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ORIGINAL ARTICLE

Chancay Port: Strategic transpacific node and logistic transformation of peruvian foreign trade

Puerto de Chancay: Nodo estratégico transpacífico y transformación logística del comercio exterior peruano

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Abstract

This study examines the Port of Chancay as a strategic hub in Peru's foreign trade, assessing its logistical, economic, and geopolitical impact through a quantitative applied approach. Using the Leontief Input–Output model and international comparative analysis, it is projected that the port recognized as the first "smart port" in the South Pacific, will reduce logistics costs by 15 % and transit times to Asia by 10 days. The estimated economic impact reaches up to 0.9 % of GDP and around 25,000 direct and indirect jobs. Chancay is redefining Peru's position in trans-Pacific trade and strengthening integration with Asia, though institutional and social challenges persist. To fully realize its potential, efficient governance and sustainable public policies are required to align competitiveness, innovation, and balanced territorial development.

Keywords: *Ports; maritime transport; logistics; international trade; blue economy.*

Resumen

El estudio examina el Puerto de Chancay como nodo estratégico del comercio exterior peruano, evaluando su impacto logístico, económico y geopolítico mediante un enfoque cuantitativo y aplicado. A través del modelo Insumo-Producto de Leontief y un análisis comparativo internacional, se proyecta que este puerto, considerado el primer "puerto inteligente" del Pacífico Sur, reducirá en 15 % los costos logísticos y en 10 días los tiempos de tránsito hacia Asia. Se estima un impacto económico de hasta 0.9 % del PBI y la generación de 25 000 empleos directos e indirectos. Chancay redefine la posición del Perú en el comercio transpacífico y fortalece su integración con Asia, aunque enfrenta desafíos institucionales y sociales. Para consolidar su potencial, se requiere una gobernanza eficiente y políticas públicas sostenibles que articulen competitividad, innovación y desarrollo territorial equilibrado.

Palabras clave: *Puertos; transporte marítimo; logística; comercio internacional; economía azul.*

INTRODUCTION

In recent decades, trans-Pacific trade has consolidated itself as one of the world's main economic axes. The Asia–Pacific region accounts for more than 40% of global trade and is projected to become the largest growth center of the 21st century, driven by the dynamism of economies such as China, Japan, South Korea, and the Southeast Asian countries (UNCTAD, 2023). This pattern has intensified the demand for efficient, sustainable, and strategic maritime connectivity, fueling global competition for port logistics hubs that facilitate integration between Latin America and Asia.

In this context, ports have evolved from physical infrastructures into value-added logistical–technological platforms, incorporating governance, digitalization, and advanced services that directly influence national competitiveness (Notteboom & Rodrigue, 2022). Experiences such as the Panama Canal, the Port of Santos, or the logistics node of Paita illustrate this regional trend.

In Peru, the Port of Chancay, under construction 75 km north of Lima, represents a paradigm shift: conceived as the first smart port in the South Pacific with direct, non-transshipment connectivity to Asia. The project, led by COSCO Shipping Ports in partnership with Volcán Compañía Minera, is designed to accommodate vessels of up to 18,000 TEUs, integrate with a logistical–industrial cluster (Chancay Park), and reduce transit times to Asia by more than 10 days compared with Callao (MTC, 2024; APN, 2023). With an investment exceeding USD 1,400 million in its first stage, it is expected to handle 1.5–3.5 million TEUs per year, potentially reconfiguring Peru's logistical geoeconomy and its insertion into trans-Pacific value chains.

The conceptual framework underpinning this transformation integrates three axes. First, that of logistical hubs as nodes that synchronize flows, consolidate/redistribute cargo, and articulate multimodal operations to optimize costs and times, supported by information technologies and advanced management (Shahparvari et al., 2020; Chen et al., 2024; Wang et al., 2023; Özmen & Aydogan, 2019; Andruetto et al., 2024; Russo et al., 2021).

Second, that of marine clusters and the blue economy, in which proximity to functional ecosystems and collaborative governance among the state, businesses, academia, and communities generate productive synergies with environmental sustainability and social cohesion (Díaz et al., 2021; Feldman et al., 2005; Cicin-Sain et al., 2021). Third, global logistical integration, which relies on standardization (containerization, EDI), end-to-end visibility, and alliances that increase resilience and market access, as evidenced during recent disruptions (Volodymyr et al., 2021; Martin, 2013; Negi, 2024; Omar et al., 2012).

However, the realization of these benefits faces institutional, social, and geopolitical risks. The literature warns of tensions associated with concentration of power in foreign actors, territorial conflicts, and potential "islands of sovereignty" when megaprojects generate exceptional regimes with partial governance, as has been debated in the case of Sri Lanka (Woods, 2022). Hence, port governance, its management models, regulatory frameworks, and public–private arrangements, is critical for balancing economic efficiency with social legitimacy and environmental sustainability (Tijan et al., 2021; Brooks, 2004; Zilli & De Sá Freire, 2023).

The international scenario adds vectors of change that reconfigure routes and logistical strategies. The Belt and Road Initiative (BRI) fosters investment in critical infrastructure, including ports and rail corridors with intercontinental reach (Shindo, 2023; Manzoor et al., 2025). In parallel, the USMCA updates rules and strengthens value chains in North America (Jose & Samudra, 2022), while the RCEP—the largest trade agreement by economic volume—establishes a new integration axis in the Asia–Pacific (Shimizu, 2021; Vines, 2018). Within this framework, a Peruvian trans-Pacific hub may shorten economic distances, reduce costs, and expand markets, provided that effective land connectivity, pro-competition regulation, and robust socio-environmental management are ensured.

Under this framework, the objective of this study is to analyze the Port of Chancay as a strategic node of Peru's foreign trade, assessing its logistical, economic, and geopolitical impact, as well as its opportunities and challenges within the context of a commercial transformation policy. The study seeks to answer three guiding questions: **(i) to what extent can the Port of Chancay consolidate itself as a world-class trans-Pacific hub?; (ii) what are the expected effects on logistical infrastructure, foreign trade, and the Peruvian economy?; and (iii) what strategic risks does its consolidation face, and what public policy measures are required to maximize its potential?**

Scope and limitations. This work is limited to the analysis of secondary sources and available documentary evidence on the project and its environment. It assumes the technical and investment information reported by the cited public and private entities; no fieldwork is conducted and no variables are manipulated. Regarding generalizations, the analysis focuses on the Chancay case and its potential articulating role in trans-Pacific chains, recognizing that its final performance will depend on governance decisions, investments in land connectivity, and the implementation of socio-environmental standards consistent with the principles of the blue economy (Notteboom & Rodrigue, 2022; Cicin-Sain et al., 2021; Tijan et al., 2021).

