

Application “Vessel Service System of Pelindo 4” Soekarno Hatta Port Innovation: Responding to Global Challenges and Improving the Quality of Public Services

Amrin¹, Husain Syam², Hamsu Abdul Gani³

1 (Doctoral Program of Public Administration, Universitas Negeri Makassar, Indonesia)

2 (Lecturer, Universitas Negeri Makassar, Indonesia)

3 (Lecturer, Universitas Negeri Makassar, Indonesia)

Abstract:

The paper discusses the Soekarno-Hatta port's adaptability in playing a critical and strategic role in the form of an efficient and well-managed maritime transportation system service in response to global and national issues that continue to evolve. The approach employed is qualitative research in order to provide a systematic, exhaustive, and factual account of the adaptability of the Soekarno-Hatta port in order to acquire explanatory data, define a generalization, and explain the relationship between focuses. The study's findings indicate that the Soekarno-Hatta port is pursuing digital innovations in response to global and national issues, as seen by the presence of the Pelindo 4 system/application (VessP4). The system was developed in response to the concept of innovation via the use of information technology and information systems. These innovations have altered the working environment at the Soekarno-Hatta port, allowing for the provision of more reliable, effective, and efficient services, as well as increased competitiveness. In the area of Innovation, presenting the Pelindo 4 Vessel Service System (VessP4) demonstrates an exceptional level of innovation adoption, the type of innovation is discontinuous, and the type of innovation is process and system innovation.

Key Word: Vessel Service System of Pelindo 4; Innovation; Soekarno-Hatta Port; Public Service.

Date of Submission: 29-06-2021

Date of Acceptance: 13-07-2021

I. Introduction

Ports are critical for global economic growth (Yeo, G. T., Thai, V. V., & Roh, S. Y. (2015). Ports are critical nodes in the global commerce network, as evidenced by the emergence of ports as supply chain actors by connecting numerous countries globally (Cahoon, S., Pateman, H., & Chen, & Chen, S. L. 2013; Haralambides, H. 2017).

According to PwC and Pantera data, over 80% of international trade is handled through ports; thus, ports must adapt to suit the needs of a continually changing and increasing business in order to compete globally (PwC and Pantera. 2013). As validated by USAID research, Indonesia, as an archipelagic country, requires an efficient and well-managed marine transportation infrastructure, as these elements are crucial for economic rivalry and national integrity (DAI. 2008).

As is the case with other countries throughout the world, ports play a key role in advancing both international and national objectives, as USAID highlights (Jansen, M., van Tulder, R., & Afrianto, R. 2018).

Recognizing the critical role of ports, encouraging the Indonesian government to launch a maritime highway policy in 2015 to reduce the price differential between western and western Indonesia, as emphasized in the Master Plan for the Acceleration and Expansion of Indonesian Economic Development 2011-2025, which aims to lift millions of people out of poverty. Additionally, expand access to education, jobs, and health care. D. D. Andilas & L. A. Yanggana. This is consistent with Jansen's perspective that port development is a catalyst for inclusive growth, with the goal of balancing economic growth and broad social benefits. As a result, ports worldwide signed the world port sustainability program's declaration in March 2018. (Jansen, M., van Tulder, R., & Afrianto, R. 2018).

Ports appear to play a strategic function on world, national, and regional levels, based on the description above. One of the elements involved in playing a critical and strategic role in meeting the needs of the community (public service) as well as economic actors generating profits (profit-oriented) (Fitriana, D. N. 2014) is the State-Owned Enterprise PT. Pelabuhan Indonesia IV (Persero) Makassar Branch (Soekarno-Hatta Port).

With the Soekarno-Hatta port playing a critical and strategic role, the phenomenon of rapid economic development, increasing market competition, and consumer awareness of their rights and interests serve as warnings to Soekarno-Hatta Port policymakers that adaptation through a differentiation strategy in the form of innovation is required when providing services (Anwar, M., Dwiningwarni, S. S., & Arisandra, M. L. 2019).

