IJ-ER
INDONESIAN JOURNAL
ECONOMIC REVIEW

Received: 25 Mey 2025 | Revised: 15 July 2025 | Accepted: 20 July 2025 | Published: 10 October 2025E-ISSN: 2986-478X, P-ISSN: 2986-1535

DOI: 10.59431/ijer.v5i2.551

RESEARCH ARTICLE

Stimulus To Improve Customer Experience In Indonesia's Cargo Shipping Service Industry

Yeremia Wijayanto [1*] | Prono Ardoko [2] | Pamungkas Hapsari [3]

[1*, 2, 3] Faculty of Economics, Universitas Semarang, Semarang City, Central Java Province, Indonesia.

Correspondence
[1*] Faculty of Economics, Universitas Semarang, Semarang City, Central Java Province, Indonesia.
Email: ywijayanto@usm.ac.id

Funding information
Universitas Semarang.

Abstract

Studies on customer experience have many links between stimuli and customer responses: cognitive, affective, social, physical, and sensory. Still, there have not been many in-depth studies on how these stimuli are obtained due to the limited empirical studies on stimuli that can affect customer experience. This research was conducted to identify and assess the most potent stimulus influencing customer experience in Indonesia's cargo shipping service industry. The Analytic Hierarchy Process (AHP) technique evaluated the significance of the customer experience stimulus criteria and sub-criteria. Nine senior managers with experience in the cargo shipping industry were asked to participate in this research. The results show that the internal stimulus has the most decisive importance, followed by the dynamic interaction between the stimulus and the external stimulus. Globally, the calculation results reveal that the elements of service quality, company capabilities, and communication processes have a high weight compared to other elements that make up the customer experience stimulus. At the end of the study, the theoretical and managerial implications and recommendations for further research are presented.

Keywords
Customer Experience; Stimulus; Cargo Shipping Services; AHP.

1 | INTRODUCTION

As marketing continues to evolve into an increasingly complex discipline, marketing studies face the challenge of analyzing data from a variety of sources. The customer decision journey is a strategic marketing framework that guides marketing analytics practitioners towards contributions that generate real value for both customers and businesses. Structuring the customer decision journey aids marketers in understanding customer needs and desires, and aligning these with the products or services designed to meet those demands. This process helps define customer needs and expectations, inform content creation, and select the appropriate marketing channels (Vollrath & Villegas, 2021). The customer journey describes the experience at each touchpoint and the distinct characteristics of a customer's interaction with a product, service, or brand. These interactions are often not linear in nature. The customer journey also spans multiple channels and reflects the cognitive, behavioral, and emotional responses involved in the process (Wolny & Charoensuksai, 2014).

Research on customer experience is an emerging field that has garnered significant interest from scholars. Previous studies have provided extensive literature reviews and proposed various concepts regarding customer experience, particularly concerning customer responses—cognitive, affective, social, physical, and sensory toward stimuli designed by companies (Becker & Jaakkola, 2020). However, fewer studies have explored how the service ecosystem can foster the creation of such stimuli. Given the limited empirical research on the relationship between service ecosystems and stimuli that influence customer experience, further investigation in this area is crucial. This study aims to identify, examine, test, and empirically assess the most impactful stimuli influencing customer experience within Indonesia's cargo shipping service industry. The study is designed to provide a framework for businesses in Indonesia's cargo shipping sector, based on the Analytic Hierarchy Process (AHP), to assist shipping firms in developing customer experience stimuli. Two research questions are posed to guide the achievement of the study's objectives. (1) What criteria underlie the creation of a customer experience stimulus? (2) Which criteria and elements are essential in developing a customer experience stimulus that can be applied within Indonesia's cargo shipping industry?

Theoretically, this study contributes to the development of marketing, particularly in helping businesses understand their position within the service ecosystem. It also provides insight into the most effective stimuli for generating positive customer experiences.

2 | BACKGROUND THEORY

The term "experience" is often difficult to define precisely due to its dependence on various factors. These factors include internal elements that a company can consciously control and manage, as well as external elements, such as customer characteristics and preferences, which are beyond the company's influence (Pekovic & Rolland, 2020). Customer experience is a holistic concept (Verhoef *et al*., 2009), and some scholars divide it into multiple components for a clearer and more precise definition. Gentile *et al*. (2007) outlined six components of customer experience: cognitive, sensory, pragmatic, emotional, relational, and lifestyle. Verhoef *et al*. (2009) classified these components as affective, cognitive, social, emotional, and physical responses to retailers. It is crucial for companies to capture relevant customer data related to these dimensions, such as emotional, cognitive, sensory, behavioral, and social responses. This information enables companies to understand customer experiences throughout their journey (Voorhees *et al*., 2017). Homburg *et al*. (2017) also identified sensory, affective, cognitive, relational, and behavioral dimensions. According to McColl-Kennedy *et al*. (2019), customer experience encompasses value-creation elements (resources, context, activities, customer roles, and interactions) that elicit a variety of emotional and cognitive responses, serving as touchpoints throughout the customer journey. Keiningham *et al*. (2017, 2020) suggested that physical, cognitive, emotional, sensory, and social dimensions are critical for managers to better understand customer experience. Expanding on Verhoef *et al*. (2009), Pekovic and Rolland (2020) defined customer experience as a multifaceted concept that includes the cognitive, emotional, social, sensory, technical, and behavioral responses of customers.

In their study, Becker and Jaakkola (2020) identified dualism in customer experience studies over the past decade. Some scholars argue that experience is either a response to an offer (e.g., Meyer & Schwager, 2007) or a judgment of the offering's quality (e.g., Kumar *et al*., 2014). This perspective implies that customer experience and outcome variables, such as value or satisfaction, are intertwined in certain studies. On the other hand, some researchers assert that customer experience is a distinct factor contributing to customer satisfaction. Furthermore, some studies treat experience as a product characteristic, rather than a customer reaction (e.g., Pine & Gilmore, 1998), which contradicts the interpretative tradition that views experience as a subjective concept possessed by the user and often synonymous with the value derived (Holbrook & Addis, 2001). Following this, Becker and Jaakkola (2020) proposed defining customer experience as an unintended, spontaneous response to specific stimuli. This view distinguishes customer experience from the stimuli to which the customer's conscious judgment responds. It rejects the notion that evaluative concepts, such as perceived

service quality or satisfaction, can be considered components of customer experience (Lemon & Verhoef, 2016).