METHOD

The study is applied, oriented toward generating useful knowledge for strategic decision-making on port infrastructure in Peru, and descriptive–explanatory in scope, as it analyzes, characterizes, and estimates the logistical and economic impacts of the Port of Chancay. The approach is quantitative, based on structural economic models and international comparative analysis. A non-experimental, cross-sectional design is adopted under the modality of a single instrumental case study: the Chancay Multipurpose Port is examined as a representative unit of the phenomenon of trans-Pacific logistical transformation. The research relies on secondary data; no independent variables are manipulated.

Main analytical model: Leontief Input–Output Model. The core of the analysis is the Leontief Input–Output model, widely validated in macroeconomic impact studies, which enables estimation of the direct, indirect, and induced effects of port investment on GDP, employment, and sectoral structure (Miller & Blair, 2009). This approach is common in the evaluation of megaprojects, logistical infrastructure, public policies, and shifts in foreign trade. For the Chancay case, the model estimates how initial investment and future operations induce measurable economic growth in GDP and employment.

The fundamental relationship is:

$$X=(I-A)-1.DX = (I - A)^{-1} \cdot DX=(I-A)-1.D$$

where X is the vector of total production required to satisfy final demand (D); I is the identity matrix; A is the matrix of technical coefficients (intersectoral relations); and (I-A)^(-1)is the Leontief inverse, capturing the multipliers. In the application to the project, D corresponds to demand induced by the port's estimated operation, considering the investment of USD 1,400 million and the target capacity of 1.5 million TEUs in its first stage. National input–output matrices from INEI (2024) are used, and assumptions and results are compared with estimates from BCRP and ECLAC to ensure macroeconomic consistency.

Complementary techniques and sources. Two supporting techniques were used:
Technical–normative documentary analysis, aimed at examining institutional guidelines, sectoral plans, investment reports, and regulations related to port infrastructure. National official sources were reviewed: MTC, APN, BCRP, PRODUCE, and corporate reports from COSCO Shipping. Additionally, documents from multilateral organizations were included: UNCTAD, ECLAC, and AidData, along with indexed academic studies and specialized technical reports. (ii) International benchmarking among five strategic ports: Chancay and Callao (Peru), Santos (Brazil), Balboa (Panama), and Ningbo–Zhoushan (China). Data were standardized to the 2023 base year, or to the closest available projection, with explicit indication when estimates were used. Sources include UNCTAD (2023), APN (2023), World Bank – CPPI (2023), COSCO Shipping Ports (2024), and other verified institutional reports.

Period of analysis. The temporal horizon covers 2019–2025, encompassing planning, execution, and commissioning of the megaproject, and includes the formal start of operations scheduled for June 2025. Additionally, a short-term (2025–2027) projection of economic–logistical impacts is developed. This framing allows assessment of prior and current progress, as well as anticipation of immediate effects on the country's port competitiveness and its integration into global logistical chains.

Validity criteria and methodological control. For internal validity, official and updated data from national and international organizations were prioritized. External validity and theoretical generalization were strengthened through international comparisons and reference to consolidated analytical frameworks (port hub theories, port governance, and cluster-logistics models). Reliability was addressed through source triangulation and comparison of indicators reported by MTC, APN, COSCO, UNCTAD, and other institutions included in the documentary corpus. When estimates or projections were used, they were explicitly identified; no assumptions external to the reviewed sources were introduced.

Scope and limits of the method. As a non-experimental study based on secondary data, results depend on the quality and timeliness of available official and corporate information. Standardization to 2023 (or a close projection) and the comparative nature of the benchmarking reduce measurement bias, although restrictions remain linked to data availability, institutional heterogeneity among ports, and possible regulatory changes. These limitations are mitigated through macroeconomic consistency (INEI, BCRP, ECLAC), documentation of assumptions in the Leontief model (Miller & Blair, 2009), and transparent reporting of ranges/scenarios when appropriate

Ethical considerations. The research is based on publicly available and properly cited documentary sources; it does not involve human subjects or sensitive data. Impartiality is observed in the selection and synthesis of information, attribution to authors/institutions, and respect for intellectual property.

RESULTS

3.1. Technical and operational capacities of the Port of Chancay

The Chancay Multipurpose Port Terminal, located 75 km north of Lima, has been conceived as the first smart port in South America, featuring high-capacity infrastructure and state-of-the-art automation technologies. Its first stage includes four berths, a logistics area, and an underground tunnel-viaduct of 1.8 km, with an estimated investment of USD 1,213 million (excluding VAT) (MTC, 2025). The initial projected capacity is between 1 and 1.5 million TEUs (≈ 6 million tons), with potential expansion to 3.5 million TEUs; it is designed to accommodate vessels of up to 18,000 TEUs..

The opening of direct routes from Chancay to Asia would significantly reduce transit times compared to Callao. The MTC (2024) estimates a reduction of up to 10 days (from ~35 to ~25 days) due to the elimination of transshipments and the provision of direct services with Asian hubs. The APN (2023) highlights that the megaproject will help decongest Callao and reconfigure national logistics by fostering competition and operational efficiency. Along this line, the MEF (2024) reports that the national port system handled >127.8 million tons in 2024, consolidating Peru's role in regional maritime trade (MEF, 2024). In technological terms, Chancay incorporates automation, intelligent cranes, 5G connectivity, digital management systems and electric vehicles, aligning with international smart port standards; experts point to similarities with developments in Asia and Europe (PUCP, 2024).

3.2. Differential features and value proposition

Chancay stands out from other Latin American ports due to its natural depth, technological level and geostrategic link to the Belt and Road Initiative (BRI). Its natural draft of 17.8 m allows ULCVs of up to 18,000 TEUs, surpassing Callao's 16 m and positioning it as the deepest port in the South Pacific. This condition enables direct traffic with Asia, without intermediate transshipments (COSCO Shipping, 2025).

In terms of technology, it is presented as the region's first "intelligent" port: in June 2024, the first five fully automated ARMG cranes arrived (WorldCargoNews, 2024), and in September 2024, the first autonomous operation was carried out with the vessel Yantian, handling 1,700 containers using AGVs and AI over a 5G network (Inspenet, 2024). Official sources attribute continuous operability, process optimization and >25% energy reduction compared to conventional terminals to this automation (COSCO Shipping, 2025). Geostrategically, the participation of COSCO Shipping Ports (60%) and Volcan (40%) provides Chinese state-backed support; the inauguration of works in November 2024 is part of the BRI's expansion in Latin America (FT, 2024). The direct Guangzhou–Chancay route reduces times and logistics costs by ~20% (Reuters, 2025), strengthening Chancay as the gateway between Asia and South America with possible effects on Chile, Colombia and Brazil. In summary, its comparative advantages include access for large vessels, terminal productivity with lower operating costs, strengthening of exports and improved integration into global value chains with Asia.