Something novel is considered innovative. Both techniques and products have been enhanced over time (Organization for Economic Cooperation and Development. 2018). BUMN that appears to provide both public and private services. Innovation is critical. As Schumpeter argued, innovation is critical to a business's growth and long-term viability (Blanco et al., 2010).

This statement emphasizes the essential function of public services in assisting service users in articulating and pursuing shared interests or in responding to community interests. In theory, following this option confirms the New Public Service paradigm's application to public services (Denhardt, R. B., & Denhardt, J. V. 2000). As a result, this essay will examine the Soekarno-Hatta port's adaptation process in providing efficient and well-managed marine transportation system services that meet the expectations of service consumers.

II. Methods

This study employs qualitative research to present a systematic, thorough, and factual account of the Soekarno-Hatta port's adaptation in the face of global and national problems. This is done to elicit explanatory data (explanatory research), to characterize a generalization, and to explain the relationship between the two foci.

III. Result

Implementation of Sea Toll Policy through Services at Soekarno-Hatta Port

The most critical stage is implementation, as defined by the Indonesian government's strategic policy cycle for marine highways (Akhmad Raffi'I et al. 2020). It is at this time when a policy's success or failure will be determined significantly. The process of enacting a policy is called policy implementation. Not dissimilarly, Hogwood and Gunn assert that policy implementation refers to activities conducted by individual officials, government agencies, or private groups in pursuit of the policy's objectives (Akib, H. (2012). Policy implementation is the stage at which adopted policies are implemented through the mobilization of available funds and resources (Gita, I., & Mulyadi, M. 2019).

Related to policy implementation, services are defined as actions that support, prepare, and manage the transfer of products or services between parties (Hardiyansyah) (2018). Service is defined as any activity that is beneficial for a group or entity and provides satisfaction even if the outcome is not a physical product (RP, A. K., & Sinambela, D. S. 2011). In its simplest form, service is described as a collection of activities. As a result, the service process occurs on a regular and ongoing basis, including all aspects of organizational life in society.

International relations in Indonesia, a country comprised of islands, emphasize the importance of efficient marine transportation services and excellent government. One of the initiatives is to tailor port services to the specific requirements of service users. The port of Soekarno-Hatta is one of the parties that play a critical role. The description reflects the industry's ever-changing and expanding needs to establish a footing for the Soekarno-Hatta port in order to provide services that transform via innovation..

The Important Role of Innovation in the Implementation if Marine Toll at Soekarno-Hatta Port

The Organization for Economic Cooperation and Development highlights the importance of innovation in fostering growth and assisting in the resolution of social difficulties associated with new ideas or practices (Gault, F. 2018; Setijanigrum, E. 2017).

Innovation is the introduction of something new, both in terms of processes and goods, as a consequence of improvements to previously existing processes and products (Organization for Economic Cooperation and Development. 2018). While innovation is frequently seen as a new organizational method for business operations, organizations, and external relations, innovating is about seeing change as an opportunity. One type of modification that can be implemented is a technological one (Steiber, A. 2012; Vanelslander, T., Sys, C., Lam, J. S. L., Ferrari, C., Roumboutsos, A., Acciaro, M., & Giuliano, G. 2019).

Responding to the OECD's arguments about the importance of innovation in relation to the critical and strategic role of ports, the idea of modernizing ports through digital innovation was born, allowing ports to contribute to the economy and national development as marine transportation infrastructure (Putra, A. A., & Djalante, S. 2016). The implementation of a combination of information technology and information systems is a reflection of digital innovation in ports (Blanco, B., Sanchez, L., & Gutierrez, C. 2016).

Port modernisation through the use of digital innovation will have a positive effect on a variety of factors, including productivity, efficiency, and logistical sustainability (Heilig, L., Schwarze, S., & Voß, S. 2017). Innovation is intended to enhance the quality and efficacy of services and an organization's long-term

competitiveness (PwC and Pantera, 2013), as well as to suit the needs of internal and external consumers (Fadil, H., Singh, K., & Joseph, C. 2016).