The concept of customer experience remains complex due to preconceived ideas about its nature. As Carù and Cova (2003) noted, much marketing research assumes that a good experience is one that is memorable for the customer, if not exceptional. Further research is likely to focus on distinguishing between ordinary and remarkable experiences as separate phenomena (e.g., Arnold & Price, 1993; Klaus & Maklan, 2011). However, such studies often emphasize the extraordinary or routine nature of an offer rather than the customer's reaction to stimuli. Since customer feedback can range from insignificant to substantial (Brakus *et al*., 2009), Becker and Jaakkola (2020) suggest using the degree, intensity, or level of experience to differentiate between regular and extraordinary customer experiences. This classification can be viewed as a continuum, with weaker customer responses and reactions indicating a more mundane experience (Carù & Cova, 2003). Consequently, a consumer may have an exceptional experience in response to a relatively mediocre offering.

From the perspective of Service-Dominant Logic (SDL), Vink *et al*. (2021) define a service ecosystem as a relatively autonomous system that adapts to actors integrating resources linked by shared institutional arrangements, thereby creating shared value through the exchange of services. Service ecosystems emphasize complex, dynamic, and multi-actor value creation. Bolton *et al*. (2018) argue that service ecosystems must integrate an organization's digital, physical, and social domains, while customers often face trade-offs in their pursuit of an exceptional customer experience. Given the critical role of customer experience, a key challenge in service ecosystems is designing and managing customer experiences that align all three domains. To achieve this alignment, a company's resources and capabilities must be shaped to correspond with those of the customer. This requires fostering connections across the three domains, ensuring consistency among components, maintaining thematic cohesiveness, and delivering excellent service design.

Source: Bolton *et al*., 2018

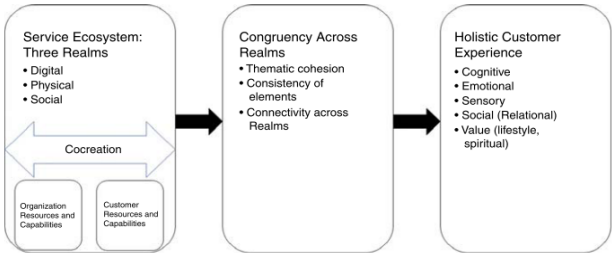

Figure 1. Integrated Perspective of Customer Experience on Service Ecosystem

The setting for this research is the cargo transportation service business. In reference to Bolton's octane description of customer experience throughout digital, social, and physical environments, the cargo shipping service industry can be entered into an octane where digital intensity has a strong influence adopt various technological sophistications. While its presence in the social realm, the cargo shipping service industry has a level that is not too high, the physical complexity of this industry has a high intensity. The availability of containers and other supporting facilities such as space on vessels, equipment at ports, land transportation facilities to transport containers from the supplier of goods to the port is an essential requirement for running a business. Bolton *et al*. (2018) show the eight octanes in Figure 2 below.

Source: Bolton *et al*., 2018

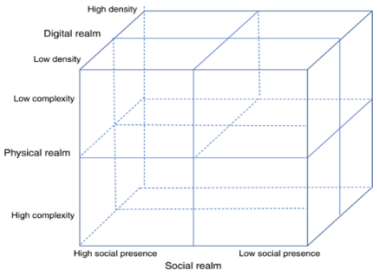

Figure 2. Eight Octane Customer Experience in Service Ecosystem

The characteristic found in octane where the cargo shipping service industry is located in the implementation of standardization by the company but on the other hand, customer needs flexibility. Customers also need a high level of troubleshooting skills from the service provider. An organization's decision support system must excel at providing value when required. Meanwhile, knowing customers and the company needs organizational learning from a corporate perspective. The duality of the cargo shipping service industry in Table 1 below is shown in the blue column.

Table 1. The Duality of Each Octane

Low Social Attendance	High Social Presence	Low Physical Complexity	High Physical Complexity
Base of the pyramid challenge	Organizational bundles vs customer bundles	Autonomy (competitive) vs interdependence (cooperation)	Regulation by actor vs regulation by community
Customer perspective. Scarcity of resources, values incompatibility	Customer perspective: perceived control can create paradox of choice, customers end up worse off	Customer perspective: highly social experience that requires high trust to integrate social resources	Requires a digital platform for information sharing, a mechanism for risk sharing. Social presence could be delivered digitally
Organizational perspective: fee vs free, potential solutions might include partner or network alliances	Organizational perspective: requires descriptive and diagnostic use of customer data	Organizational perspective: limited or no digital and physical touchpoints to create trust and align customer/organizational goals	Requires descriptive and diagnostic capability but no predictive analytics
Privacy vs transparency	Standardization vs flexibility	Avoidance vs attraction	Capabilities vs resources
Organizational and customer perspective: requires information sharing and low perceived risk. Trust between service providers and customers is essential	Customer perspective: high coping abilities required. The organization's decision support system must be excellent to provide value in real time	Customer perspective. Feedback and perceived control required	Customer perspective: customer innovation and creativity through participation. Local solutions may be possible if services can be modularized.

Source: Bolton *et al*., 2018

3 | METHOD

The Analytic Hierarchy Process (AHP), introduced by Saaty, is a method that breaks down multi-criteria decision-making problems into a hierarchical structure consisting of several levels, each with a clear objective at every level (Wind & Saaty, 1980). To simplify the decision-making process, the problem, decision criteria, and potential solutions can be divided into smaller, manageable components. AHP is based on three fundamental principles: decomposition, pairwise comparison, and priority synthesis. AHP has been widely applied across various decision-making fields due to its flexibility and practicality (Singh, 2016).

In this study, AHP was chosen as the method to determine the criteria and key elements that define the stimulus for improving customer experience in Indonesia's cargo shipping service industry for the following reasons: First, AHP can efficiently handle multiple criteria and sub-criteria; second, AHP allows both objective and subjective assessments and establishes priorities between them; third, AHP can implement both tangible and intangible criteria based on the judgments of competent experts; fourth, AHP has been used by numerous researchers and academics to solve complex problems, as documented in peer-reviewed journals; fifth, AHP benefits stakeholders and management by enhancing service quality and operational efficiency; and finally, by classifying issues into criterion and sub-criterion levels, systematic problem resolution becomes easier to achieve.

We involved a group of experts to review the criteria and sub-criteria used to analyze customer experience in Indonesia's cargo shipping service ecosystem and assess their relative weights in the AHP model. Rahman *et al*. (2019) stated that AHP does not require large samples for effective analysis. Typically, studies using AHP involve a small number of respondents from senior managers and executives who have in-depth knowledge of the issue under analysis. A small sample size does not affect the validity of AHP-based analyses. For this study, nine experts were selected based on their expertise in the cargo shipping service industry. The experts were asked to perform pairwise evaluations of the criteria and sub-criteria developed through a comprehensive literature review. Each participant has over ten years of management experience, holds senior positions in their companies, and possesses sufficient knowledge of marketing activities in Indonesia's cargo shipping industry. With their expertise, they were able to

evaluate and assign weights to the criteria and sub-criteria influencing customer experience within the industry using the AHP model. Details of the experts involved in this study are provided in Table 2.

