still play a very critical role in developing business and the level of transparency is fairly low, respondents did not necessarily provide straight-forward critical opinions about their partners. Here then the involvement of the
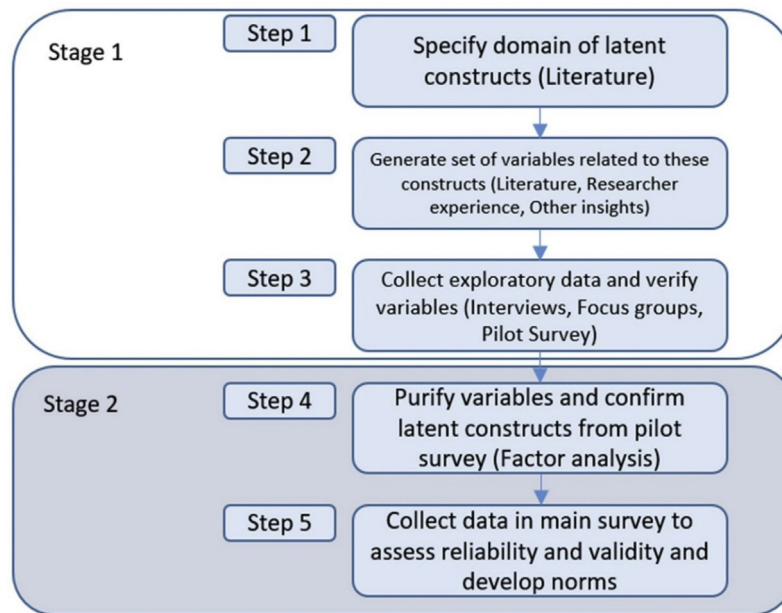
Fig. 2. Two-stage method for construct and variable development and validation.
Source: Compiled from Churchill (1979) and Dunn et al. (1994).

interviewer's presence was essential to notice such social cues to direct the conversation and extract the essential ideas.

Individual in-depth interviews were conducted so interviewees could be more comfortable and honestly share opinions if they chose to do so. Another reason for the preference of individual in-depth interviews in this circumstance is its suitability for business-to-business markets. This fits well with the nature of logistics industry where organizations outsource one or several tasks to other partners instead of in-house accomplishment (Robson, 2002).

The first section of each semi-structured interview guide dealt with company profiles and demography. The second section for customers/logistics users included questions referring to criteria for selecting partners and evaluating them during collaboration based on the Grant's (2004) logistics process: pre-transaction, transaction and post-transaction. This section had two purposes. First, it provided an opportunity for interviewees to discuss LSQ expectations from current and future LSPs. Secondly, it acted as a foundation to direct the interviewees to reflect on their logistics experiences to address issues in the third section. The third section listed the sixteen variables of LSQ, and interviewees were asked to indicate which were relevant or not to their company and the context of Hai Phong. Then, they were asked to rank each of them on a ten-point importance scale level and suggest if there were any others that should be included. This provided a relative measure of customer perceptions. The fourth and final section sought their opinions on the ability of other parties, particularly port operators, in enabling their logistics or SCM operations.

The second section for LSPs and port operators questioned how they defined LSQ and provided the sixteen LSQ variables for them to justify their relevance or irrelevance and level of importance. Interviewees were asked to take their current and target customers into consideration when answering. This provided a relative measure of customer expectations. They were also asked to include any missing variables to the list. The third section for LSPs only asked about the support of port operators towards their business, critically targeted to how the terminal operation might have influence on their levels of LSQ.

3.3. Sampling and data analysis techniques

Purposive sampling was selected as the non-probability sampling technique (Robson, 2002). The issue of sample size is important to achieve robust and rigorous findings. Previous research by Mentzer et al. (2001) (15 LSPs and 12 customers) and Rafiq and Jaafar (2007) (2 LSPs and 7 customers) suggests there has been no standard number of interviews undertaken taken in LSQ research. We set out to interview between ten and fifteen companies for each of the three groups however in the end we were only successful in obtaining interviews with 14 participant companies, including six shippers i.e. customers, five LSPs and three port operators, due to time constraints and schedules. Notwithstanding this reduced number, respondents were able to provide very good responses due to their direct relevance to the research topic, tacit knowledge and ability to answer the interview questions. Details of the fourteen participants are provided in Appendix A.