Soekarno-Hatta Port Digital Service Innovation: Vessel Service System of Pelindo 4

In playing a role as a national strategic project to create Indonesia's sea toll lanes, as well as responding to industry needs that continue to change and develop, by policymakers, Makassar New Port is articulated by following the steps taken by ports of various countries around the world through digital transformation, one of them presents the Vessel Service System of Pelindo 4 (VessP4), an application system created to manage the activities of loading and unloading services and various businesses within the Pelindo IV environment. The information system provides multiple features, including recording the realization of ship services in real-time. Registration is carried out anywhere and anytime online, electronically archived digital documents, and guide officers can provide information to users after the service is completed.

The VessP4 information system, which is based on the anytime, anywhere principle, will enable greater information exchange between ports and supply chain actors, resulting in decreased order cycle times and documentation, as well as increased flexibility (Carlan, V. et al. 2017).

The presentation of VessP4 demonstrates the new face of Soekarno-Hatta port, which is defined by a transition away from traditional work practices and toward work methods based on information technology and information systems. According to Heilig and Schwarze, the Soekarno-Hatta port has developed into a modern port as a result of the presence of VessP4 and its many service features (Heilig, L., Schwarze, S., & Voß, S. 2017). The presence of VessP4 to streamline port operations demonstrates the birth of innovation. According to Schumpeter, innovation is the process of creating new things, such as new ways (Lazzarotti, F., Samir Dalfovo, M., & Emil Hoffmann, V. (2011). Technology-based innovation is a difficult option to make because nearly all innovation phenomena include the application of technology (Arduino, G. et al., 2013).

The enhancement of the Soekarno-Hatta port's work process demonstrates the capacity to transform obstacles into chances for solving old problems, such as breaking the container ship queue. Previously, ships were required to queue for two to three days prior to docking. Loading and unloading tasks now take between 24 and 30 hours (Linda Tranita. 2020). Improvements to work processes through the use of information technology (IT) and information systems (IS) will boost productivity, quality, efficiency, and visibility, as well as having a beneficial effect on economic growth and competitiveness (Carlan, V. et al. 2017; Heilig, L., & Voß, S. (2017).

Levels, Categories, and Politics of the Sea Vessel Service System of Pelindo 4 Innovation at Soekarno Hatta Port

From a conceptual standpoint, the implementation of innovation has a magnitude that is mirrored in its impact (Muluk. 2008). To begin, incremental innovation refers to new ways of thinking about the effects of tiny improvements to processes or services. By and large, these advances rarely result in changes to organizational structures or relationships. However, incremental innovation is critical for public sector transformation because it enables the implementation of tiny changes over time and the development of services that are sensitive to local and individual requirements. Sustain increased value for money (value for money).

Second, radical innovation is a paradigm shift in public services or the introduction of new organizational and service methods. These inventions necessitate massive political support due to their inherent risk. To significantly improve the performance of public services and to meet the expectations of service consumers, radical innovation is required (Gumilar, P. C. 2016).

Thirdly, transformative or systemic innovation alters the workforce structure and organizational structure by reforming all sectors and radically altering organizational structures. This mode of innovation is more time consuming and involves basic social, cultural, and organizational foundations.

Referring to the description of the basis for categorizing innovation, the presence of the Vessel Service System of Pelindo 4 at Soekarno Hatta Port has an effect on work culture, shifting from manual work methods upstream to work plans based on information technology and information systems, in order to reduce work time, particularly when loading and unloading cargo ships, as previously described. This demonstrates that the innovations adopted at the Soekarno-Hatta port are radical, since the existence of VessP4 results in significant improvements in service performance and satisfies service consumers' expectations for high-quality, effective, and efficient services.

Continuous and discontinuous innovation are two distinct types of innovation (Muluk, 2008). Continuous Innovation (sustaining Innovation) is a method of innovation that results in change while remaining true to the operating conditions of the service, system, or product. Meanwhile, discontinued innovation refers to a process of innovation that results in fresh developments and is not predicated on pre-existing situations. The description demonstrates that Pelindo 4's Vessel Service System is discontinuous at the Soekarno-Hatta port.