Table 2. Expert/Respondent Detailed Information

Expert/Respondent	Background	Position	Work Experience (years)
Expert 1	Shipping Industry	Area Manager	21
Expert 2	Shipping Industry	Area Manager	25
Expert 3	Shipping Industry	Area Manager	25
Expert 4	Shipping Industry	Area Manager	15
Expert 5	Shipping Industry	Sales Manager	20
Expert 6	Shipping Industry	Area Manager	20
Expert 7	Shipping Industry	Commercial Manager	24
Expert 8	Shipping Industry	Sales Manager	20
Expert 9	Shipping Industry	Area Manager	16

Source: results of research data processing

In this research, the author refers to the AHP steps outlined by Selmer (2013). This study examines and categorizes the business boundaries that support total quality management using the multi-criteria decision-making technique, the AHP method. The steps that will be followed in this research are as outlined below. The first step is to define and state the goals. The research in Indonesia's cargo shipping service ecosystem aims to identify and investigate the factors that influence customer experience. Understanding the stimulus that determines customer experience is crucial for decision-makers and managers. With sufficient knowledge of the customer experience stimulus, practitioners working in the cargo shipping service industry in Indonesia are expected to have a solid foundation for designing the most effective and efficient combination of elements to apply within their company. The second step is to break down the goals into lower-level criteria or sub-criteria. The purpose of this process is to discover and evaluate the factors that influence the customer experience stimulus in the service ecosystem of Indonesia's cargo shipping industry, which is divided into three categories: (1) stimuli that the company can control, (2) stimuli from outside the company, and (3) dynamic interactions between stimuli (Becker & Jaakkola, 2020), forming the second level of the hierarchical model. Nine elements (sub-criteria) at the third level of the hierarchical model were distinguished from various literature to construct the hierarchical structure of this multifaceted issue. The stimulus that the company can control consists of three elements: (1) service quality, (2) company capabilities, and (3) company resources. The stimulus from outside the company also consists of three elements: (1) strong relationships with partners, (2) digital innovation, and (3) co-creation between companies and customers. Meanwhile, dynamic interactions between stimuli consist of (1) organizational culture, (2) communication processes, And (3) connectivity between functions.

Table 3. Main Criteria and Sub-criteria for Customer Experience Stimulus

Main Criteria	Label	Sub-criteria	Label	Reference
The stimulus that the company can control	Internal Stimulus	Service Quality	Service quality	(Mbama *et al*., 2018) (Siqueira *et al*., 2020)
The stimulus that the company can control	Internal Stimulus	Company Capability	Capability	(Actor, 2020) (Homburg *et al*., 2017)
The stimulus that the company can control	Internal Stimulus	Company Resources	Resource	(McColl-Kennedy *et al*., 2019)
Stimulus from outside the company	External Stimulus	A strong relationship with partners	Relation	(Ciuchita *et al*., 2019) (Wasan, 2018) (Witell *et al*., 2020)
Stimulus from outside the company	External Stimulus	Digital Innovation	Digital Innovation	(Pencarelli *et al*., 2021) (Actor, 2020) (Bolton *et al*., 2018) (Ciuchita *et al*., 2019) (Hoyer *et al*., 2020) (Amoako *et al*., 2021)
Stimulus from outside the company	External Stimulus	Co-Creation with Customers	Co-creation	(Bolton *et al*., 2018) (Jain *et al*., 2017)

Dynamic Interaction between Stimulus	Dynamic Interaction	Organizational culture	Culture	(Godovykh and Tasci, 2020) (Homburg *et al*., 2017)
Dynamic Interaction between Stimulus	Dynamic Interaction	Communication Process	Communication	(Manthiou *et al*., 2020) (Bonfanti *et al*., 2021)
Dynamic Interaction between Stimulus	Dynamic Interaction	Connectivity Inter Functions	Connectivity	(Actor, 2020) (Manthiou *et al*., 2020) (Witell *et al*., 2020) (McColl-Kennedy *et al*., 2019)

Source: results of research data processing

After the goals related to identifying and studying the determinants of the customer experience stimulus in the service ecosystem in Indonesia's cargo shipping service industry have been completed, the pertinent and essential criteria and sub-criteria have been recognized through steps one and two. These criteria and sub-criteria are grouped hierarchically according to the general aim, diverse stages, and associated sub-criteria. As seen in Figure 3, the AHP framework was developed to aid the study. The below graphic shows these criteria and sub-criteria in a four-tiered decision hierarchy.

Source: developed in this research

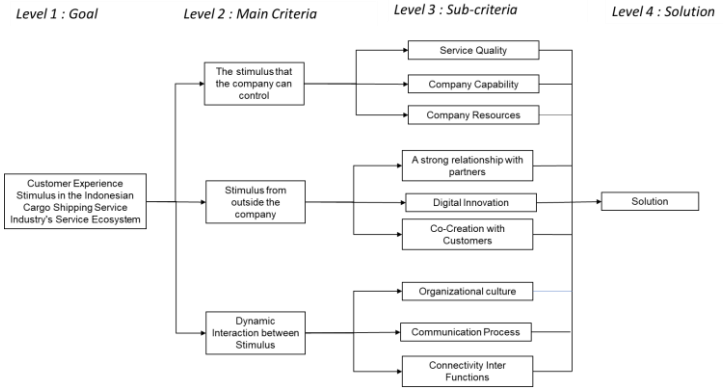

Figure 3. Framework of Customer Experience Stimulus in Indonesia's Cargo Shipping Service Industry

After evolving the AHP framework, the next tread is data collection which involves organizing a proficient team and establishing comparative analyses for each AHP criteria and sub-criteria. These proficients were selected from senior managers who have worked for more than ten years in Indonesia's cargo shipping service industry, as explained in section 3.2 regarding samples and respondents. When submitting the questionnaire, the researcher explains the AHP data collecting technique, such as the meaning of the integer priority score on a scale of 1-9 and how these scores should be considered when comparing the two criteria pairwise.