Data analysis was carried out using Braun and Clarke's (2006) suggestions for conducting thematic analysis: become familiar with the data, generate initial codes, search for, review and define themes, review themes, and write-up. We considered the five themes proposed by Parasuraman et al.'s (1985), tangibility, reliability, responsiveness, assurance and empathy, were useful a priori themes we could reference during our analysis. We initially used open and axial coding schemes individually (Miles, Huberman, & Saldaña, 2014). Open coding allowed structuring and simplifying the data so useful information could be abstracted and organized while subsequent axial coding followed in which we re-grouped codes into core themes and sub-themes. These were then discussed collectively to identify, reorganize and eliminate discrepancies in the data, core themes and sub-themes. This later process enhanced inter-rater reliability and data credibility, as well as enabling the development of a refined set of key themes around LSQ in Hai Phong. Finally, in a selective coding process we reviewed the final major themes/sub-themes to develop findings.

To ensure research rigour, we followed guidelines from Halldórsson and Aastrup (2003) to assess qualitative research quality through trustworthiness, which consists of credibility, transferability, dependability and confirmability. *Confirmability:*
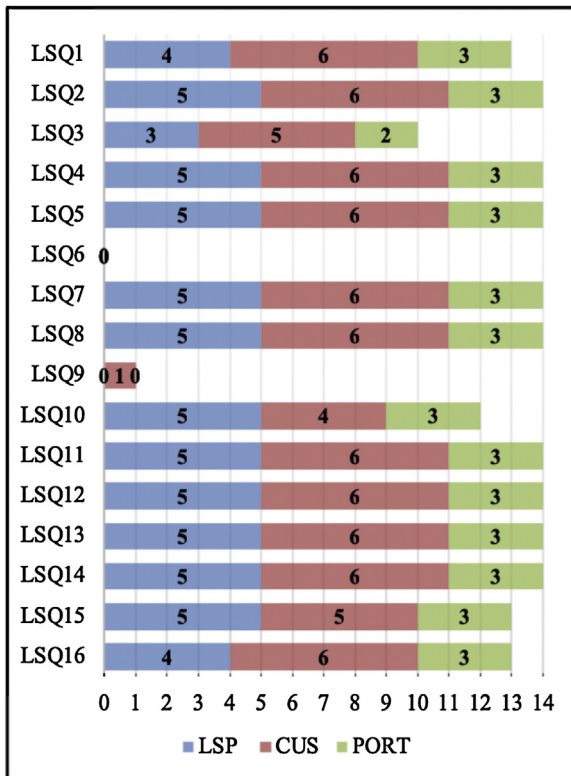
Fig. 3. Number of responses for relevance of LSQ variables.
Source: Authors.

Data were collected from informed interviewees at each company who possessed tacit knowledge about their company's LSQ operations and procedures. *Credibility:* Multiple respondent types and data sources across the fourteen respondents were used to triangulate emergent findings. *Dependability*: Thematic analysis was used for coding. *Transferability:* Our approach to transferability can be separated into the intended practical and theoretical contributions. Our practical contributions are primarily context-specific and pertinent to LSPs, customer/users and port operators in Hai Phong, while the theoretical contribution we propose in Section 5 enhances extant customer service quality/LSQ research.

The next section discusses findings from the empirical study including the importance and relevance of the sixteen a priori LSQ variables and additional variables, differences in perceptions and expectations, the role of port operators, and emerging issues.

4. Findings and discussion

Sections 4.1, 4.2 and 4.3 discuss variable relevance or irrelevance, suggestions for additional variables, and levels of variable importance. These sub-sections essential address RQs 1 and 2.