This is indicated by the presence of a system that either does not exist or has never been implemented (Gumilar, P. C. 2016).

Additionally, the measurement innovation typology is outcome-driven. If a service is the outcome of service product innovation, service process innovation, service method innovation, policy innovation, or system innovation, it can be classed as innovative. On this basis, various innovation typologies are introduced: To begin, innovation refers to a change in the shape or design of a product or service. Second, process innovation is a term that refers to continual quality improvement and encompasses the mix of organizational changes, procedures, and policies that are required to innovate. Thirdly, service method innovation is a novel way of connecting with service users or providing services. Fourth, innovation in strategy or policy entails revisions to vision, mission, and objectives, as well as new approaches and explanations for the present reality. Fifth, system innovation is a relationship between systems that involves the introduction of new or updated methods of interacting with other actors, or, in other words, a shift in governance (Wicaksono, K. W. 2019).

Related to the description, if there is a correlation between innovation at the Soekarno-Hatta port and the birth of a policy on system use in service, the typology of innovation can be determined. It will present the findings of a study indicating that the Innovation of the Pelindo 4 Vessel Service System is a process innovation, and system innovation is defined by the adoption of an electronic system-based service process from upstream to downstream, resulting in a change in the interaction process between service users and service providers.

Improving the Quality of Pelindo Services at Soekarno-Hatta

In the context of global competition, providing quality services is essential to survive and succeed (Ramseook-Munhurrun, P., et al. 2010). To determine the level of community satisfaction with the quality of public services, Parasuraman et al postulated several indicator dimensions: tangibles, reliability, responsiveness, empathy, and assurance (Rezaei, M., et al. 2011).

Vessel Service System of Pelindo 4 sebagai Pelayanan Publik yang Tangible

Tangibles are indications of the quality of public services. They include physical facilities, personnel, and communication infrastructure held by service providers (Anita, W., & Nurcahyanto, H. (2016). To meet tangible public service indicators, the Soekarno-Hatta port provides an office building, 362 meters of pier, 16 hectares of stacking area, 2,125 meters of causeway, 1,300 meters of breakwater, two container cranes, two reach stackers, 18 units of rubber tyred gantry, terminal tractor 25 units, forklift 7 tons 2 units, forklift 2 tons 1 unit 40 feet chassis 23 uni (Makassar New Port. 2021). It is sufficiently adequate from the perspective of service providers and users at the Soekarno-Hatta port.

To enhance the efficiency and effectiveness of the operation of various physical facilities, Soekarno-Hatta port utilizes information technology and information systems innovations. The use of software in the form of systems or applications requires physical infrastructure in the form of computers and mobile phones connected to the internet network, specifically the Pelindo Vessel Service System application (VessP4). VessP4's existence indicates an effort to optimize many parts of the information management system in order to enhance service quality and respond to global problems (Rukayat, Y. 2018).

VessP4 is accessed by downloading the program or visiting the website and then providing certain data, including the Population Identification Number, email, appointment letter, firm, name, phone number, password, and a photo as a registration requirement.

VessP4 includes a variety of capabilities, including vessel registration, vessel service, freshwater service, and document management. The vessel registration service sub-menu has the following service options: vessel agented, new vessel registration, change of ship agency, and vessel update requests. Ship Arrival Notification, Ship and Goods Service Request, Changed Ship and Goods Service Request, Mooring Extension Service Request for Ship and Goods, and Under Bridge Pilotage are the vessel service sub-menus. Freshwater Service includes sub-menus for Water Service and Water Filling Documents. Additionally, there are two service alternatives inside the document sub-service: billing and pilotage certificate.

Both service providers and end users agree that the Soekarno-Hatta port can operate more effectively and efficiently with the presence of the Vessel Service System of Pelindo 4 (VessP4).