Table 4. Pairwise Comparison Scale

Degree of Interest	Definition	Description
1	Both elements are equally important	Both elements have the same effect
3	One element is slightly more important than the other	The assessment is slightly more in favor of one element than its partner
5	One element is more important than the other elements	The assessment is very biased in favor of one element over its partner
7	One element is more important than the other elements	One element is very influential, and its dominance is evident.
9	One element is very important than the other elements	The evidence that one element is more important than the other is very clear
2,4,6,8	The middle value between two adjacent comparisons	This value is given if there is doubt between the two adjacent assessments
The opposite	If element x has one of the above values when compared to element y	Then element y has the opposite value when compared to element x

Source: Wind and Saaty (1980)

Following the identification of experts and the collection of relevant information and data, the next step is to evaluate the relative importance of the criteria and sub-criteria that influence customer experience in Indonesia's cargo shipping service ecosystem. The AHP method determines the level of relevance through pairwise comparisons, and the findings are shown in a matrix format. The expert team was asked to carefully compare the criteria for each hierarchy level by providing a relative scale in pairs to the model. It is often the case that evaluators' judgments may be inconsistent. As a result, the AHP technique needs to include these inconsistencies into the model via the consistency index (CI) and consistency ratio (CR). CR is used to assess the consistency of pairwise comparisons and decision-making. As a result of this connection, CI and CR are derived.

$$CI=\frac{\lambda_{max}-n}{n-1} \text{ and } CR=\frac{CI}{RCI}$$

The number of criteria and sub-criteria for each level of the matrix is n, where n is the matrix rank or the number of criteria and sub-criteria, RCI is the random consistency index, and □ max is the largest eigenvector. In step 7, the local and global weights of each criterion and sub-criterion are calculated based on the pairwise comparison process. A distinction is made between local and global priority weights during the prioritization. Local weights reflect the priority weights from preceding hierarchical levels, while global weights represent the priority weights of the overall objective. AHP combines the priority weights of the criteria with the comparison ratings of the sub-criteria to rank the sub-criteria as a whole. The global weight can be calculated using the formula. Global weight =(Local weight for criterion i×Local weight for sub-criterion j for category i), Step 8 involves determining the priority and rank of the criteria and sub-criteria. As a result of the calculations performed in step 7, decision-makers and managers will be able to understand, prioritize, and rank the criteria and sub-criteria that define the stimulus for customer experience within Indonesia's cargo shipping service ecosystem.

4 | RESULTS AND DISCUSSION

4.1 Results

This study utilizes software provided by onlineoutput.com to calculate local and global weights and criteria and sub-criteria rankings, and a consistency index. This software provides outputs in the form of (1) displaying a hierarchical graph, (2) the weight of the criteria, sub-criteria, for the objectives, (3) the ratio of inconsistencies for each paired comparison matrix, so it is constructive in supporting decision-making studies.

Source: downloaded from results onlineoutput.com

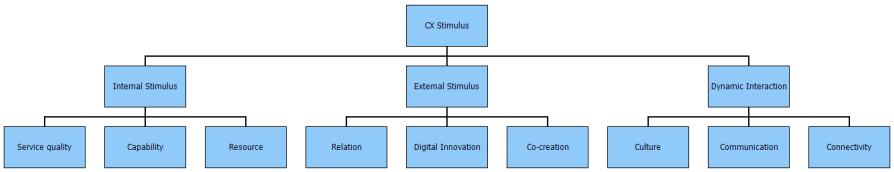

Figure 4. Hierarchical Graphics Display

Using onlineoutput.com, the weighting of the three customer experience stimuli is presented in table 5. The calculation results show that the internal stimulus is the main priority with a weight of 0.529, followed by dynamic interactions between stimuli which weigh 0.375. Meanwhile, the external stimulus was ranked last, with a weight of only 0.097. The analysis also shows that the resulting consistency ratio is 0.052, which means it can be accepted because according to Wind and Saaty (1980) consistency ratio limit is equal to or less than 10%.

Table 5. Customer Experience Stimulus Priority

Rank	Name	Weight
1	Internal Stimulus	0.529
3	External Stimulus	0.097
2	Dynamic Interaction	0.375

Inconsistency ratio: 0.052 (Consistent matrix)
Source: downloaded from results onlineoutput.com

Table 6. Internal Stimulus Priority

Rank	Name	Weight

1	Service Quality	0.432
2	Capability	0.358
3	Resource	0.21

Inconsistency ratio: 0.053 (Consistent matrix)
Source: downloaded from results onlineoutput.com

As shown in Table 6 above, service quality is ranked first with a weight of 0.432, followed by company capabilities (0.358), and the last order is company resources (0.21). While the consistency index shows the number 0.053, which means the level of consistency of the matrix is still acceptable because it is below the required number of 0.1. For external stimuli, the analysis results show that the relationship has the highest weight, 0.469, which means that it becomes the main priority on the external stimulus criteria. Next up are customer co-creation and digital innovation, with weights of 0.329 and 0.202, respectively. The consistency index is still within acceptable limits, although the figure shown is 0.09, close to 0.1.

Table 7. External Stimulus Priority

Rank	Name	Weight
1	Relation	0.469
3	Digital Innovation	0.202
2	Co-creation	0.329

Inconsistency ratio: 0.09 (Consistent matrix)
Source: downloaded from results onlineoutput.com

The results of the analysis of the last criteria, namely dynamic interactions between stimuli, show that communication has the highest weight (0.541), followed by connectivity (0.364) and organizational culture (0.095). The consistency index obtained is 0.052, which means that the matrix presented meets the requirements, which are still acceptable because the number shown is below 0.1.

Table 8. Priority of Dynamic Interaction between Stimulus

Rank	Name	Weight
3	Culture	0.095
1	Communication	0.541
2	Connectivity	0.364

Inconsistency ratio: 0.052 (Consistent matrix)
Source: downloaded from results onlineoutput.com

The analysis results for all three criteria and nine sub-criteria together obtained the following rankings: service quality is the number one priority with a weight of 0.249; the next priority is the company's capability (0,206), communication (0,177), and company resources (0,121). Connectivity, relationships, co-creation, organizational culture, and digital innovation, are in order of priority number 5, 6, 7, 8, 9 with the weight of each sub-criteria is 0.119; 0.046; 0.032; 0.031; and 0.02.