4.1. Relevance of LSQ variables

Fig. 3 shows the answers of interviewees in all three groups LSPs (LSPs), customers/users (CUS), and port operators (PORT) regarding the relevancy of the sixteen a priori LSQ variables in the context of Hai Phong.

LSQ6 and LSQ9 were essentially considered irrelevant by all three groups. Both deal with products, LSQ6 with consistent product quality and LSQ9 with delivered product meets required specifications. This irrelevancy is owning to the current context of Hai Phong logistics market. The majority of LSPs, particularly local LSPs, in Hai Phong are SMEs and what are termed 2PLs, i.e. only

offering individual services to customers such as transportation, customs clearance, freight forwarding and so on. For this reason, LSPs are only required to guarantee no problems with cargo such as no damage or no shortages, which already fall in to the domain of LSQ8. They do not offer such service as procurement or managing upstream supply chain for customer; therefore, they are not involved deeply in product specifications. Accordingly, we deleted these variables from further analysis in concert with suggestions by Churchill (1979) and Dunn et al. (1994).

LSQ3 (consistent order cycle time) accounted for the lowest relevancy score (10/14) among the other 14 variables. The qualitative reasons given by were relatively objective, consisting of seasonality and congestion. Some interviewees suggested adjustments to variables LSQ4, LSQ8 and LSQ12 to best fit the Hai Phong context. For LSQ4 (accurate invoices), interviewees emphasized that this variable should be extended to include other documentation (exact issued invoice, customs declaration forms, etc.).

For LSQ8 (undamaged shipments), interviewees recommended amending this variable to a delivered shipment condition that includes quantity and quality, the latter dealing partially with LSQ6 as the term 'undamaged' emphasizes quality. Meanwhile, the quantity (amount, weight, volume, etc.) was also a concern and it was suggested LSPs could be hired for warehouse management or consolidation (CUS2, CUS6 and LSP1) or consigning cargo at port on behalf of clients as an additional service to trucking (LSP4, LSP5) to minimize cargo loss due to interference from people in the middle of the process.

For LSQ12 (helpful LSP staff) interviewees suggested an extension of 'subject CS representatives' and further elaboration of the term 'helpful'. For the former, LSP staff having interactions with customers need to add functional activities providers such as truck drivers, warehouse workers/managers, customs declaration officer, and so on. For the latter, being helpful was mostly reflected through three aspects: attitude (i.e. enthusiastic or not), knowledge (i.e. expertise, understanding well type of cargo), and skills (i.e. ability to resolve troubles, English fluency, computer skills).

4.2. Suggestions for additional variables

There were also some suggestions for additional variables. One was assistance from expert associations ["...some organizations specializing in evaluating and summarizing logistics activities of LSPs in the region . . . as academic reference for SMEs in approaching to logistics network with reliable partners. . ." CUS 1].

Another relates to regulation and government assistance. Thai (2013) indicated that the lack of a separate authority body in charge of logistics causes difficulties in developing policy, strategies and guidelines for logistics. For this reason, there are negative consequences such as a lack of an official site for statistics, data and academic resources. In comparison with a neighbouring country, Thailand's National Economic and Social Development Board is assigned responsibility for logistics development, issuing the development strategy, and managing LSPs in the nation by categories (Banomyong & Supatn, 2011).

A third was the capability of LSP staff in handling the above changes ["... due to legal factor of high frequency of amendments in circulars and decrees of export and import . . ." - CUS 2, CUS 3]. Hence, all concerns about CS representatives of LSPs could be summarized as an item of staff preparation within LSQ12. We note such a variable requires to be measurable both before and after service provision to be valid as an item addressing LSQ, due to the nature of service quality measurement discussed previously.

Table 2
Average ranking of variable importance between customers/users and LSPs.