3.3. Regional logistics turning point

Compared with traditional terminals nearing operational limits, such as Callao, Chancay offers an Asia–South America corridor for ULCVs (up to 18,000 TEUs) with 5G, ARMG and AGV technologies (Inspenet, 2024; WorldCargoNews, 2024). An illustrative case is COSCO's "Chancay Express" service, which connects Lirquén (Chile) and Guayaquil (Ecuador) without calling at Callao, reducing transit times and logistics costs to Asia; the WSA5 service, launched in March 2025, deepens this regional integration (Blueberries Consulting, 2025).

Complementarily, Chancay Park, promoted by Volcan and COSCO, is designed as an adjacent logistics-industrial cluster, concentrating storage, distribution, and industrial services to exploit agglomeration and proximity economies (ThePeople'sMap, 2025). This port-park coupling reinforces the hub proposal and the generation of linkages.

3.4. Expected economic impact and international outlook

Official projections indicate annual revenues of ≈ USD 4,500 million, equivalent to 0.9%–1.8% of GDP, depending on export dynamics and consolidation of the logistics-industrial park (globalEDGE, 2024). During construction and the first stage, >8,000 direct jobs have been reported, with multiplier effects in land transport, storage, foreign trade and related services (Farmonaut, 2024).

Total strategic investment is estimated at USD 3,500 million, driven by COSCO and Volcan, in order to establish Peru as a trans-Pacific logistics hub. The BCRP estimates, for the initial phase (≈2025), a contribution of 0.3 percentage points of GDP, projected to reach 0.9 p.p. as complementary works and operational expansion are completed. One study highlights that the megaport can energize SMEs by expanding access to international suppliers, mainly Asian, and modernizing the logistics chain (Tencco Córdova, Arapa Palacios, Quispe Quichua & Delgado Huanca, 2025).

Likewise, FOB operations of ≈ USD 420 million have already been recorded, suggesting early impacts on foreign trade. Based on an Input–Output (Leontief) model, results project for 2025–2027: direct GDP contribution of 0.9% (~USD 2,000 million/year), production multipliers of 1.6x–2.1x, and 20,000–25,000 jobs (direct, indirect and induced). A −15% reduction in logistics costs is also estimated for trans-Pacific routes due to the elimination of transshipments and incorporated technology.

The operating time of 0.1 years indicates that the analyzed horizon corresponds to initial stages (Table 1).

Table 1

Economic and logistical impact projections (2025–2027)

Indicator	Estimate (2025–2027)
Direct GDP contribution	0.9 % (~USD 2,000 million annually)
Production multiplier	1.6x – 2.1x
Total jobs generated	20,000 – 25,000 jobs

Indicator	Estimate (2025–2027)
Logistics cost reduction	-15 % on trans-Pacific routes
Operational functioning time	0.1 years (1 month)

Note. Estimates based on Leontief, using sectoral multiplier coefficients for port infrastructure in emerging economies; parameters calibrated with preliminary data on investment, capacity and productivity of the port, according to COSCO Shipping Ports (2024), BCRP (2024), PRODUCE (2024) and APN (2024). Cost reduction stems from the direct trans-Pacific route without transshipment; operational time reflects the first months of 2025

At the international level, the direct Guangzhou–Chancay route (April 2025) reduces transit times from ~35 to ~30 days and up to 20% in costs, enhancing the competitiveness of agro-exports, fisheries and mining (Reuters, 2025; CGTN, 2025)..

3.5. Structural challenges (beyond the physical infrastructure)

Although the smart port design, robotic cranes, 5G and AGVs promise high productivity, challenges remain regarding technological interoperability and cybersecurity due to integration with global shipping lines and customs systems, requiring robust protocols for operational continuity (Global Americans, 2024; Southern Star Navigation, 2024). In land connectivity, the Panamericana Norte shows saturation, affecting logistics efficiency; the absence of a railway limits full multimodality. In response, studies have been reported on a China–Brazil–Chancay bioceanic corridor (Mundo Marítimo, 2025; Reuters, 2025).

In governance, miscoordination among levels of government and delayed implementation of the Chancay 2024–2034 Urban Development Plan (PDU) have been noted (PUCP, 2024). The majority share of Chinese capital raises debates on port competition and sovereignty; Indecopi warned of insufficient effective competition between Chancay and Callao and recommended tariff control, generating tensions between COSCO and the State. At the geopolitical level, the port is interpreted as part of the BRI, with concerns in the United States regarding potential dual-use implications.

In the economic-commercial sphere, Chancay must attract volumes and shipping lines to sustain the investment (USD 3,400 million). There is a risk of underutilization if capacity is not saturated (~1.5 million TEUs/year). Competition with Callao could trigger a tariff war; in Chancay's favor, shorter times to Asia and connection to the Ocean Alliance stand out (COSCO Shipping, 2025). PUCP (2024) emphasizes avoiding an import-biased pattern, promoting exports and local processing. In socio-environmental terms, accelerated urban expansion is observed, with a projected tripling of the population by 2034 in a district with deficits in basic services and potential sanitary risks and social conflicts. Labor tensions are expected if the local population is not integrated through technical training. Environmentally, concerns include the Santa Rosa Wetland and marine biodiversity; dredging and operations could alter currents and habitats, affecting migratory species and artisanal fishing (PUCP, 2024).

3.6. A window into the future of Peruvian foreign trade

The megaproject is designed for deep-draft capacity and to consolidate itself as a BRI node articulating a South America–Asia logistics corridor. Various analyses project a 10–12-day reduction in transit to Asia (from ~40 to ~28 days), with significant logistics savings, especially for perishables such as fruits

and seafood (ArgenPorts, 2024; PUCP, 2024; Revista Marina, 2024). From a macroeconomic perspective, activity is estimated at ≈ USD 4,500 million/year (~1.8% of GDP) and >8,000 direct jobs in the initial phase (globalEDGE, 2024). At the regional scale, CSIS (2025) argues that Chancay will become the third largest port in Latin America operated by a Chinese entity, reinforcing its role as a hemispheric hub and strengthening ties with Brazil, Ecuador, Colombia and Chile (CSIS, 2025).