Source: downloaded from results onlineoutput.com

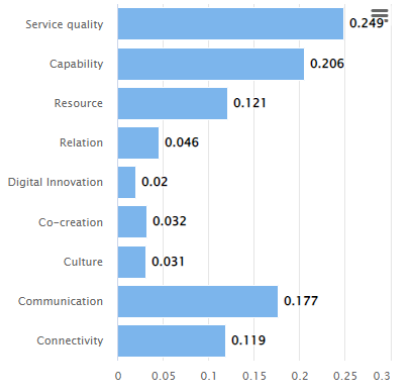

Figure 5. Customer Experience Stimulus Priority

This study aims to discover and investigate the determinants of the customer experience stimulus in the service

ecosystem in Indonesia's cargo shipping service industry. Knowing the priorities of these essential elements will make it easier for business actors to design a service ecosystem that supports the creation of a positive customer experience. Main criteria used in this study refer To Becker and Jaakkola (2020) that the stimulus to create a customer experience comes from a stimulus that can be controlled by the company, a stimulus from outside the company, and the dynamic interaction between stimuli. Furthermore, each of the main criteria is translated into three sub-criteria so that a total of nine essential elements in the preparation of the customer experience stimulus are obtained. AHP approach was applied by asking a team of experts consisting of nine people with experience in the cargo shipping industry to carefully compare the criteria for each level of the hierarchy by setting a relative scale in pairs.

AHP results show that the stimulus that the company can control is the main priority that supports the creation of a positive customer experience with a weight of 0.529. These results confirm the Resource Advantage Theory of Competition (RATC), which states that the company is a heterogeneous and imperfectly moving combination of factors labeled resources. When paired with heterogeneous demand, the heterogeneity of resources in motion is imperfect, meaning a significant variance of business size, scope, and profitability within the same industry. The relevance of (1) market segments, (2) diverse corporate resources, (3) comparative advantage in resources, and (4) competitive advantage in market position is emphasized by RATC (Hunt and Arnett, 2004). As stated in premise RATC number eight: management's responsibility is to identify, comprehend, develop, select, implement, and adjust strategies. Managers play a role in creating internal stimuli, namely stimuli that the company can control to lead customers to a positive customer experience throughout the customer journey stage.

In the main criteria of this internal stimulus, the results of the AHP show that service quality ranks first in elements that have a high level of importance. Based on the five-dimensional SERVQUAL model, Zeithaml *et al*. (1988) measure the customer experience with the tangibles, reliability, responsiveness, assurance, and empathy of the services provided by the company; service quality is a global assessment, or attitude, which is related to service excellence. Because it is related to service excellence, the company will always try to maintain the quality of its services. Consistency in maintaining superior service quality is one of the stimuli that lead to a positive customer experience, especially when customers enjoy services from service providers.

An essential element that ranks second after service quality is its capability to manage its resources to gain a competitive advantage. Meanwhile, the element with the last priority in the internal stimulus is the company's resources. The resource-based view (RBV) is based on optimizing the company's internal resources. Companies that can optimally exploit their internal resources can create a competitive advantage, and strategically managing these resources will ensure a sustainable competitive advantage. Creating, integrating, and reconfiguring enterprise resources brings the firm to dynamic capabilities. Because of their distinctiveness, dynamic capabilities are the fundamental source of long-term competitive advantage; nevertheless, building and integrating resources takes time. It demonstrates that the mix of resources is an essential component of a firm's dynamic capacities (Maiti *et al*., 2020). In particular, the perspective of the RBV depends on its ability to build, integrate, and utilize resources and capabilities (Eng *et al*., 2020). Therefore the first step that the company must take is to identify the resources that allow the realization of competitive advantage (Nagano, 2020). Companies with a competitive advantage have a significant opportunity to win because customers choose this special offer. In other words, within their competitive advantage, the company can continuously create a stimulus for realizing a positive customer experience.

The following main criterion that ranks second is the dynamic interaction between stimuli with a weight of 0.375. The AHP results do not show that external stimuli originating from outside the company rank second after internal stimuli. It indicates that the importance of the dynamic interaction criteria between stimuli is critical; even the difference in weight between these two criteria has a significant value of 0.278, far from the weight of the external stimulus itself, which only weighs 0.097. Moreover, when compared to the first rank of internal stimulus, the difference in weight reached 0.432. In their article, Becker and Jaakkola (2020) stated that recent research developments on customer experience indicate the need for a more dynamic view. The customer experience is based on an ongoing assessment of several touchpoints, the stimulus having multiple effects, and the connectivity of the stimulus across the touchpoints are essential drivers of the prerequisites for a positive customer experience. It implies that the customer experience emerges dynamically and benefits multilevel analysis.

From the AHP calculation, the communication element has the highest weight (0.541) compared to the other two factors, namely connectivity (0.364) and culture (0.095). According to Bonfanti *et al*. (2021), communication activities are critical in creating the customer experience. Effective communication results in customers who are more aware of and compliant with the regulations and those that act on demand. Additionally, communication efforts are essential to persuade (possible) customers. Regarding the connectivity element, Witell *et al*. (2020) argue that touchpoints in a B2B context include all verbal and nonverbal events that customers experience, whether consciously or not, related to a supplying company. Thus, touchpoints cover different forms of interaction involving other actors. The point of contact incorporates several functional and organizational units and personnel functioning at various hierarchy levels within each corporation. There is no one individual actor active in the customer journey since numerous actors (both acting independently and on behalf of functional units) are involved in various touchpoints during the customer journey. Each

step necessitates a new set of touchpoints including firms, customers, partner companies, or other ecosystem participants. Customer experience management needs a multidisciplinary strategy including several functions and network partners.

In his studies, Hamburg *et al*. (2017) introduce three cultural mindsets that lead to customer experience, namely (1) experience response orientation, (2) touchpoint journey orientation, and (3) alliance orientation. Experiential response orientation broadens market orientation, notably in detailed understanding, detecting, and responding to customer needs beyond the focus on cognitive, affective, and customer relations responses involving sensory and customer behavior (as a separate dimension). Second, alliance orientation expands market orientation, especially competitor orientation, in terms of acting more collaboratively with other (non) competitors in the market. Finally, touchpoint journey direction promotes cross-functional cooperation beyond market data as a collaboration object and towards realizing complex touchpoint journeys. As a design scheme, this emerging orientation may contribute to mapping interdependencies between different companies' touchpoints and developing market-network-oriented value propositions.

Finally, the AHP results place a stimulus from outside the company as the last criterion with a weight of 0.097. The figures imply that these criteria are not meaningful enough to create a customer experience stimulus. Of the three elements that build this external stimulus, relations have the highest weight, 0.469, followed by co-creation (0.329) and digital innovation (0.202). The importance of relationships between customers and parties outside the company in delivering the customer experience is stated by Witell *et al*. (2020) that suppliers need to build a portfolio of customer relationships to increase the benefits of those relationships. The shift from a transactional to a relational exchange in the buyer-seller relationship will significantly influence the customer experience (Homburg *et al*., 2017). Compared to transactional relationships, long-term partnerships rely on administrative and bureaucratic constraints and collaboration between suppliers and consumers or partners. Cooperation is developed in business interactions when many parties coordinate their activities to achieve goals with reciprocity on occasion.

