

## Performance-Based Port Concession Extensions: A Pragmatic Framework for Renewal in Colombia and Beyond

### Part 1: The Evolution of Port Concessions and a New Policy Question

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#### Introduction

From the outset of port sector reforms in the late twentieth century, Latin America's concession programs emerged as leading examples of how inefficient, state-dominated ports could be transformed into modern, investment-driven facilities. While Malaysia's Port Klang is often cited as an early instance of port "privatization," the 1986 transfer of container operations from the Port Klang Authority to Klang Container Terminal Berhad was more accurately a corporatization exercise, shifting activities to a government-linked entity rather than introducing full private risk capital and operational autonomy.<sup>2</sup>

**Figure 1. Ports, like Obregon's *Detalles de un Océano*, are shaped by interacting currents -- effective concession policy is decided not by ideology, but in the details.**



Source. Galeria Duque Arango, Medellin, Alejandro Obregon, *Detalles de un Océano*, 1985 (<https://galeriaduquearango.com/artistas/#>).

A more durable and influential model took shape in Latin America. Chile pioneered what is now widely recognized as the modern landlord framework during the country's port sector reforms in the 1980s and 1990s. The process culminated in Law 19.542 of 1997, the Ports Modernization Law, which replaced the centralized Empresa Nacional de Puertos (Emporchi) with autonomous state-owned port companies that concessioned terminal operations to private operators.<sup>3</sup> Infrastructure remained publicly owned, while private concessionaires assumed responsibility for operations, investment, and commercial risk, subject to regulatory oversight. The model emphasized competition, private capital mobilization, and performance accountability without full privatization of land or assets.

Chile's approach quickly became a reference point across the region. Countries facing chronic underinvestment, outdated infrastructure, and limited public resources adapted the landlord-concession framework to their own institutional contexts. Colombia followed Chile's 1980s reforms with Law 1 of 1991, which liquidated the inefficient state-run Colpuertos and

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<sup>2</sup> United Nations ESCAP, "Public-Private Partnerships Case Study #5 -- Regulation in PPP projects: the case of Port Klang", March 2015, available at [https://ppp.worldbank.org/sites/default/files/2022-02/Case%205\\_Regulator\\_Port%20Klang.pdf](https://ppp.worldbank.org/sites/default/files/2022-02/Case%205_Regulator_Port%20Klang.pdf).

<sup>3</sup> Ley N° 19.542 de 1997, Justicia Chile, available at <https://chile.justia.com/nacionales/leyes/ley-n-19-542/gdoc/>.

introduced regional port societies operating under private concessions.<sup>4</sup> Other countries, including Brazil, Peru, Argentina, Mexico, Panama, Costa Rica, Ecuador, Honduras, Guatemala, and the Dominican Republic, implemented variations of the same structure, often accompanied by regulators tasked with overseeing tariffs, service standards, investment obligations, and safeguards against anticompetitive behavior.

Not every program adhered perfectly to what would now be considered best practice. Some experienced regulatory fragmentation, renegotiations, or implementation challenges. Yet, taken together, the reforms succeeded in attracting substantial private capital that public budgets alone could not provide. Across the region, ports expanded capacity, modernized equipment, and improved productivity at a pace that had proven difficult under traditional public management. Container terminals in San Antonio and Valparaíso in Chile, Cartagena in Colombia, Santos in Brazil, Buenos Aires in Argentina, and in Panamá, among others, became benchmarks for efficiency and reliability, drawing attention well beyond Latin America and influencing concession frameworks subsequently adopted in Africa, Asia, and parts of Europe.

Three decades later, many of these first-generation concessions (or their extensions) are approaching expiration. Governments face a new policy question that was largely absent at the time of the original reforms: how best to manage the end of high-performing, mature concessions. Should such concessions be exposed to a new competitive tender, or should extensions be considered when incumbents have demonstrably met investment obligations, delivered strong operational performance, and operated within competitive port systems?