3.7. Comparative analysis: trans-Pacific node and implications for logistics transformation

The construction of Chancay is one of Peru's most ambitious undertakings for its trans-Pacific integration. With predominantly Chinese investment, it is projected as a high-performance hub in the South Pacific, capable of receiving vessels of up to 18,000 TEUs and handling 1.5–3.5 million TEUs annually (MTC, 2025). To calibrate its position, it is compared with Panama (canal and ports), Santos, Callao, Paita, Balboa, and the mega-hub Ningbo-Zhoushan.

1. **Panama / Expanded Canal.** Although the canal remains a critical axis of inter-oceanic trade, its tariffs and capacity constraints are encouraging alternative hubs in the Pacific. Chancay could reduce 10–12 days (from ~35 to ~23 days) in transit to Asia, with cost savings of up to 30% (Global Americans, 2024; Maritime Executive, 2024).

2. **Santos (Brazil).** The principal South American port, marked by congestion and limits for intermodal expansion. Chancay was designed as a smart port with an underground viaduct (1.8 km) and a logistics zone outside the urban area, providing operational fluidity (APN, 2020).

3. **Callao y Paita (Peru).** Callao will remain a central node, but Chancay reorients flows toward direct trade with Asia, reducing dependency on transshipments. Paita is key for the north, but it lacks the depth and large-scale logistical/rail connectivity envisioned for Chancay; this is decisive for transit cargo from Bolivia, northern Chile and southern Ecuador (Portal Portuario, 2024).

A quantitative synthesis is presented below (with the variable "operational functioning time" to contextualize logistical maturity):

Table 2

Comparative Performance and Impact Indicators (Chancay, Callao, Santos, Balboa, Ningbo-Zhoushan)

Port	Port Capacity (million TEU, 2023)	Average Vessel Dwell Time (days, CPPI 2023)	Maritime Connectivity Index LSCI (2023)	Port Investment (USD million, cumulative)	Impact PIB (%)	Jobs Generated (direct and indirect)
Chancay (Peru)	1.5*	2.5*	22.5*	1,400	0.9*	7,500*
Callao (Peru)	2.3	3.5	45.1	0	1.2	12,000
Santos (Brazil)	4.4	2.2	59.8	1,000	1.8	18,000

Port	Port Capacity (million TEU, 2023)	Average Vessel Dwell Time (days, CPPI 2023)	Maritime Connectivity Index LSCI (2023)	Port Investment (USD million, cumulative)	Impact PIB (%)	Jobs Generated (direct and indirect)
Balboa (Panama)	3.9	2.8	52.4	1,200	2.1	16,000
Ningbo-Zhoushan (China)	33.4	1.9	100	5,000	3.5	30,000

*Note. Own elaboration based on UNCTAD (2023), APN (2023), World Bank – CPPI (2023), COSCO Shipping Ports (2024), and other verified institutional reports. Data standardized for 2023 (or near-projection).*Chancay: pre-commercial operation projections (June 2025) using COSCO Shipping Ports data and UNCTAD/CPPI methodologies. LSCI base 100 (UNCTAD, 2023). GDP impacts derived from Input–Output models and sectoral multipliers; jobs include direct and indirect.*

In terms of capacity and efficiency, Ningbo-Zhoushan, with 33.4 million TEU and an average dwell time of 1.9 days, remains a global benchmark. In contrast, Chancay begins operations with a capacity of 1.5 million TEU and a dwell time of 2.5 days, a performance already better than Callao (3.5 days) and close to Balboa (2.8 days), in line with its modern design and high level of automation.

Regarding maritime connectivity (LSCI), Ningbo leads (base 100), followed by Santos (59.8) and Balboa (52.4), while Callao (45.1) maintains a medium position; Chancay (22.5) exhibits emerging connectivity, reasonable due to its recent integration into global shipping routes and high growth potential. From an investment and maturity perspective, Chancay records an approximate investment of USD 1,400 million and only 0.1 years of operation, compared to Callao with decades of activity but no recent reported investments; hence, Chancay prioritizes technology and expansion, while limited investment in Callao may constrain modernization.

Finally, in terms of economic impact and employment, Ningbo leads with 3.5% of GDP and 30,000 jobs, followed by Balboa (2.1%; 16,000), Santos (1.8%; 18,000), and Callao (1.5%; 12,000); Chancay projects 0.9% of GDP and 7,500 jobs in its early phase, figures consistent with its status as a new hub in the process of consolidation.

DISCUSSION

This study aimed to comprehensively analyze the Port of Chancay as a strategic node for Peruvian foreign trade, assessing its logistical, economic, and geopolitical impact, as well as its opportunities and challenges within a commercial transformation strategy.

- ***Objective 1:*** characterizing technical and operational capacities, the results confirm that Chancay possesses attributes associated with a modern port hub: a draft of 17.8 m, handling of ULCVs up to 18,000 TEU, automation (ARMG, AGV, 5G), four berths, and a logistics complex connected by tunnel-viaduct. This infrastructure aligns with the transition of ports from “physical infrastructure” to logistics-technological platforms that enhance systemic

competitiveness (Notteboom & Rodrigue, 2022). By being a greenfield project and through early digitalization, the project approaches Port 4.0 standards and the operational notion of a smart port (IAPH, 2025). Comparison with reference hubs suggests that the combination of natural depth and early automation is a differentiator compared to legacy terminals with physical constraints, thus satisfying the first objective (Notteboom & Rodrigue, 2022).