Meanwhile, to truly understand the co-creation of value in customer experience, companies need a comprehensive perspective of consumer experience across time that encompasses all physical, digital, and social domains. Organizations will face several customer experience issues in the marketplace if they lack cohesion. Because consumers actively build shared experiences, especially in the social world, firms must support customer interactions with all players involved. (Bolton *et al*., 2018). With its physically complex environment and high digital density in the cargo shipping industry, companies and consumers must collaborate to offer a great experience. Typically, the desired level of customization is defined by the customer's (individual or company) willingness to share data with the service provider. On the other side, customers' concerns about data privacy and security may prevent them from utilizing the service system. Due to the industry's minimal social presence, developing trust requires digital technologies safeguarding data privacy and security. As a result, digital innovation is necessary to bridge a gap between a high level of physical complexity and a high level of digital density but a low level of social presence in the customer experience.

4.2 Discussion

The findings from this study provide significant insights into the factors influencing customer experience in Indonesia's cargo shipping service industry. By utilizing the Analytical Hierarchy Process (AHP) methodology, the study identified and prioritized the stimuli that most significantly impact customer experience. Using software from onlineoutput.com, the study was able to calculate the weights of various criteria and sub-criteria, providing a clear picture of what matters most in shaping customer satisfaction. Internal stimuli emerged as the top priority in shaping the customer experience, with a weight of 0.529. This aligns with the Resource-Based View (RBV), which emphasizes the importance of internal resources and capabilities in gaining a competitive advantage (Barney, 1991). According to the RBV, companies that can effectively manage and utilize their internal resources create a sustainable competitive advantage, which directly influences their ability to deliver a positive customer experience. The AHP analysis identified service quality as the most important element within the internal stimulus category, with a weight of 0.432. This aligns with the SERVQUAL model, which asserts that consistently delivering high-quality service is essential for fostering customer loyalty and satisfaction (Zeithaml, Berry, & Parasuraman, 1988). Service quality directly influences customers' perceptions and contributes significantly to their overall experience.

Following service quality, company capability ranks second in importance with a weight of 0.358. The ability of a company to leverage its resources effectively, adapt to market changes, and meet customer demands is crucial for maintaining a competitive edge. Dynamic capabilities, which refer to a company's ability to adapt, integrate, and reconfigure resources to meet the challenges of a changing environment, are essential for maintaining a competitive advantage (Teece, Pisano, & Shuen, 1997). In the cargo shipping industry, this means that companies need to continually innovate and improve their service offerings to meet evolving customer expectations. Companies with strong dynamic capabilities can ensure that their service delivery is both efficient and adaptable, which is particularly important in an industry where customer demands and market conditions can fluctuate rapidly. The third priority under internal stimuli is company resources, with a weight of 0.21. While resources are necessary for a company's operations, they are less influential on customer experience compared to service quality and capabilities. This finding aligns with the RBV, which suggests that having resources alone is not enough; they must be utilized strategically to gain a competitive advantage

(Maiti *et al*., 2020). Companies in the cargo shipping industry must ensure that they not only possess the necessary resources, such as vessels and infrastructure, but also have the capabilities to utilize these resources in ways that enhance the customer experience.

The second main criterion, dynamic interaction between stimuli, is ranked second in importance, with a weight of 0.375. This category includes the interaction between various service elements and customer touchpoints that influence the overall customer experience. The analysis revealed that communication is the most significant factor within this category, with a weight of 0.541. This result highlights the critical role that communication plays in creating a positive customer experience. Effective communication helps ensure that customers are well-informed about the services provided and the status of their shipments, which leads to greater customer satisfaction and loyalty. Communication also plays a key role in managing customer expectations, resolving issues, and building trust between the company and its customers (Bonfanti, Vigolo, & Yfantidou, 2021). Connectivity, with a weight of 0.364, is the second most important factor within dynamic interactions. This refers to the seamless integration of service touchpoints and channels throughout the customer journey. Ensuring that customers have consistent and smooth interactions across all touchpoints whether digital, physical, or social—is essential for maintaining a positive experience. According to Witell *et al*. (2020), a multi-channel approach to service delivery, where different touchpoints are connected and aligned, is crucial for providing a cohesive customer experience.

Organizational culture, with a weight of 0.095, ranks third in this category. While culture plays an important role in shaping the service environment and the behavior of employees, it was found to be relatively less influential in driving customer experience compared to communication and connectivity. Nonetheless, a company's culture still impacts how employees interact with customers and influences the overall service quality. A customer-oriented culture ensures that employees are aligned with customer satisfaction goals and are empowered to act in the best interest of the customer (Homburg, Jozić, & Kuehnl, 2017). External stimuli, ranked third in priority with a weight of 0.097, showed the least impact on customer experience compared to internal and dynamic stimuli. Despite its lower weight, external stimuli such as relationships, co-creation, and digital innovation are still essential to consider in shaping the overall customer experience. Relationships, with the highest weight of 0.469, play a significant role in delivering value to customers. Building long-term relationships based on trust and collaboration can help companies maintain customer loyalty and improve service delivery over time (Witell *et al*., 2020).

Co-creation, with a weight of 0.329, emphasizes the importance of involving customers in the service process. When customers feel actively engaged and have a hand in shaping the service, they are more likely to have a positive experience. Digital innovation, although gaining importance in many industries, had a relatively low weight of 0.202 in this study. This finding suggests that while digital innovation is important, it has not yet played a significant role in driving customer experience in the cargo shipping industry (Pencarelli *et al*., 2021). This gap highlights the need for the industry to invest more in digital transformation to enhance service delivery and meet evolving customer expectations. The relatively low weight for digital innovation can also be attributed to the industry's slow adoption of technological advancements. While some international cargo shipping companies have integrated digital platforms to improve customer experience, many companies in Indonesia have yet to fully embrace these technologies (Hoyer *et al*., 2020). This indicates an opportunity for the cargo shipping industry to further leverage digital tools to enhance operational efficiency and customer satisfaction.

The findings of this study emphasize the importance of internal stimuli particularly service quality and company capabilities in creating a positive customer experience in the cargo shipping industry. The study also highlights the critical role of dynamic interactions, especially communication and connectivity, in shaping customer perceptions. While external stimuli like relationships and digital innovation are important, they play a secondary role in comparison to the internal and dynamic factors. Future research should explore how digital innovation can be better integrated into the customer experience strategy in the cargo shipping sector to bridge the gap between physical complexity and digital transformation (Bolton *et al*., 2018).