Vessel Service System of Pelindo 4 as a Reliable Public Service

Reliability is a measure of the service's quality as determined by the service unit's ability to deliver the promised service (Rukayat, Y. 2018). There are criteria for timeliness and procedural compliance when deploying the Pelindo 4 Vessel Service System at the Soekarno-Hatta port.

Punctuality is determined by the precision with which officers provide information to potential service users regarding ship arrivals, requests for ship and commodities services, and clean water. The Soekarno-Hatta port operation can be classified as a timely service from the standpoint of service suppliers and users.

Additionally, both service providers and service consumers are required to complete a number of services in accordance with defined rules when implementing the Vessel Service System of Pelindo 4 at the Soekarno-Hatta port. The proper deployment of Pelindo 4's full Vessel Service System will minimize numerous frauds. Service procedures are recognized to be of high quality, effective, and efficient from the perspective of both service providers and service customers. Additionally, service users enter data online at any time and from any location, and the entire process is communicated electronically, including notification of service completion and payment amount.

The provision of services through procedures also demonstrates the Soekarno-Hatta port's approach in meeting the standards for public service accountability. The agency must oversee the entire mechanism of Pelindo 4's Vessel Service System, ensuring clarity and a sense of fairness.

Vessel Service System of Pelindo 4 as a Responsive Public Service and Assurance

According to Zeithaml, responsiveness is the measure of a service's quality based on its readiness to assist customers and give services honestly. Additionally, responsiveness assesses an organization's ability to respond to the hopes, goals, and aspirations of service users, as well as their requests (Wicaksono, K. W. (2019).

Before implementing the Vessel Service System of Pelindo 4, the expectations of service users, namely regularity, low cost, and timeliness, were still not maximized. Responsiveness is used to measure the extent to which the implementation of the Vessel Service System of Pelindo 4 can meet the expectations of service users, namely regularity, low costs, and timeliness in obtaining services that were previously considered not optimal. After running, according to the perspective of service providers and users, the Vessel Service System of Pelindo 4 has met the expectations of service users for regularity, low costs, and timeliness of service users.

Vessel Service System of Pelindo 4 as an Assured Public Service

Zeithaml argues that assurance or assurance is the quality of service measured based on the knowledge, courtesy, and ability of service providers to provide trust to service users (Botha, H. H. 2020).

Prior to the implementation of Pelindo 4's Vessel Service System, service users' expectations, notably regularity, cheap cost, and timeliness, were not fully met. The term "responsiveness" refers to the degree to which the implementation of Pelindo 4's Vessel Service System meets the expectations of service consumers, namely regularity, low costs, and timeliness in receiving previously deemed suboptimal services. After operating, the Vessel Service System of Pelindo 4 met the expectations of service consumers for regularity, low prices, and timeliness.

IV. Conclusion

Through its critical and vital position, the Soekarno-Hatta port demonstrates its ability to adapt to global issues by giving birth to innovations based on information technology and information systems, as seen by the presence of the Pelindo 4 Vessel Service System (VessP4). When analyzed, the innovations can be classed as radical, discontinuous, or typologically as process or system innovations. Three key service elements of digital innovation have prompted Soekarno-Hatta port to provide tangible, reliable, responsive, sympathetic, and assurance services. The existence of Innovation demonstrates that Soekarno-Hatta port service operates in an efficient and effective manner.