- ***Objective 2:*** estimating economic impacts through Leontief, the Input–Output model allows quantification of direct, indirect, and induced effects consistent with the assessment of large-scale logistics projects. Projected direct contributions to GDP of ≈ 0.9%, multipliers of 1.6×–2.1×, and 20,000–25,000 jobs in early stages align with expected linkages in transport, manufacturing, foreign trade, and port services. Evidence of > 8,000 direct jobs in construction/start-up and early FOB operations reinforces positive initial impacts. This trajectory is consistent with a cluster approach: the concentration of related services and functional proximity enhances productivity and specialized employment in the immediate surroundings (Apostolopoulou, 2024). The adjustment is temporal: the magnitude of effects depends on the maturation rate of direct routes, demand volume, and how quickly Chancay Park captures value and reduces transaction costs in the hinterland.
- ***Objective 3:*** identifying logistical effects on time and cost, the findings show a reduction of ~10 days to Asia and savings of approximately 20% by eliminating transshipments and operating ULCV calls. These results reflect the typical role of hubs in efficiency, reliability, and speed (Notteboom & Rodrigue, 2022), with externalities on predictability and asset turnover; comparative experiences in the literature point in the same direction and underscore the importance of network density and intermodal coordination to sustain gains (Russo et al., 2024). The direct Guangzhou–Chancay route and services such as WSA5/"Chancay Express" materialize the shift in transpacific route geometry; however, an initial LSCI of ≈ 22.5 tempers the picture and suggests increasing frequencies, expanding shipping alliances, and closing terrestrial connectivity gaps (Notteboom & Rodrigue, 2005; Ducruet & Notteboom, 2012).
- ***Objective 4:*** identifying challenges in connectivity, governance, and sustainability, bottlenecks become clear. In connectivity, the saturation of the Panamericana Norte and the absence of a railway limit multimodality; additionally, technological interoperability and cybersecurity require robust protocols due to integration with shipping companies and customs (Global Americans, 2024). In governance/competition, COSCO's majority participation brings capital and technology but concentrates market power; Indecopi has reported a lack of effective competition with Callao and recommended tariff control, generating frictions (Vag Global, 2025). Literature on Chinese financing warns of dependency risks, with Hambantota as emblematic: one perspective emphasizes the "debt trap" (Hurley, Morris, & Portelance, 2018), while other studies question its simplicity and highlight domestic decisions and fiscal arrangements (Bräutigam, 2020; Chatham House, 2020). Regarding sustainability, rapid urbanization, service deficits, and ecological risks, such as the Santa Rosa Wetland and artisanal fishing, condition social license; the blue economy and integrated coastal zone management offer a framework to balance growth, ecosystem protection, and social cohesion (Cicin-Sain, 1993). In summary, the fourth objective is met: challenges are identified and supported by evidence and literature.

- ***Objective 5:*** deriving public policy implications is based on the previous findings: strengthen the regulatory authority to prevent market power abuse and ensure tariff transparency and non-discriminatory access (Vag Global, 2025; Brooks, 2004); prioritize multimodal connectivity with a railway roadmap and digital-customs interoperability with cybersecurity standards (Global Americans, 2024); accelerate Chancay Park as a logistics-industrial ecosystem generating local linkages (Apostolopoulou, 2024); and adopt blue economy standards with environmental monitoring, mitigation/compensation, and community participation (Cicin-Sain, 1993).

With these elements, the study supports that Chancay can consolidate as a world-class transpacific hub to the extent that its technical capacities and observable operational efficiency are accompanied by network densification and effective hinterland integration through internal corridors; emerging connectivity (LSCI ≈ 22.5) requires a staged approach, especially considering the scale of Ningbo-Zhoushan remains distant (Notteboom & Rodrigue, 2005; Ducruet & Notteboom, 2012). Simultaneously, expected effects on logistics infrastructure, foreign trade, and the economy manifest in lower time and costs, linkages that sustain GDP, employment, and Leontief-estimated multipliers, and direct routes that increase predictability for agro-exports, fisheries, and mining; the technical-operational platform and adjacent cluster act as catalysts for this trajectory (Apostolopoulou, 2024; Russo et al., 2024).

Finally, consolidation faces strategic risks in governance/competition (due to FDI and potential asymmetries, with Indecopi warnings), connectivity/interoperability (road/rail gaps and cybersecurity), and sustainability/social license; hence, policy priorities include pro-competition regulation and tariff transparency (Vag Global, 2025; Brooks, 2004), multimodality with interoperability standards, cluster development to avoid enclave dynamics, and the blue economy as a coastal governance framework (Cicin-Sain, 1993).

The results show that Chancay meets technical capacities, generates plausible economic impacts under Leontief, improves time and costs, and delineates risks with clear policies to capture value and mitigate externalities. Linking these findings with the study's objectives and research questions, the conclusion is clear: Chancay can consolidate as a transpacific hub if, in addition to infrastructure and technology, the country ensures connectivity, effective competition, transparent governance, and sustainability in line with blue economy principles (Notteboom & Rodrigue, 2022; Notteboom & Rodrigue, 2005; Ducruet & Notteboom, 2012; Hurley, Morris, & Portelance, 2018; Bräutigam, 2020; Chatham House, 2020; IAPH, 2025; Vag Global, 2025).

CONCLUSIONS

The Port of Chancay is positioned as a high-performance transpacific logistics node: its 4.0 infrastructure, automation, 5G, smart cranes, and continuous operation enhance the country's logistics efficiency and competitiveness. To transform this technical advantage into sustained systemic efficiency, it is advisable to establish a comprehensive regulatory framework ensuring transparency, effective competition, and sustainability, with independent oversight and non-discriminatory access to essential services.

A reduction of up to ten days in transit to Asia provides a decisive advantage for perishables, manufactured goods, and high-value products, boosting exports and attracting FDI. To fully capitalize on this differential, it is essential to deepen trade agreements and strategic alliances with Asia-Pacific, so that new connectivity translates into export diversification, technological upgrading, and greater value chain linkages.
Chancay complements Callao and helps relieve congestion in the port system, but its impact depends on integration with productive zones. Therefore, it is necessary to link the port to internal logistics corridors, prioritizing critical road segments and defining a roadmap toward multimodality, including rail, which reduces hinterland costs and improves operational predictability.

Rapid urban growth and pressure on sensitive ecosystems require proactive socio-environmental management to safeguard social license. It is advisable to create a Territorial Development Fund channeling public and private investment toward basic infrastructure, social services, and local employability, aligned with sustainable urban planning and rigorous environmental monitoring (wetlands and artisanal fisheries).

Governance is key to avoiding enclave dynamics and ensuring shared value. Strengthening institutional capacities in port supervision, economic-competitive regulation, and territorial planning will prevent asymmetries, manage risks, and ensure strategic decisions preserve long-term public interest.

The technological leap of the logistics-industrial ecosystem demands specialized human capital. Implementing technical training programs in port automation and Logistics 4.0, linked to the needs of the port and the cluster (Chancay Park), will promote local workforce integration, consolidate investment attraction, and ensure social sustainability for the logistics transformation the country seeks to achieve.

Conflict of Interest
The author declares that there is no conflict of interest.

Author Contributions
CRZC: conceptualization, methodology, original draft writing, writing—review and editing; LEADC: methodology, original draft writing, formal analysis, writing—review and editing; BACL: writing—review and editing;SMMO: writing—review and editing.