		CUS	LSP	GAP
LSQ1	Requested services or products are available	8.33	7.25	−1.08
LSQ2	Order cycle time is appropriate	8.67	8.60	−0.07
LSQ3	Order cycle time is consistent	5.80	5.75	−0.05
LSQ4	Issued invoices are accurate	7.50	8.20	+0.70
LSQ5	Delivery is on-time as promised	9.50	9.40	−0.10
LSQ7	Orders are completely accurate	7.67	7.80	+0.13
LSQ8	Delivered shipment is in good condition (undamaged)	9.67	9.60	−0.07
LSQ10	After-sale support is available	7.50	6.80	−0.70
LSQ11	There is provision of ongoing information and status of shipment	9.33	9.00	−0.33
LSQ12	LSP's customer service representatives are helpful	9.33	6.60	−2.73
LSQ13	There are customized services for customers' requests	7.33	7.40	+0.07
LSQ14	LSP's performance can be trusted	8.17	9.40	+1.23
LSQ15	LSP commits to provide good logistics service	8.40	7.80	−0.60
LSQ16	There is an integrity in LSP's business	7.33	7.00	−0.33

Source: Authors.

4.3. Perceptions of LSPs and expectations of customers/users

Table 2 provides the average rankings of customer/user (CUS) expectations and LSP perceptions of LSQ for the remaining 14 variables i.e. excluding LSQ6 and LSQ9. All but four variables (LSQ4, 7, 13 and 14) show CUS expectations exceeding LSP perceptions of each variable's importance that resulting in a negative 'gap' i.e. LSPs consider the variable as less important than customers/users (the gap value is shaded.) LSQ12, helpful LSP staff, had the largest gap at 2.73. In contrast to customers/users, LSPs rated higher that their invoices (LSQ4) and orders (LSQ7) are accurate, they provide customized services (LSQ13) and their performance can be trusted (LSQ14).

The three most highly ranked variables by both customers and LSPs include on-time delivery (LSQ5) and shipments conditions (LSQ8) and the provision of shipment information and status (LSQ11). The condition of cargo is a relative concern in other parts of the world in previous studies discussed in the literature. For example, Thai's (2013) research in the Singapore logistics sector used a similar variable named 'order fulfilment quality' including order condition (free of loss, fault, damage) and was the second most significant factor within both customer and providers by mean score. The mean scores of the two timeliness variables LSQ2 (lead time is appropriate) and LSQ5 (delivery is on-time as promised) were comparatively high. We thus infer this finding is similar between CUS and LSPs in Hai Phong and Singapore, one of the biggest hub-ports in the world. Results also correspond to those found by Kilibarda, Nikolicic, and Andrejic (2016), where Serbian freight forwarding companies were evaluated and similar gaps in the dimensions were found.

However, findings from Mentzer et al. (2001) in US and Rafiq and Jaafar (2007) and Grant (2004) in UK revealed a slight difference in the order of importance. The influence of two criteria defined as timeliness, order condition (free of damage) and order accuracy (right items, correct quantity) were in the middle of the rankings. It can be argued that Western logistics practitioners do value these factors but appreciate others more, for instance information quality, procedure of ordering and order discrepancy handling (ability to resolve troubles).

We now turn to the role of port operators in enabling or inhibiting LSQ for LSPs and logistics customers/users.

4.4. The support of port operators to LSQ

To address RQ3 about how well port operators support/enable or inhibit LSQ in Hai Phong, findings from CUS and LSP reflected that terminal operations have the most influence on LSQ5 (on-time delivery) and LSQ8 (shipment condition). In addition to the limitations of infrastructure and constructing sites mentioned by all targeted groups, LSP and CUS interviewee highlighted inefficiency in cargo handling and problems with staff attitudes at terminals. To be more precise, surveyed terminal operators considered shipping lines as their top priority clients. Until asked about manufacturers, traders, logistics providers and so on, they referred the first two as indirect clients; while logistics companies such as freight forwarders who do not own cargo are not considered their customers. This often leads to a lack of cooperation and a situation of neglect when handling cargo, thus affecting timeliness and shipment quality.

Albeit port operators do have activities related to customer service care via formal or informal procedures shown in Fig. 4, i.e. via emails, telephone or in person), the problem stems from the owning to the port operator and terminal's customer focus. They are not aware of the impacts their operations may have on logistics processes of LSPs and logistics customers/users in Hai Phong outside the port terminal.