5 | CONCLUSIONS AND FUTURE WORK

This study outlines a method to identify and assess the key factors that influence customer experience in Indonesia's cargo shipping industry. By utilizing the Analytic Hierarchy Process (AHP), the research highlights which factors hold the most weight in shaping customer perceptions and satisfaction. Findings indicate that internal stimuli, particularly service quality, are the most significant contributors to customer experience. Dynamic interactions between various service factors also play a crucial role, while external stimuli, such as customer relationships and digital innovation, were less influential in comparison. The research emphasizes the vital role of internal resources and capabilities in enhancing customer experiences. Service quality was ranked as the most important factor, underscoring the need for businesses to consistently deliver high standards of service to foster customer satisfaction and loyalty. Company capabilities, along with effective communication both internally and externally, are also essential in meeting customer needs and ensuring operational efficiency. The results suggest

that improving connectivity between different customer touchpoints can lead to a more seamless and consistent experience across all interactions. The findings also offer a practical framework for cargo shipping companies in Indonesia to refine their customer experience strategies. Understanding the relative importance of each factor can guide businesses in prioritizing actions and allocating resources more effectively. By focusing on areas within their control, such as service quality and organizational capabilities, companies can improve their competitive positioning and enhance the overall customer experience.

There are several directions for future research based on the findings of this study. First, further investigation into the role of digital innovation in customer experience within the cargo shipping industry is needed. While this study found external stimuli, including digital innovation, to be less impactful, the increasing adoption of technology across industries suggests that a deeper understanding of digital tools' influence could be valuable. Exploring how digital platforms, mobile applications, and data analytics can enhance service delivery may reveal opportunities for innovation in customer experience. In addition, future studies could examine customer experience from the perspective of different market segments. This study considered the cargo shipping industry as a whole, but customer needs and expectations may vary between business clients, individual shippers, and large corporations. Understanding how different customer groups respond to service stimuli will help businesses tailor their strategies to meet the specific needs of each segment. Finally, integrating qualitative methods, such as interviews or focus groups, could complement this quantitative approach and provide a more comprehensive understanding of customer experience. Gathering in-depth feedback from customers can reveal how they emotionally and cognitively respond to various service stimuli, offering valuable insights for refining service offerings. While this study provides a solid foundation for improving customer experience in Indonesia's cargo shipping industry, further research is needed to explore the dynamic nature of customer expectations and the role of emerging technologies in shaping customer journeys.

REFERENCES

Akter, S. (2020). Building dynamic service analytics capabilities for the digital marketplace. *Journal of Business Research*, *118*, 177–188. https://doi.org/10.1016/j.jbusres.2020.06.016

Amoako, G. K., Doe, J. K., & Neequaye, E. K. (2021). Online innovation and repurchase intentions in hotels: the mediating effect of customer experience. *International Hospitality Review*, *ahead-of-print*(13 August 2021). https://doi.org/10.1108/ihr-02-2021-0008

Arnould, E. J., & Price, L. L. (1993). River Magic: Extraordinary Experience and the Extended Service Encounter. *Journal of Consumer Research*, *20*(1), 24. https://doi.org/10.1086/209331

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, *17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Becker, L., & Jaakkola, E. (2020). Customer experience: fundamental premises and implications for research. In *Journal of the Academy of Marketing Science* (Vol. 48, Issue 4, pp. 630–648). Springer. https://doi.org/10.1007/s11747-019-00718-x

Bolton, R. N., McColl-Kennedy, J. R., Cheung, L., & ... (2018). Customer experience challenges: bringing together digital, physical and social realms. *Journal of Service Management*, *29 No. 5*, 776–808. https://doi.org/10.1108/JOSM-04-2018-0113

Bonfanti, A., Vigolo, V., & Yfantidou, G. (2021). The impact of the Covid-19 pandemic on customer experience design: The hotel managers' perspective. *International Journal of Hospitality Management*, *94*(July 2020), 102871. https://doi.org/10.1016/j.ijhm.2021.102871

Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty? *Journal of Marketing*, *73*(3), 52–68. https://doi.org/10.1509/jmkg.73.3.52

Carù, A., & Cova, B. (2003). Revisiting consumption experience: A more humble but complete view of the concept. *Marketing Theory*, *3*(2), 267–286. https://doi.org/10.1177/14705931030032004

Ciuchita, R., Mahr, D., & Odekerken-Schröder, G. (2019). "Deal with it": How coping with e-service innovation affects the customer experience. *Journal of Business Research*, *103*, 130–141. https://doi.org/10.1016/j.jbusres.2019.05.036

Eng, T. Y., Ozdemir, S., Gupta, S., & Kanungo, R. P. (2020). International social entrepreneurship and social value creation in cause-related marketing through personal relationships and accountability. *International Marketing Review*, *37*(5), 945–976. https://doi.org/10.1108/IMR-12-2018-0360

Gentile, C., Spiller, N., & Noci, G. (2007). How to Sustain the Customer Experience:. An Overview of Experience Components that Co-create Value With the Customer. *European Management Journal*, *25*(5), 395–410. https://doi.org/10.1016/j.emj.2007.08.005

Godovykh, M., & Tasci, A. D. A. (2020). Customer experience in tourism: A review of definitions, components, and measurements. *Tourism Management Perspectives*, *35*, 1–10. https://doi.org/10.1016/j.tmp.2020.100694

Holbrook, M. B., & Addis, M. (2001). On the conceptual link between mass customisation and experiential consumption : An explosion of subjectivity. *Journal of Consumer Behaviour*, *1*, 50–66. https://doi.org/10.1002/cb.53

Homburg, C., Jozić, D., & Kuehnl, C. (2017). Customer experience management: toward implementing an evolving marketing concept. *Journal of the Academy of Marketing …*. https://doi.org/10.1007/s11747-015-0460-7?fbclid=IwAR09X82UKjwAG4DdzLvz8LKpdHDVatOz5JYJo-M2vQeCIJjClHLHerJ7eGc

Hoyer, W. D., Kroschke, M., Schmitt, B., Kraume, K., & ... (2020). Transforming the customer experience through new technologies. *Journal of Interactive Marketing*, *51*, 57–71. https://www.sciencedirect.com/science/article/pii/S1094996820300827

Hunt, S. D., & Arnett, D. B. (2004). Market segmentation strategy, competitive advantage, and public policy: Grounding segmentation strategy in resource-advantage theory. *Australasian Marketing Journal*, *12*(1), 7–25. https://doi.org/10.1016/S1441-3582(04)70083-X

Jain, R., Aagja, J., & Bagdare, S. (2017). Customer experience–a review and research agenda. *Journal of Service Theory and Practice*. https://doi.org/10.1108/JSTP-03-2015-0064