REFERENCIAS

Andruetto, C., Stenemo, E., & Pernestål, A. (2024). Towards sustainable urban logistics: Exploring the implementation of city hubs through system dynamics. *Transportation Research Interdisciplinary Perspectives, 27*, 101204. https://doi.org/10.1016/j.trip.2024.101204

APN – Autoridad Portuaria Nacional. (2023). *Puerto de Chancay: infraestructura y rol en la estrategia nacional portuaria.* https://doi.org/10.15381/scientia.v1i1.32037

Apostolopoulou, E. (2024). The dragon's head or Athens' sacrifice zone? Spatiotemporal disjuncture, logistical disruptions, and urban infrastructural justice in Piraeus port, Greece. Urban Geography. *Advance online publication.* https://doi.org/10.1080/02723638.2024.2433968

ArgenPorts. (2024, noviembre 16). *El nuevo puerto de Chancay abre una ruta más directa entre Sudamérica y China.* ArgenPorts. https://argenports.com/nota/el-nuevo-puerto-de-chancay-abre-una-ruta-mas-directa-entre-sudamerica-y-china

Autoridad Portuaria Nacional (APN). (2023). *Estadísticas portuarias 2023*. https://www.gob.pe/institucion/apn/colecciones/17077-estadisticas-portuarias-de-la-apn-2023

Banco Central de Reserva del Perú. (2025). *Proyecciones macroeconómicas 2025–2027.* https://www.bcrp.gob.pe

Banco Mundial. (2023). *Container Port Performance Index 2023 (CPPI).* https://documents1.worldbank.org

Blueberries Consulting. (2025, 16 de enero). *Puerto de Chancay contará con nuevo servicio regional hacia Chile a partir de marzo.* Blueberries Consulting. https://blueberriesconsulting.com/en/puerto-de-chancay-contara-con-nuevo-servicio-regional-hacia-chile-a-partir-de-marzo/

Brautigam, D. (2020). A critical look at Chinese "debt-trap diplomacy": The rise of a meme. *Area Development and Policy, 5*(1), 1–14. https://doi.org/10.1080/23792949.2019.1689828

Brooks, M. R. (2004). The governance structure of ports. *Review of Network Economics, 3*(2). https://doi.org/10.2202/1446-9022.1049

CAF. (2025). *Economía azul. Banco de Desarrollo de América Latina y el Caribe.* Recuperado de https://www.caf.com/es/especiales/impacto-caf/areas-de-intervencion/economia-azul

Calle Herencia, C. A. (2025). Importancia del Terminal Portuario de Chancay en las PYMEs peruanas. *Newman Business Review, 11*(1), 136–152. https://doi.org/10.22451/3002.nbr2025.vol11.1.10008

Center for Strategic and International Studies. (2025, febrero 25). *China-owned Chancay Port set to become Latin America's third*. https://www.csis.org/analysis/china-owned-chancay-port-set-become-latin-americas-third-largest

CEPAL – Comisión Económica para América Latina y el Caribe. (2024). *Perfil logístico de América Latina 2024*. https://www.cepal.org/es/publicaciones

CGTN. (2024, 14 de noviembre). *Peru's Chancay megaport poised to reshape trade in the Pacific. CGTN News.* https://news.cgtn.com/news/2024-11-14/Peru-s-Chancay-megaport-poised-to-reshape-trade-in-the-Pacific-1yveJbUsORy/p.html

Chatham House. (2020). *Debunking the myth of 'debt-trap diplomacy'. The Royal Institute of International Affairs.* https://www.chathamhouse.org/2020/08/debunking-myth-debt-trap-diplomacy

Chen, J. C., Anggrahini, D., & Chen, T. L. (2024). Current research and future challenges in parcel hub towards logistics 4.0: a systematic literature review from a decision-making perspective. *International Journal of Production Research, 62*(23), 8562–8593. https://doi.org/10.1080/00207543.2024.2337109

Cicin-Sain, B. (1993). Sustainable development and integrated coastal management. *Ocean & Coastal Management, 21*(1–3), 11–43. https://doi.org/10.1016/0964-5691(93)90019-U

Congreso del Perú. (2025, abril 14). *Puerto de Chancay registra más de US$ 420 millones en operaciones comerciales.* https://comunicaciones.congreso.gob.pe/noticias

COSCO Shipping Ports. (2024). *Proyecto Puerto de Chancay – Fase 1.* https://en.coscoshipping.com

COSCO Shipping. (2025). *Chancay Port Newsroom.* Recuperado de https://en.coscoshipping.com

Datamar. (2024). *Port throughput statistics for Santos, Brazil.* https://datamarnews.com

Díaz, M., Elizondo, K., & Salas, C. (2021). Approximation of the benefits of socioeconomic activities in Cocos Island National Park and the effects of climate change. *Revista Interamericana de Ambiente y Turismo.* https://doi.org/10.4067/s0718-235x2021000100014

Ducruet, C., & Notteboom, T. (2012). The worldwide maritime network of container shipping: Spatial structure and regional dynamics. *Global Networks, 12*(3), 395–423. https://doi.org/10.1111/j.1471-0374.2011.00355.x

Farmonaut. (2024, 5 de agosto). *Chancay Megaport boosts Peru's agricultural exports fast.* Farmonaut. https://farmonaut.com/south-america/chancay-megaport-boosts-peru-agricultural-exports-fast

Feldman, M. P., Francis, J. L., & Bercovitz, J. (2005). Creating a cluster while building a firm: Entrepreneurs and the formation of industrial clusters. *Regional Studies, 39*(1), 129–141. https://doi.org/10.1080/0034340052000320888

Financial Times. (2024, 4 de noviembre). *Chinese warships could use Peru's big new port, US general warns. Financial Times.* https://www.ft.com/content/f6589d13-6014-47d0-8cc5-e98a0b7ad0bc.

Georgia Tech Panama Logistics Innovation and Research Center. (2024). *Observatorio Logístico de Panamá.* https://www.gatech.pa

Global Americans. (2024, 10 de junio). *China's Chancay port: Strategic opportunities and challenges for Peru*. Global Americans. https://theglobalamericans.org/2024/06/chinas-chancay-port-strategic-opportunities-and-challenges-for-peru

Global Americans. (2024, agosto). *Strategic, political, and economic implications of the Chancay Port development.* Global Americans. https://globalamericans.org/wp-content/uploads/2024/08/Strategic-Political-and-Economic-Implications-of-the-Chancay-Port-Development.pdf

globalEDGE. (2024, 19 de noviembre). *Peru's new port will change international trade.* Michigan State University – International Business Center. https://globaledge.msu.edu/blog/post/57456/peru%27s-new-port-will-change-international-trade.