Qualitative discussions with all interviewees confirmed the relationship of Parasuraman et al.'s (1985) five dimensions or themes to the fourteen remaining variables, e.g. LSQ8 for tangibility, LSQ3 and 5 for reliability, and LSQ10, 11 and 12 for assurance. However, two other issues emerged regarding human factors and resources and are discussed in Sections 4.4 and 4.5 respectively.

4.5. Emerging issues: human factors and resources

Different opinions about human factors and resources emerged among the groups when discussing additional factors. All six customer/users interviewed noted that in their opinion human factor/resource criteria of capabilities and skills are important variables of LSQ. This is an important emerging issue for them, and two variables were highly valued by them (five of six customers are foreign based), namely LSQ11 (ongoing information) and LSQ12 (helpful staff). Conversely, LSPs did not highly value these variables. Customers consider that work by LSP employees having positive influence on LSQ is a determinant factor, i.e. if LSP staff can fulfil their tasks well, the service is subsequently good. LSQ12's notion of helpful staff comprises several components: knowledge/understanding, skills, attitude and preparation. Customers thus appear to value knowledge and understanding more than the other groups and CUS3 and CUS4 both confirmed it was acceptable if staff have adequate knowledge but not necessarily favourable attitudes.

Further, with outstanding capabilities staff may be able to organize assigned jobs better, i.e. arrange cargo transportation, fill in customs declaration form accurately, etc. (CUS1, CUS3, CUS4). They may also be able to assist customers in decision making through
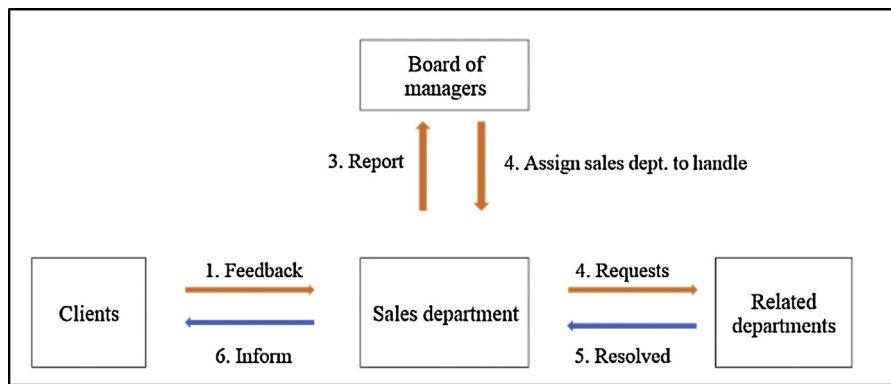
Fig. 4. Procedure of resolving customers' feedbacks at PORT 1 and PORT 3.

Source: Authors.

consulting with proper solution for the logistics process (CUS1, CUS3). Such competency can be recognized through the ability and speed of resolving troubles during transaction (CUS1, CUS2, and CUS6).

The interviewees shared similar opinions that knowledge and understanding can be achieved through experience and education. CUS1 noted the ability of logisticians in Hai Phong has improved in recent years, but still needs more attention. The lack of proper and sufficiently deep subject understanding may trigger higher number of interactions which makes the logistics process less effective and takes much more time than needed.

The issue of proper education and training emerged and was also discussed. Some interviewees believed that because the logistics sector in Hai Phong has only recently developed many human resources in the sector have achieved tacit knowledge from practice and experience and not from professional education. As a result, some Vietnamese logistics companies can only work with certain types of cargo/shipments. Interviewees other than CUS5 also noted an increasing requirement for technical skills such as computer skills, foreign languages (English) and so on. This raises a concern about how well the logistics workforce in Hai Phong has accomplished these fundamental skills.