A growing body of academic and policy literature argues that retendering plays an important governance role, even when existing operators are performing adequately. Scholars emphasize that long-term concessions, if repeatedly extended through bilateral renegotiation, may entrench incumbents, weaken contestability<sup>5</sup>, and allow informational advantages to accumulate over time<sup>6</sup>. From this perspective, retendering is less about uncovering “true” costs than about periodically restoring competitive pressure, re-discovering market valuations for port land and infrastructure, and rebalancing risk and reward once initial greenfield uncertainty has dissipated. Industry analysts similarly note that in mature markets, where assets are largely amortized and traffic risks better understood, retendering can provide a mechanism for testing whether concession terms negotiated decades earlier still reflect prevailing market conditions.

At the same time, the debate is often framed too narrowly as a binary choice between renewal and competition. In practice, neither academic institutions nor international organizations such as the World Bank<sup>7</sup> or the International Transport Forum<sup>8</sup> advocate blanket non-renewal of expiring concessions. Rather, they caution against extending underperforming, inactive, or weakly regulated concessions without scrutiny, while recognizing that retendering itself carries costs, risks of disruption, and no guarantee of superior outcomes. The more relevant question is therefore not whether extensions are inherently desirable or

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<sup>4</sup> Ley 1 de 1991, Diario Oficial No. 39.626 de 11 de enero de 1991, Por la cual se expide el Estatuto de Puertos Marítimos y se dictan otras disposiciones, available at [https://normas.cra.gov.co/gestor/docs/ley\\_0001\\_1991.htm](https://normas.cra.gov.co/gestor/docs/ley_0001_1991.htm).

<sup>5</sup> Notteboom, T., A. Pallis & J. P. Rodrigue, Terminal Concessions and Land Leases, *Port Economics, Management and Policy*.

<sup>6</sup> Ferrari, C., P. P. Puliafito, & A. Tei, “Dynamics in terminal concessions: the role of performances”, *Maritime Economics & Logistics*, 19(2), 1–21, 2017.

<sup>7</sup> World Bank, *Port Reform Toolkit*, Module 4: Private Sector Participation, available at

<https://openknowledge.worldbank.org/server/api/core/bitstreams/d91f5bbc-5ad2-44b3-819c-5ab33c7b084f/content>.

<sup>8</sup> International Transport Forum, “Ports Policy Review of Chile”, 9 December 2016, available at <https://www.itf-oecd.org/ports-policy-review-chile>.

undesirable, but under what circumstances each instrument, that is, retendering or renewal, best serves the public interest.

Recent industry evidence reinforces the need for pragmatism. One survey indicates that between 2020 and 2022, of 27 port concessions reaching review, 21 were renewed or extended following renegotiation of commercial terms, investment obligations, or performance requirements.<sup>9</sup> This pattern suggests that governments frequently conclude that continuity, when paired with updated obligations and safeguards, may generate greater value than operator turnover, especially in ports that already face competitive pressures from nearby terminals or overlapping hinterlands.

Building on the Latin American reform experience, this paper argues that merit-based extensions, conditioned on appropriate regulatory oversight, transparent performance audits, and renewed investment commitments, can often preserve institutional knowledge, sustain capital expenditure, and avoid unnecessary disruption. For high-performing ports, continuity need not undermine competition or efficiency; under certain conditions, it may reinforce them.

The objective is not to advocate extensions universally, nor to dismiss retendering as a governance tool. Rather, the aim is to broaden the policy discussion and ensure that renewal remains a legitimate and analytically defensible option alongside retendering in the concession toolkit, to be deployed selectively in accordance with market structure, performance outcomes, and public policy objectives.

### **Comparative Evidence: High-Performing Ports and the Value of Continuity**

Before turning to the specific arguments that arise in favor of mandatory re-tendering, it is useful to examine how concession policy has functioned in practice across a range of high-performing ports. If extensions merely entrenched incumbents and discouraged efficiency, one would expect the world's best-performing ports to cluster around frequent operator turnover. The opposite pattern is more commonly observed.