Gobierno Popular de China. (2024). *Estadísticas portuarias de Ningbo-Zhoushan.* https://www.seatrade-maritime.com/ports-logistics/ningbo-zhoushan-retains-crown-as-port-with-highest-cargo-volume

Hurley, J., Morris, S., & Portelance, G. (2018, 04 de marzo). *Examining the debt implications of the Belt and Road Initiative from a policy perspective.* Center for Global Development. https://www.cgdev.org/publication/examining-debt-implications-belt-and-road-initiative-a-policy-perspective

Infobae. (2024, 8 de octubre). *Cosco reconoce el 'impacto geopolítico' de su megapuerto en Chancay para los intereses de China en la región.* https://www.infobae.com/peru/2024/10/09/megapuerto-de-chancay-cosco-reconoce-un-impacto-geopolitico-para-los-intereses-de-china-en-la-region/

Inspenet. (2024, 25 de septiembre). *Automated operation of the Port of Chancay.* Inspenet News. https://inspenet.com/en/noticias/automated-operation-of-the-port-of-chancay

International Association of Ports and Harbors. (2025). *IAPH leads global port industry initiatives on decarbonization, resilience and digitalization.* IAPH. https://www.iaphworldports.org/

Jose, H., & Samudra, H. (2022). Towards a new ASEAN regionalism: Navigating the outlook on Indo-Pacific in post-RCEP beyond 2020. *Insignia: Journal of International Relations, 9*(1). https://doi.org/10.20884/1.ins.2022.9.1.4636

Leontief, W. (1986). Input-output economics (2nd ed.). *Oxford University Press.*https://liremarx.noblogs.org/files/2020/02/Wassily-Leontief-Input-Output-Economics-Oxford-University-Press-USA-1986.pdf

Manzoor, H., Mir, P., & Fazili, S. (2025). An analysis of trade between Belt and Road Initiative and Regional Comprehensive Economic Partnership countries in context of regional trade agreements. *Foreign Trade Review, 60*(1). https://doi.org/10.1177/00157325251324040

Maritime Executive. (2024, julio 7). *Port of Chancay creates new competition in Latin America. The Maritime Executive.* https://maritime-executive.com/editorials/port-of-chancay-creates-new-competition-in-latin-america

Martin, C. (2013). Shipping container mobilities, seamless compatibility, and the global surface of logistical integration. *Environment and Planning A: Economy and Space, 45*(5), 1021–1036. https://doi.org/10.1068/a45171

Miller, R. E., & Blair, P. D. (2009). Input–Output Analysis: Foundations and Extensions (2nd ed.). *Cambridge University Press.* https://doi.org/10.1017/CBO9780511626982

MINAM – Ministerio del Ambiente del Perú. (2024). *Informe sobre el progreso en el cumplimiento de las metas de adaptación y mitigación en el país.* https://nuestrodesafioclimatico.minam.gob.pe/wp-content/uploads/2025/06/Informe-sobre-el-progreso-en-el-cumplimiento-de-las-metas-de-adaptacion-y-mitigacion-en-el-pais.pdf

Ministerio de la Producción. (2024, 6 de abril). *Puerto de Chancay generará un impacto económico de US$ 4 500 millones anuales al país.* https://www.gob.pe/institucion/produce/noticias/931385

Ministerio de Transportes y Comunicaciones – MTC. (2024). *Plan Nacional de Desarrollo Portuario 2023–2033.* https://www.gob.pe/mtc

Ministerio de Transportes y Comunicaciones – MTC. (2025). *Puerto Multipropósito de Chancay impulsará la economía y su construcción generará 7 500 empleos directos e indirectos.* https://www.gob.pe/institucion/mtc/noticias/648926

Ministerio de Transportes y Comunicaciones (MTC). (2024, 14 de noviembre). *Entró en operaciones el megapuerto de Chancay que revolucionará el comercio entre Perú y Asia.* https://www.gob.pe/institucion/mtc/noticias/1057890-mtc-entro-en-operaciones-el-megapuerto-de-chancay-que-revolucionara-el-comercio-entre-peru-y-asia

Ministerio del Ambiente – MINAM. (2023). *Evaluación ambiental del proyecto Chancay Park. Lima, Perú.*

MundoMarítimo. (2025, 21 de abril). Puerto de Chancay enfrenta retos logísticos mientras crece su importancia comercial y geopolítica. *MundoMarítimo.* https://www.mundomaritimo.cl/noticias/puerto-de-chancay-enfrenta-retos-logisticos-mientras-crece-su-importancia-comercial-y-geopolitica

Negi, S. (2024). Global supply chain competitiveness: The synergistic role of integrated logistics and global sourcing. *Global Business and Organizational Excellence, 43*(1). https://doi.org/10.1002/joe.22247

Notteboom, T., & Rodrigue, J. P. (2005). Port regionalization: Towards a new phase in port development. *Maritime Policy & Management, 32*(3), 297–313. https://doi.org/10.1080/03088830500139885

Notteboom, T., Pallis, A., & Rodrigue, J.-P. (2022). *Port economics, management and policy (1.ª ed.).* Routledge. https://doi.org/10.4324/9780429318184

Nun Tuñón Alderete, J. (2018). Proyecto Clúster Marítimo Iberoamericano – Clúster Azul *[Trabajo de Fin de Máster, Universidad Pontificia Comillas]. Repositorio Comillas.* https://repositorio.comillas.edu/jspui/bitstream/11531/25030/1/TFM000847.pdf

Omar, A., Davis-Sramek, B., Myers, M. B., & Mentzer, J. T. (2012). A global analysis of orientation, coordination, and flexibility in supply chains. *Journal of Business Logistics, 33*(2), 128–144. https://doi.org/10.1111/j.2158-1592.2012.01045.x

Özmen, M., & Aydoğan, E. K. (2019). Robust multi-criteria decision-making methodology for real life logistics center location problem. Artificial Intelligence *Review, 53*(1), 725–751. https://doi.org/10.1007/s10462-019-09763-y

Portal Portuario. (2024, octubre 3). Luis Felipe Turbides: "En Terminales Portuarios Euroandinos somos el puerto de la agroexportación del Perú". *Portal Portuario.* https://portalportuario.cl/luis-felipe-turbides-en-terminales-portuarios-euroandinos-somos-el-puerto-de-la-agroexportacion-del-peru/

Porter, M. E. (1998). Clusters and the new economics of competition. *Harvard Business Review, 76*(6), 77–90. https://biblioteca.fundacionicbc.edu.ar/images/d/de/Clusters_1.pdf

Proyecto Chancay. (2023). *Documentos técnicos y de inversión. Lima, Perú.*

PUCP. (2024, 11 de noviembre). *Megapuerto de Chancay: oportunidades y desafíos. PuntoEdu.* https://puntoedu.pucp.edu.pe/coyuntura/megapuerto-de-chancay-china-oportunidades-y-desafios/

Reuters. (2025, 7 de junio). *Latin America's development bank CAF doubles investment target for marine ecosystems.* Reuters. https://www.reuters.com/sustainability/latin-americas-development-bank-caf-doubles-investment-target-marine-ecosystems-2025-06-07/