Attitudes can also be reflected through the interaction process between customers and providers, for instance, communication (i.e. phone, email etc.). Firstly, they are asked to not only frequently update movement of cargo but also to express a cooperative intention and an awareness of being in a position of serving their partners. Apart from communication, attitude also includes the willingness or attempt to fulfil a customer's requirement and handle problems. This also means that logistics users expected enthusiasm from the staff, particularly dedication. In some cases, freight forwarders did not show their dedication while supervising the consignment stage. Then, even though product quality was damaged by a port's employees, the forwarder's neglect also contributed to the impact.

Thai (2013) discussed the importance of human-related factors, namely personnel contact (i.e. effort to understand customers' situation, adequate knowledge, experience etc.) and noted that both sides (LSPs and customers were concerned with this factor. While we found that perceptions of customers/logistics users in Hai Phong are similar to those in developed markets, LSPs especially local companies do not really appreciate this element much. This gap in awareness of human resource matters raises concerns regarding the status quo of logistics human factors in Hai Phong in particular, and in Vietnam in general. This issue now forms part of the LPI analysis carried out by the World Bank (Arvis et al., 2018), which implies that awareness of human development as a competency has not been considered much at a macro level.

At the same time, micro level businesses have paid attention to it due to its local impacts. A shortage of skilled and qualified labour in this sector has been detected in many nations around the world (McKinnon, Flöthmann, Hoberg, & Busch, 2017). In Vietnam, there is a need for approximately 20,000 logistics job-holders in the period from 2016 to 2020 according to Vietnam Logistics Business Association or VLA (Vietnam Knowledge, 2016). Currently, only 30% of the logistics labour force has been educated professionally with 20% in a domestic curriculum and 10% at foreign institutions. This means that 70% have achieved their knowledge and skills through daily job and experience i.e. tacit knowledge. In other words, they probably did not choose that occupation; the occupation has chosen them.

There are possibly two reasons leading to these circumstances. The very first one is the limited number of entities offering courses with logistics majors or with appropriate course as has been found in UK (Wong, Grant, Allan, & Jasiuvian, 2014). Only three universities under control of the Vietnamese Ministry of Transport have logistics undergraduate courses and can only supply the market with an average of 500 professionally-educated labourers annually (Thien, 2017). The number of short-time courses is also very limited, and the Logistics Education and Training Center operated by Vietnam Maritime University is considered the most proactive one, attracting 400 learners each year (Vietnam Knowledge, 2016). These graduates or educated learners can fulfil administrative and managerial positions.

Further, operative roles like truck drivers or warehouse workers are generally considered as low social status occupations and tend to be unappealing to the future workforce even though wages for these jobs in Hai Phong have been quite competitive in recent years in comparison with 'high social status' jobs like officers. Another criterion affecting quality of logistics resources is the location of the jobs, normally locating in logistics hubs in central cities or nearby port areas (Hanoi, Hai Phong and Ho Chi Minh City). The competition for logistics human resources may become even more intensive and is even more difficult in the situation of Hai Phong, where a well-qualified labour force tends to move to the nearby capital in Hanoi (Vietnam Knowledge, 2016).

We discuss the issue of trust in the next sub-section.

4.6. Emerging issues: trust

All LSPs considered LSQ14 (trust) played a critical role in logistics service quality to customer. In their words, it covers 'reputation' and 'relationship', meaning that if the LSPs are well known in the market and their clients keep using services of their company, they could tell that they provide good service and already fulfil other

quality above. This factor is believed to be result of technical and functional factors.

LSPs in Hai Phong focus more on the former, meaning outcomes of the service and are not aware of the influence of functionality (process of service delivery) on the 'trusted' image. Variables related to results after the transaction are more valued by LSPs (undamaged shipments, accurate invoices, complete order, etc.). They tend to validate LSQ more through visible components; in the meanwhile, unclear elements like how staff serving customers is not noted, or they supposed this may not have much impact on how customers evaluate the general LSQ.

In addition, returning customers as an indicator reflecting service quality could be risky in the Vietnam context. As in other Asian countries, Vietnamese business culture is more relationship-driven (Hofstede, Neuijen, Ohayv, & Sanders, 1990). Customers of local LSPs are mainly Vietnamese or Chinese companies. Thus, when service quality is still within an acceptable range, they continue to work with that partner. However, Western companies are relatively job-oriented and transaction-driven (Grant, 2004). Thus, holding a high appreciation for LSQ14 is appropriate here.