Across Latin America and beyond, many of the ports that consistently rank near the top of objective performance benchmarks, particularly the World Bank's Container Port Performance Index (CPPI)<sup>10</sup>, operate under long-term concession frameworks characterized by continuity, phased investment, and performance-conditioned renewals. In these settings, stability appears to preserve institutional knowledge, sustain capital expenditure, and maintain the commercial relationships that underpin reliable service. By contrast, mandatory re-tendering introduces transition risk and can encourage short-term decision-making near the end of concession periods.

Cartagena provides one illustration. Under a stable concession framework, the port has steadily improved productivity and scale over the past two decades. In the most recent CPPI edition, Cartagena ranked third globally among more than 400 container ports, behind only China's Yangshan and Oman's Salalah, climbing

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<sup>9</sup> Drewry, Market Opinion, "Market forces driving port authorities to retender more terminal concessions", 30 October 2023, available at <https://www.drewry.co.uk/maritime-research-opinion-browser/maritime-research-opinions/market-forces-driving-port-authorities-to-retender-more-terminal-concessions>. Note while not specifically citing the reasons for retendering or not, Drewry does suggest that concessions for terminals operating in monopoly environments (e.g., no inter-terminal, inter-port, or hinterland corridor competition) should not be extended or renewed, though Drewry does not address terminals that have a primarily transshipment role. However, in our examples below, all the ports or terminals cited have inter-terminal and/or inter-corridor competition.

<sup>10</sup> World Bank Group, The Container Port Performance Index 2023, pp. 2 and 37, available at <https://openknowledge.worldbank.org/server/api/core/bitstreams/6cebb847-6f46-44e7-9533-12ac893b3693/content>.

from fifth in 2022, despite handling volumes well below the mega-hubs of East Asia.<sup>11</sup> The ranking reflects operational efficiency rather than size alone, including short vessel dwell times and high crane productivity. Cartagena's throughput has continued to grow, surpassing four million TEUs in 2025<sup>12</sup>, with the majority consisting of transshipment cargo. These outcomes were enabled not by periodic resets, but by sustained private investment in deeper drafts, modern cranes, yard systems, and long-standing commercial relationships with carriers facilitated by a concession extension.

Similar dynamics appear in other transshipment-heavy and gateway hubs with long-term private involvement.

- **Tangier Med Port** has grown from a greenfield development into one of the Mediterranean's largest container gateways, now handling up to nine million TEUs annually and consistently ranking in the global top tier (fourth in CPPI 2023).<sup>13</sup> Long-term concessions have supported successive waves of expansion and billions of dollars in capital investment. The port's rapid scaling and strong efficiency metrics would have been difficult to achieve under short concession cycles that discouraged long-horizon commitments.
- **Algeciras (Spain)**, Europe's most efficient port<sup>14</sup> and principal Strait of Gibraltar hub, shows a comparable pattern. With a high share of relay and transshipment traffic, it depends heavily on reliability and carrier confidence. Concession continuity has allowed operators to cultivate deep relationships with global shipping alliances and feeder networks, supporting consistently strong performance in European rankings.
- **Panama.** Panama's container terminals, including facilities on both the Atlantic and Pacific entrances to the Canal, collectively process nearly ten million TEUs annually<sup>15</sup>, much of it transshipment. Here again, private operators have relied on long-term stability to build the reliability and operational familiarity that shipping lines require. Continuity has proven particularly valuable in a region where carriers can readily shift services among competing Caribbean hubs.
- **Brazil.** Brazil's leading container gateways, most notably the Port of Santos, which alone handles roughly five million TEUs annually, anchor the country's role in South American liner networks, combining large domestic flows with growing regional transshipment. The extension of long-standing private terminal concessions, such as the 20-year renewal granted to Brasil Terminal Portuário (BTP), reflects a policy judgment that operational continuity and mandated reinvestment can deliver capacity expansion and service reliability more effectively than re-tendering. For carriers serving Brazil's vast hinterland, stable terminal relationships reduce operational risk and support schedule integrity in a market where congestion and scale effects materially influence network design.
- **Argentina.** Argentina's container traffic remains highly concentrated at the Port of Buenos Aires, which functions as both a national gateway and a regional relay point for the Río de la Plata system.