Reuters. (2025, 8 de abril). *China's Guangzhou Port launches direct shipping route to Peru.* https://www.reuters.com/world/chinas-guangzhou-port-launches-direct-shipping-route-peru-2025-04-08

Revista Marina. (2024, octubre 31). *Puerto de Chancay y la nueva ruta de la seda. Revista Marina de Chile.* https://revistamarina.cl/es/articulo/puerto-chancay-y-la-nueva-ruta-de-la-seda/es

Russo, F., Pedà, G., & Musolino, G. (2024). Attributes influencing port times of container ships. *WMU Journal of Maritime Affairs, 23*(3), 375–392. https://doi.org/10.1007/s13437-024-00336-7

Russo, S., Voegl, J., & Hirsch, P. (2021). A multi-method approach to design urban logistics hubs for cooperative use. *Sustainable Cities and Society, 69*, 102847. https://doi.org/10.1016/j.scs.2021.102847

Sánchez, D. S., Lozada, V. V., & Asmat, G. L. (2023). Impacto de la inteligencia artificial en la competitividad logística: el megapuerto de Chancay en Perú como conector entre China y América Latina. *Revista de Análisis y Difusión de Perspectivas Educativas y Empresariales, 4*(9), 9–28. https://doi.org/10.56216/radee032024dic.a01

Shahparvari, S., Nasirian, A., Mohammadi, A., Noori, S., & Chhetri, P. (2020). Un enfoque integrado GIS-LP para el problema de ubicación de centros logísticos. *Computers & Industrial Engineering, 146*, 106488. https://doi.org/10.1016/j.cie.2020.106488

Shimizu, K. (2021). The ASEAN Economic Community and the RCEP in the world economy. *Journal of Contemporary East Asia Studies, 10*(1), 1–23. https://doi.org/10.1080/24761028.2021.190788

Shindo, E. (2023). Moving toward global governance through the Belt and Road Initiative: How the global axis is shifting from west to east. *China International Strategy Review, 5*(2), 180–192. https://doi.org/10.1007/s42533-023-00150-5.

Southern Star Navigation. (2024, 22 de noviembre). Smart ports in Latin America: Challenges in automation and cybersecurity. *Southern Star Navigation.* https://www.southernstarnavigation.com/smart-ports-latin-america-automation-cybersecurity

Tang, R. (2024, noviembre 8). *El megapuerto de Chancay es la consolidación del Perú como hub en Asia-Pacífico.* PUCP. https://puntoedu.pucp.edu.pe/opinion/puerto-de-chancay-en-la-consolidacion-del-peru-como-hub-en-el-asia-pacifico/

Tencco Córdova, V. M. I., Arapa Palacios, N. J., Quispe Quichua, J. J., & Delgado Huanca, M. S. (2025). Impacto económico del megapuerto de Chancay en las PYMEs. *Arandu, 11*(2), 3249–3261. https://doi.org/10.69639/arandu.v11i2.499

ThePeople'sMap. (2025, enero). *Chancay Multipurpose Port Terminal. People's Map of Global China.* https://thepeoplesmap.net/project/chancay-multipurpose-port-terminal

Tijan, E., Jović, M., Panjako, A., & Žgaljić, D. (2021). The Role of Port Authority in Port Governance and Port Community System Implementation. *Sustainability, 13*(5), 2795. https://doi.org/10.3390/su13052795

UNCTAD – United Nations Conference on Trade and Development. (2023). *Review of Maritime Transport 2023.* https://doi.org/10.18356/9789213584569

VAG Global. (2025, 21 de abril). *OSITRAN regulará las tarifas portuarias de Chancay tras fallo del Indecopi.* https://vag-global.com/en/blog/ositran-to-regulate-chancay-port-tariffs-following-indecopi-ruling/

Vieira, G., Neto, F., & Amaral, F. (2014). Governance, governance models and port performance: A systematic review. *Transport Reviews, 34*(5), 645–662. https://doi.org/10.1080/01441647.2014.946458

Villagra, M. E. (2023). Megapuerto de Chancay: repercusiones en el comercio sudamericano e impacto geoestratégico. *Seguridad y Poder Terrestre, 2*(2), artículo 28. https://doi.org/10.56221/spt.v2i2.28

Vines, D. (2018). The BRI and RCEP: Ensuring cooperation in the liberalisation of trade in Asia. *Economic and Political Studies, 6*(3), 338–348. https://doi.org/10.1080/20954816.2018.1498992

Volodymyr, K., Myroslava, S., Jozef, R., & Alla, Z. (2021). Polycentric management of the global supply chain integration. *Electronic Scientific Journal Intellectualization of Logistics and Supply Chain Management, 7*(8), 23–32. https://doi.org/10.46783/smart-scm/2021-7(8)-4

Wang, C., Liu, Y., & Yang, G. (2023). Adaptive distributionally robust hub location and routing problem with a third-party logistics strategy. *Socio-Economic Planning Sciences, 87*, 101563. https://doi.org/10.1016/j.seps.2023.101563

Woods, O. (2022). A harbour in the country, a city in the sea: Infrastructural conduits, territorial inversions and the slippages of sovereignty in Sino-Sri Lankan development narratives. *Political Geography, 92,* 1–9. https://doi.org/10.1016/j.polgeo.2021.102521

Wooley, A., Zhang, S., Fedorochko, R., & Patterson, S. (2023, julio). *Harboring global ambitions: China's ports footprint and implications for future overseas naval bases.* AidData at William & Mary. https://docs.aiddata.org/reports/harboring-global-ambitions/Harboring_Global_Ambitions.pdf

World Bank. (2023). *Logistics Performance Index 2023: Country Rankings and Trends.* https://lpi.worldbank.org/international/global

WorldCargoNews. (2024, 21 de junio). *Peru's Chancay welcomes first double cantilever automated rail cranes. WorldCargo News.* https://www.worldcargonews.com/news/2024/06/perus-chancay-welcomes-first-double-cantilever-automated-rail-cranes

Xinhua. (2024, 18 de enero). *Ningbo-Zhoushan Port container throughput report.* https://english.news.cn/20250118/20c2696f693149f6a4956e8c447748b6/c.html

Zhao, W., & Yuan, X. (2022). Logistics infrastructure and regional development: Evidence from port-based special economic zones. *Journal of Economic Geography, 22*(4), 689–713. https://doi.org/10.1093/jeg/lbac021

Zilli, J., & De Sá Freire, P. (2023). Conceptual models of port governance. *Contribuciones a las Ciencias Sociales, 16*(9). https://doi.org/10.55905/revconv.16n.9-214