And yet, the gap between perceptions of customers/users and LSPs about trust was the largest as discussed in Section 4.2, implying the former are orientated towards functional features of LSQ rather than trust that comes from relationship between them and LSPs, i.e. reflecting a more transactional approach (Grant, 2004, 2005). This is an area of continuing debate and academic research (Juga et al., 2010; Juntunen et al., 2010) and also has connotations in the Vietnamese marketplace notwithstanding a relationship-driven culture (Hofstede et al., 1990).

We now conclude this paper in Section 5.

5. Conclusions

This paper has investigated issues of logistics service quality or LSQ among logistics service providers or LSPs, logistics customers/users and port operators in the Hai Phong region of Vietnam. The next sub-section discusses our contributions.

5.1. Contributions

This paper made several contributions to the study of LSQ. First, it contributes to customer service theory on what LSQ entails in a developing country lower on a logistics maturity scale such as Vietnam and provides logistics and LSP managers with insights on what areas of LSQ to focus on to enhance customer perceptions and satisfaction. Fourteen important LSQ variables were found and among these delivery time and condition of shipment were perceived as most important by both LSPs and customers. Further, differences between customers/logistics users and LSPs regarding human factors and resources and trust emerged and were highlighted important by customers/logistics users and LSPs respectively, but not vice versa.

Second, we found that how variables were interpreted, particularly the most important ones, indicates that the mindset of logisticians in Hai Phong is relatively the same as other places in the world. Particularly, those findings were compared with results of studies in the US, UK and Singapore that informed our variables for investigation. This implies that extant LSQ variables and constructs in that literature can be applied in research not only in Hai Phong but in Vietnam and the wider ASEAN region as well.

Third, interviewees also identified some issues requiring attention from government outside of the investigated variables, which is an additional contribution. The development of the road network infrastructure needs to continue and be completed by the government's own schedule and changes in legal customs

procedures should be accomplished per the VNLAP as these two issues negatively influence LSQ regarding 'infrastructure' and 'timeliness' that are measures of the LPI. Additionally, there should be additional efforts undertaken on developing entities supporting logistics knowledge and skills. With the development of a national logistics hub in Hai Phong, logistics education programmes should be carefully examined for content applicability and expansion in terms of learner numbers. Further, more workshops and short courses are suggested to be carried out with firms. With more proper and professional education, it is expected that local LSPs will have positive mindset changes regarding focal LSQ variables to meet customer expectations.

Finally, trust with customers/users emerged as an important issue for LSPs to effectively provide LSQ. However, this appears not to be highly reciprocated by customers/users and this finding supports the ongoing debate about trust, relationships and loyalty between these two groups.

As with all research studies this paper has several limitations. The next sub-section discusses them as well as opportunities for further research.

5.2. Limitations and opportunities for further research

Despite its findings and contributions, this research is an exploratory study that followed a qualitative approach to principally investigate logistics customer/user expectations and LSP perceptions towards LSQ provision in Hai Phong. While considered valid, these results and implications lack generalizability and should be tested through empirical quantitative research of a larger sample size to confirm and apply them to the LSQ population in the country and other ASEAN countries.

Such research would satisfy the second stage shown in Fig. 2 where variables from a pilot survey are purified and latent constructs confirmed in a fourth step prior to conducting and analysing a major empirical study in the fifth and last step. This would result in more firms participating and should have a more diversified selection by type of terminals and port operations. This increase in the number of firms participating would also allow us to look at inter-LSP LSQ, as Bae and Park (2018) examined the need for communications between LSPs in a port scenario, as many times more than one firm will be involved in the processing of a shipment.

There was a shortcoming in the number of interviewees available for this study and the composition of port operator interviewees. Only container terminals were selected because of their high productivity levels. However, issues identified by customers and LSPs were found at bulk cargo terminals. Bulk cargo (e.g. steel) are principal imported items at Hai Phong due to a considerable share of equipment and machine production in that region.