References

- [1]. Akib, H. (2012). Implementasi kebijakan: Apa, mengapa dan bagaimana. *Jurnal Ilmiah Ilmu Administrasi Publik*, 1(1), 1-11. Available Online: https://www.researchgate.net/publication/277844111_Implementasi_Kebijakan_Apa_Mengapa_dan_Bagaimana
- [2]. Andilas, D. D., & Yanggana, L. A. (2017). Pelaksanaan Program Tol Laut PT Pelayaran Nasional Indonesia. *Jurnal Manajemen Transportasi & Logistik*, (01), 1-8. Available Online: <https://media.neliti.com/media/publications/114037-ID-pelaksanaan-program-tol-laut-pt-pelayara.pdf>
- [3]. Anita, W., & Nurcahyanto, H. (2016). Analisis Kualitas Pelayanan Publik Di Badan Lingkungan Hidup Kota Semarang. *Journal of Public Policy and Management Review*, 5(1), 248-259. DOI: 10.14710/jppmr.v5i1.10439
- [4]. Anwar, M., Dwiningwarni, S. S., & Arisandra, M. L. (2019). Pengaruh Inovasi Organisasi Terhadap Kualitas Jasa Pelayanan Pelabuhan. *Jurnal eBA*, 5(2). Available Online: <file:///Users/admin/Downloads/ArtikelAnwar-5.pdf>
- [5]. Arduino, G., Aronietis, R., Crozet, Y., Frouws, K., Ferrari, C., Guih ery, L., ... & Vanelslander, T. (2013). How to turn an innovative concept into a success? An application to seaport-related innovation. *Research in Transportation Economics*, 42(1), 97-107. <https://doi.org/10.1016/j.retrec.2012.11.002>