Keiningham, T., Aksoy, L., Bruce, H. L., Cadet, F., & ... (2020). Customer experience driven business model innovation. *Journal of Business …*. https://www.sciencedirect.com/science/article/pii/S014829631930462X

Keiningham, T., Ball, J., Benoit, S., Bruce, H. L., & ... (2017). The interplay of customer experience and commitment. *Journal of Services …*. https://doi.org/10.1108/jsm-09-2016-0337

Klaus, P., & Maklan, S. (2011). Bridging the gap for destination extreme sports: A model of sports tourism customer experience. *Journal of Marketing Management*, *27*(13–14), 1341–1365. https://doi.org/10.1080/0267257X.2011.624534

Kumar, V., Umashankar, N., Kim, K. H., & Bhagwat, Y. (2014). Assessing the influence of economic and customer experience factors on service purchase behaviors. *Marketing Science*, *33*(5), 673–692. https://doi.org/10.1287/mksc.2014.0862

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, *80*(6), 69–96. https://doi.org/10.1509/jm.15.0420

Maiti, M., Krakovich, V., Shams, S. M. R., & Vukovic, D. B. (2020). Resource-based model for small innovative enterprises. *Management Decision*, *58*(8), 1525–1541. https://doi.org/10.1108/md-06-2019-0725

Manthiou, A., Hickman, E., & Klaus, P. (2020). Beyond good and bad: Challenging the suggested role of emotions in customer experience (CX) research. *Journal of Retailing and Consumer Services*, *57*(August). https://doi.org/10.1016/j.jretconser.2020.102218

Mbama, C. I., Ezepue, P., Alboul, L., & Beer, M. (2018). Digital banking, customer experience and financial performance: UK bank managers' perceptions. *Journal of Research in …*. https://doi.org/10.1108/JRIM-01-2018-0026

McColl-Kennedy, J. R., Zaki, M., & ... (2019). Gaining customer experience insights that matter. *Journal of Service …*. https://doi.org/10.1177/1094670518812182

Meyer, C., & Schwager, A. (2007). Understanding customer experience [14]. *Harvard Business Review*, *85*(6), 137.

Nagano, H. (2020). The growth of knowledge through the resource-based view. *Management Decision*, *58*(1), 98–111. https://doi.org/10.1108/MD-11-2016-0798

Narver, J. C., & Slater, S. F. (1990). The Effect of Market Orientation on Business Profitability. *Journal of Marketing*, *October*, 20–35. https://doi.org/10.4135/9781452231426.n3

Pekovic, S., & Rolland, S. (2020). Recipes for achieving customer loyalty: A qualitative comparative analysis of the dimensions of customer experience. *Journal of Retailing and Consumer Services*. https://www.sciencedirect.com/science/article/pii/S0969698919310562

Pencarelli, T., Bravi, L., Dini, M., & Splendiani, S. (2021). Enhancing customer experience through technological innovation in traditional travel agencies: evidences from Italy. *Current Issues in Tourism*, *24*(5), 590–596. https://doi.org/10.1080/13683500.2020.1734548

Pine, J., & Gilmore, J. H. (1998). Welcome To The Experience Economy. *Harvard Business Review*, *76*(4), 97–105.

Sahaf, M. A. (2019). *Strategic marketing: making decisions for strategic advantage*. PHI Learning Pvt. Ltd.

Selmer, J. (2013). Identification and Prioritization of Barriers to Total Quality Management Implementation in Service Industry: An Analytic Hierarchy Process Approach. *The TQM Journal*, *25*(5), 61–72.

Singh, A. K. (2016). Competitive service quality benchmarking in airline industry using AHP. Benchmarking: An International Journal. *Benchmarking: An International Journal*, *23*(4).

Siqueira, J. R., ter Horst, E., Molina, G., Losada, M., & Mateus, M. A. (2020). A Bayesian examination of the relationship of internal and external touchpoints in the customer experience process across various service environments. *Journal of Retailing and Consumer Services*, *53*(November 2019). https://doi.org/10.1016/j.jretconser.2019.102009

Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*, *43*(2–3), 172–194. https://doi.org/10.1016/j.lrp.2009.07.003

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, *18*(7), 509–533. https://doi.org/10.1093/0199248540.003.0013

Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer Experience Creation: Determinants, Dynamics and Management Strategies. *Journal of Retailing*, *85*(1), 31–41. https://doi.org/10.1016/j.jretai.2008.11.001

Vink, J., Koskela-Huotari, K., Tronvoll, B., Edvardsson, B., & Wetter-Edman, K. (2021). Service Ecosystem Design: Propositions, Process Model, and Future Research Agenda. *Journal of Service Research*, *24*(2), 168–186. https://doi.org/10.1177/1094670520952537

Vollrath, M. D., & Villegas, S. G. (2021). Avoiding digital marketing analytics myopia: revisiting the customer decision journey as a strategic marketing framework. *Journal of Marketing Analytics*, *0123456789*. https://doi.org/10.1057/s41270-020-00098-0

Voorhees, C. M., Fombelle, P. W., Gregoire, Y., Bone, S., Gustafsson, A., Sousa, R., & Walkowiak, T. (2017). Service encounters, experiences and the customer journey: Defining the field and a call to expand our lens. *Journal of Business Research*, *79*(April), 269–280. https://doi.org/10.1016/j.jbusres.2017.04.014

Wasan, P. (2018). Predicting customer experience and discretionary behaviors of bank customers in India. *International Journal of Bank Marketing*, *36*(4), 701–725. https://doi.org/10.1108/IJBM-06-2017-0121

Wind, Y., & Saaty, T. L. (1980). Marketing Applications of the Analytic Hierarchy Process. *Management Science*, *26*(7), 641–658.

Witell, L., Kowalkowski, C., Perks, H., Raddats, C., & ... (2020). Characterizing customer experience management in business markets. *Journal of Business …*. https://www.sciencedirect.com/science/article/pii/S0148296319306502

Wolny, J., & Charoensuksai, N. (2014). Mapping customer journeys in multichannel decision-making. *Journal of Direct, Data and Digital Marketing Practice*, *15*(4), 317–326. https://doi.org/10.1057/dddmp.2014.24

Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1988). Communication and Control Processes in the Delivery of Service Quality. *Journal of Marketing*, *52*(2), 35. https://doi.org/10.2307/1251263

How to cite this article: Wijayanto, Y., Ardoko, P., & Hapsari, P. (2025). Stimulus To Improve Customer Experience In Indonesia's Cargo Shipping Service Industry. Indonesian Journal Economic Review (IJER), 5(2), 81-95. https://doi.org/10.59431/ijer.v5i2.551.