In addition, further research on the points involving the issue of human factors and the role government plays with regards to infrastructure development, customs procedures and education support is vitally important. Specifically, what impact does government investment and support have in the overall ability of LSPs to provide specific LSQs. Another related future research question is to determine what specific logistics education support programmes should be provided to best improve those identified LSQ variables.

Finally, the issue of trust that emerged in the research process also requires research to validate the views of interviewees to add to this ongoing debate in the logistics and supply chain management literature.

Conflict of interest

None declared.

Appendix A. Profiles of companies and interviewees

Company code (origin)	Activities	Interviewee
CUS 1 (Vietnam)	A trading and manufacturing SME Imports machinery and equipment from Korea, Japan, EU, USA, China Products (imported/self-manufactured) are distributed nationwide or exported to Myanmar Averages 8–9 orders per month	Director (Founder)
CUS 2 (Japan)	Production of radial tires; export base of parent firm for replacement tires demand Imports materials, machines & equipment for production from China, Japan, India, Thailand Averages 100 TEUs/month Exports finished products to USA, EU, New Zealand, Australia Averages 300 TEUs/months	Executive of Logistics Division
CUS 3 (Japan)	Steel structure manufacturing site, production base of parent firm in Southeast Asia Imports materials (e.g. steel), chemicals, etc. from Japan (90%), China, USA, Korea Averages 5 orders per month Exports finished products to Japan, Nicaragua, Chile, Morocco Averages 1 order per month	Chief Executive of Logistics Division
CUS 4 (Denmark)	Workwear manufacturer, 100% FDI and wholly-owned subsidiary Imports materials from Asia (China, Korea, Thailand, etc.); fabrics from EU (UK, Sweden, Norway); machines from Japan & Singapore Averages 200 TEUs/month & bulk cargo Exports finished products to head-quarter's distribution centre in Denmark; sometimes to EU, USA and Australia Averages 100 TEUs/month	Executive of Supply Chain Division
CUS 5 (Republic of Korea)	Manufacturer of nonstandard steel structures Imports steel plate, steel roll, shaped steel (e.g. channel sections) from South Korea, Middle East, Belgium, Portugal Averages 31–32,000 tonnes annually Exports finished products: steel structures, frames, beams etc. to Middle East, Chile, USA Averages 25,000 tonnes annually	Executive of Exporting-Importing Division
CUS 6 (Republic of Korea)	Electronics manufacturing site (800,000 sqm and US $1.5 billion investment) for global markets Imports components and technological accessories from headquarters, other Asian countries Exports finished products to company's warehouses worldwide or directly to customer Average revenue is US $70–80 million per month	Executive of Supply Chain Division
LSP 1 (Hong Kong)	ISCM (International Supply Chain Management), NVOCC for containerized cargo, consolidation, warehousing and distribution, customs formalities, trucking, IT solutions Competencies: ISCM (booking shipping lines, system management) & IT solutions (tracking service) Mainly serves customers assigned by headquarter (e.g. Debenhams, Disney, etc.)	Supervisor Hai Phong Office
LSP 2 (Vietnam)	Cooperate with Dinh Vu port in handling CY services, and services at CFS (container-freight station) Container repairs Customs formalities	Vice-General Director
LSP 3 (Vietnam)	Cargo storage serviced, customs clearance, trucking Competency: container management for exported cargo	General Director
LSP 4 (Vietnam)	Mainly inland transportation (rail & road); customs clearance, NVOCC for containerized cargo, container management	Vice-Director Hai Phong Branch
LSP 5 (Vietnam)	Inland transportation, customs service, warehousing	Logistician
PORT 1	Mainly handles containerized cargo	Vice-Chief of Sales
PORT 2	Specializes in containerized cargo Capacity of 500,000 TEUs	Manager of Marketing
PORT 3	Part of Vietnam-based container shipping company	Vice-General Director

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