- [6]. Blanco, B., Pérez-Labajos, C. A., Sánchez, L., Serrano, A., López, M., & Ortega, A. (2010). Innovation in Spanish port sector. *Journal of Maritime Research*, 7(1), 71-87. Available Online: <http://www.jmr.unican.es/index.php/jmr/article/download/129/126>
- [7]. Blanco, B., Sanchez, L., & Gutierrez, C. (2016). Port System of the Spanish South Peninsular Coast Side. *Journal of Maritime Research*, 13(1), 15-24. Available Online: <https://www.jmr.unican.es/index.php/jmr/article/view/478>
- [8]. Botha, H. H. (2020). Kualitas Pelayanan Kesehatan Rumah Sakit Umum Daerah Dr. Moewardi Surakarta (Reliability, Accessibility, Comfortabel, Competence, Assurance, dan Tangibel). *Jurnal Ilmiah Manajemen Publik dan Kebijakan Sosial*, 4(1), 53-67. DOI: <https://doi.org/10.25139/jmnegara.v4i1.2463>
- [9]. Cahoon, S., Pateman, H., & Chen, S. L. (2013). Regional port authorities: leading players in innovation networks?. *Journal of Transport Geography*, 27, 66-75. doi:10.1016/j.jtrangeo.2012.06.015
- [10]. Carlan, V., Sys, C., Vanelslander, T., & Roumboutsos, A. (2017). Digital innovation in the port sector: Barriers and facilitators. *Competition and regulation in network industries*, 18(1-2), 71-93. Available Online: <https://www.network-industries.org/wp-content/uploads/2019/07/Digital-Innovation-in-the-Port-Sector-Barriers-and-Facilitators.pdf>
- [11]. DAI. (2008). Reformasi Sektor Pelabuhan Indonesia dan UU Pelayaran Tahun 2008. USAID. Available Online: https://pdf.usaid.gov/pdf_docs/Pnadh189.pdf
- [12]. Denhardt, R. B., & Denhardt, J. V. (2000). The new public service: Serving rather than steering. *Public administration review*, 60(6), 549-559. DOI:10.1111/0033-3352.00117
- [13]. Fadil, H., Singh, K., & Joseph, C. (2016). The influence of organizational innovation towards internal service quality in MBKS. *Procedia-Social and Behavioral Sciences*, 224, 317-324. DOI:10.1016/j.sbspro.2016.05.491
- [14]. Fitriana, D. N. (2014). Inovasi Pelayanan Publik BUMN (Studi Deskriptif tentang Inovasi Boarding Pass System dalam Meningkatkan Kualitas Pelayanan Kereta Api PT KAI di Stasiun Gubeng Surabaya). Available Online: [file:///Users/admin/Downloads/download-fullpapers-kmp3c8840fbbddfull%20\(1\).pdf](file:///Users/admin/Downloads/download-fullpapers-kmp3c8840fbbddfull%20(1).pdf)
- [15]. Gault, F. (2018). Defining and measuring innovation in all sectors of the economy. *Research policy*, 47(3), 617-622. <https://doi.org/10.1016/j.respol.2018.01.007>
- [16]. Gita, I., & Mulyadi, M. (2019). Implementasi Kebijakan Program Pembangunan partisipatif Berbasis Komunitas (P3BK) di Kecamatan Pondok Melati Kota Bekasi. *Aspirasi: Jurnal Masalah-masalah Sosial*, 10(1), 61-75. Available Online: <https://jurnal.dpr.go.id/index.php/aspirasi/article/view/1255>
- [17]. Gumilar, P. C. (2016). Inovasi Pelayanan Administrasi Terpadu Kecamatan di Kecamatan Kota Sumenep, Kabupaten Sumenep. *Kebijakan Dan Manajemen Publik*, 4(3). Available Online: <http://www.journal.unair.ac.id/download-fullpapers-kmp59962a1842full.pdf>
- [18]. Haralambides, H. (2017). Globalization, Public Sector Reform, And The Role Of Ports In International Supply Chains. *Maritime Economics and Logistics*. 19(1). 1-51. doi:10.1057/s41278-017-0068-6
- [19]. Hardiyansyah. (2018). *Kualitas Pelayanan Publik: Konsep, dimensi, Indikator dan Implementasinya*. Gava Media, Yogyakarta. Available Online: <https://www.gavamedia.net/produk-245-kualitas-pela...>
- [20]. Heilig, L., & Voß, S. (2017). Information Systems In Seaports: A Categorization And Overview. *Information Technology and Management*, 18(3), 179-201. DOI:10.1007/s10799-016-0269-1
- [21]. Heilig, L., Lalla-Ruiz, E., & Voß, S. (2017). Digital transformation in maritime ports: analysis and a game theoretic framework. *Netnomics: Economic research and electronic networking*, 18(2), 227-254. DOI:10.1007/s11066-017-9122-x
- [22]. Heilig, L., Schwarze, S., & Voß, S. (2017). An analysis of digital transformation in the history and future of modern ports. Proceedings of the 50th Hawaii International Conference on System Sciences. DOI:10.24251/HICSS.2017.160
- [23]. Jansen, M., van Tulder, R., & Afrianto, R. (2018). Exploring the conditions for inclusive port development: the case of Indonesia. *Maritime Policy & Management*, 45(7), 924-943. <https://doi.org/10.1080/03088839.2018.1472824>
- [24]. Lazzarotti, F., Samir Dalfovo, M., & Emil Hoffmann, V. (2011). A bibliometric study of innovation based on Schumpeter. *Journal of technology management & innovation*, 6(4), 121-135. Available Online: <https://scielo.conicyt.cl/pdf/jotmi/v6n4/art10.pdf>
- [25]. Linda Tranita. (2020). Makassar New Port Mampu Memangkas Antean Kapal. Tempo. Available Online: <https://majalah.tempo.co/read/hukum/161470/begini-makassar-new-port-memangkas-antean-kapal-jadi-setengahnya>
- [26]. Makassar New Port. (2021). Available Online: <https://inaport4.co.id/makassar-new-port/>
- [27]. Moch Andry Wikra Wardhana Mamonto. (2019). Legal Politics of Simplifying Political Parties in Indonesia, Substantive Justice International Journal of Law, 2(1), Available Online: <https://substantivejustice.id/index.php/sucila/article/view/25>