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<sup>11</sup> World Bank Group, The Container Port Performance Index 2023, pp. 2 and 37, available at <https://openknowledge.worldbank.org/server/api/core/bitstreams/6cebb847-6f46-44e7-9533-12ac893b3693/content>.

<sup>12</sup> Grupo Puerto de Cartagena, "4 Millones de contenedores movilizados en un solo año", available at <https://www.puertocartagena.com/es/sala-de-prensa/noticias/cuatro-millones-de-contenedores-movilizados-en-el-2025>.

<sup>13</sup> World Bank Group, The Container Port Performance Index 2023, pp. 2 and 37, available at <https://openknowledge.worldbank.org/server/api/core/bitstreams/6cebb847-6f46-44e7-9533-12ac893b3693/content>.

<sup>14</sup> World Bank Group, The Container Port Performance Index 2023, pp. 2 and 37, available at <https://openknowledge.worldbank.org/server/api/core/bitstreams/6cebb847-6f46-44e7-9533-12ac893b3693/content>.

<sup>15</sup> OceanCrew, "Panama Ports See 3.6% Rise In TEU Container Traffic In 2025", available at <https://oceancrew.org/news/panama-ports-see-36-rise-in-teu-container-traffic-in-2025#>.

Faced with expiring concessions amid market volatility and labor sensitivity, the government opted for temporary extensions of existing terminal contracts to preserve service continuity while redefining the port's long-term concession model. For shipping lines, this approach helped maintain operational familiarity and workforce stability in a constrained port setting, where even short disruptions can prompt carriers to divert services to competing regional hubs such as Montevideo or southern Brazil.

Elsewhere in Latin America, Colombia's Pacific gateway Buenaventura similarly demonstrates how private concessions and operational continuity can drive incremental productivity gains even amid difficult geographic and access constraints. Chile itself, whose reforms influenced much of the region, provides a particularly instructive case. While new projects are sometimes competitively tendered, practice has often been pragmatic rather than doctrinaire. Performance-tied extensions have been granted where operators meet investment and service obligations. At San Antonio, for example, the principal terminal's concession was extended conditional on additional commitments, even as larger expansion projects proceeded through separate competitive processes (e.g., mega-projects like the Outer Port with offers due in January 2026 and adjudication in March 2026<sup>16</sup>). This flexible approach combines competition where it adds value with continuity where performance is already strong.

Taken together, these examples suggest a consistent pattern. High-performing ports, whether measured by CPPI rankings, throughput growth, or transshipment efficiency, frequently operate under stable concession regimes that reward sustained investment and operational learning. Extensions, when conditioned on operational performance, updated obligations, and regulatory oversight, can reinforce rather than undermine competition. In markets where reliability and speed determine carrier choices, continuity often preserves the competitive advantages built over many years.

### **Counterargument 1: The Hidden Costs of New Tenders**

One of the most compelling reasons to consider merit-based extensions alongside re-tendering lies in the substantial direct and indirect costs, both financial and temporal, that governments incur when launching a full competitive bidding process for a port concession. These burdens are often underestimated because they are dispersed across agencies, consultants, and multi-year administrative cycles rather than appearing as a single line item in a budget. In practice, however, they can be significant and, for high-performing concessions, may outweigh the theoretical benefits of fresh competition.