- [28]. Muluk, K. (2008). Knowledge Management: Kunci Sukses Inovasi Pemerintah Daerah. *Malang: Bayumedia Publishing*.
- [29]. Organization for Economic Cooperation and Development. (2018). Guidelines for Collecting, Reporting, and Using Data on Innovation. Oslo Manual 2018. Available Online: <https://www.oecd.org/sti/inno/oslo-manual-2018-info.pdf>
- [30]. PT. Pelabuhan Indonesia IV (Persero). (2020). User Manual Customer Vessel Service System of Pelindo 4. Available Online: https://vessp4.inaport4.co.id/user_manual/customer
- [31]. Putra, A. A., & Djalante, S. (2016). Pengembangan Infrastruktur Pelabuhan Dalam Mendukung Pembangunan Berkelanjutan. *Jurnal Ilmiah Media Engineering*, 6(1). Available Online: <file:///Users/admin/Downloads/11627-23200-1-SM.pdf>
- [32]. PwC and Panteia. (2013). Final Report Study aimed at supporting an impact assessment on: "Measure to Enhance the Efficiency and Quality of Port Services in the EU". European Commission Directorate-General for Mobility and Transport Unit B3 Ports & Inland Navigation. Available Online <https://ec.europa.eu/transport/sites/default/files/modes/maritime/studies/doc/2013-07-ia-port-services.pdf> (Accessed on 12 May 2021)
- [33]. Ramseok-Munhurrin, P., Lukea-Bhiwajee, S. D., & Naidoo, P. (2010). Service quality in the public service. *International journal of management and marketing research*, 3(1), 37-50. Available Online: <http://www.theibfr2.com/RePEc/ibf/ijmmre/ijmmr-v3n1-2010/IJMMR-V3N1-2010-3.pdf>
- [34]. Rezaei, M., Rezaei, H., Alipour, H., & Salehi, S. (2011). Service quality, client satisfaction and client personality in the public companies. *Australian Journal of Basic and Applied Sciences*, 5(3), 483-491. Available Online: https://d1wqtxts1xzle7.cloudfront.net/45230235/Service_Quality_Client_Satisfaction_and_20160430-19526-7jdi1j.pdf?1462046109=&response-content-
- [35]. RP, A. K., & Sinambela, D. S. (2011). Analisis Kualitas Pelayanan, Serta Pengaruhnya Terhadap Kepuasan Pelanggan dan Loyalitas Pelanggan (Survei Pada Pengunjung SnowBay Waterpark TMII). *JRMSI-Jurnal Riset Manajemen Sains Indonesia*, 2(2), 110-129. Available Online: <http://journal.unj.ac.id/unj/index.php/jrmsi/article/view/764/673>
- [36]. Rukayat, Y. (2018). Kualitas pelayanan publik bidang administrasi kependudukan di kecamatan pasirjambu. *Jurnal Ilmiah Magister Administrasi*, 11(2). Available Online: <https://jurnal.unnur.ac.id/index.php/jimia/article/view/32>
- [37]. Setijaningrum, E. (2017). Inovasi Kebijakan Pelayanan Publik: Best Practice di Indonesia. Airlangga University Press. Surabaya. Available Online: http://repository.unair.ac.id/97698/2/24A_Inovasi%20Kebijakan%20Pelayanan%20Publik%20-%20Best%20Practice%20di%20Indonesia.pdf
- [38]. Steiber, A. (2012). *Organizational Innovations: A Conceptualization Of How They Are Created, Diffused And Sustained*. Chalmers Tekniska Hogskola (Sweden). Chalmers University of Technology. Available Online: <https://publications.lib.chalmers.se/records/fulltext/156232.pdf> (Accessed on 18 June 2021)
- [39]. Vanelslander, T., Sys, C., Lam, J. S. L., Ferrari, C., Roumboutsos, A., Acciaro, M., ... & Giuliano, G. (2019). A serving innovation typology: mapping port-related innovations. *Transport Reviews*, 39(5), 611-629. DOI:10.1080/01441647.2019.1587794
- [40]. Wicaksono, K. W. (2019). Transforming The Spirit Of New Public Service Into Public Management Reform In Indonesia. *Jurnal Manajemen Pelayanan Publik*, 2(1), 24-34. Available Online: <https://jurnal.unpad.ac.id/jmpp/article/view/20190/10554>
- [41]. Yeo, G. T., Thai, V. V., & Roh, S. Y. (2015). An analysis of port service quality and customer satisfaction: The case of Korean container ports. *The Asian Journal of Shipping and Logistics*, 31(4). Available Online: <https://core.ac.uk/download/pdf/82379838.pdf> (Accessed on 12 June 2021)