A particularly underappreciated component of these costs is the internal time commitment required from government staff. Complex concession tenders demand sustained involvement from planners, engineers, lawyers, economists, and regulators across multiple agencies. In many port authorities, regulatory agencies, or transport ministries, these same professionals are also responsible for day-to-day oversight of existing concessions, safety and environmental compliance, corridor planning, and broader logistics policy. When a re-tender is launched, a small pool of experienced staff can be tied up for months, or even years, preparing documents, responding to bidder inquiries, evaluating proposals, and managing approvals. The result is not

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<sup>16</sup> PortalPortuario, "EPSA da inicio al proceso de licitación para obras del proyecto Puerto Exterior San Antonio", 21 Enero 2025, available at <https://portalportuario.cl/epsa-da-inicio-al-proceso-de-licitacion-para-obras-del-proyecto-puerto-exterior-san-antonio/>.

simply a financial expense, but a significant diversion of scarce institutional capacity away from other priorities. In practice, this opportunity cost can exceed external advisory fees.

The process begins well before any tender is formally issued.<sup>17</sup> Governments must first prepare or update master plans that define future infrastructure needs, capacity expansions, and development priorities. These plans are not conceptual exercises; they form the basis for binding investment obligations that bidders must price into their proposals. Closely tied to this is a detailed financial and tariff analysis to estimate costs, revenues, and feasible concession fees or royalties. Without this groundwork, the tender risks being either unattractive to qualified bidders or misaligned with public objectives.

Preparation of tender documentation itself requires substantial effort. Information memoranda must assemble extensive technical, operational, legal, and environmental data. Draft concession contracts and bid specifications must be prepared and vetted. In practice, these tasks almost always require external legal, engineering, and financial advisers, often at considerable expense.

Time further amplifies these costs. Pre-qualification rounds, regulatory approvals, bidder outreach, site visits, clarification processes, and final evaluations can stretch over many months. Clarifications frequently require addenda or deadline extensions. After award, negotiations and additional approvals may follow. In many jurisdictions, the full cycle from preparation to financial close can span 18–24 months or more.

During this period, the incumbent operator continues to run the facility but faces reduced incentives to undertake major capital expenditures given uncertainty around renewal. Management attention shifts toward procedural compliance rather than modernization. Strategic investments may be deferred. These opportunity costs (lost time, delayed improvements, and institutional distraction) are rarely captured in formal comparisons of tender versus extension but are very real in practice.

The typical components of a re-tendering process are summarized in Table 1.

**Table 1. Typical Components and Costs of a Port Re-Tendering Process**

Stage	Activities	Typical Timeframe	Typical Cost/Impact
Planning & diagnostics	Master plan updates, demand forecasts, engineering studies, tariff/financial modeling	6–9 months	Consultant fees; staff time; delayed decision-making
Transaction preparation	Information memorandum, data room, draft contracts, legal structuring	4–6 months	Legal/technical advisers; often millions of dollars for complex ports
Pre-qualification	Eligibility criteria, submissions, evaluation	3–5 months	Administrative burden; limits bidder pool

<sup>17</sup> The World Bank suggests governments should examine their options at least three years prior to the expiration of the concession contract. See World Bank, *Port Reform Toolkit*, Module 4: Private Sector Participation, p. 45, available at <https://openknowledge.worldbank.org/server/api/core/bitstreams/d91f5bbc-5ad2-44b3-819c-5ab33c7b084f/content>.

Stage	Activities	Typical Timeframe	Typical Cost/Impact
Marketing & bidding	Roadshows, site visits, Q&A, bid preparation	3–6 months	Promotion costs; bidder expenses; timeline extensions
Evaluation & approvals	Technical/financial review, regulatory scrutiny, negotiations	3–6 months	Additional advisers; procedural delays
Transition & handover	Asset inspections, staffing changes, system migration	6–12 months (overlapping)	Operational risk; productivity dips; deferred investment
Government oversight burden	Inter-agency coordination, documentation review, responses to bidders, approvals, monitoring	Continuous (18–30+ months)	Diversion of scarce regulatory capacity; delayed planning and oversight of other assets
<b>Total cycle</b>	—	<b>18–30+ months</b>	<b>Multimillion-dollar transaction costs + opportunity costs</b>

These transaction costs, including advisory fees, regulatory delays, and foregone investment, represent significant drains on public resources, particularly in capital-constrained environments. Studies of port PPPs and concession programs in Latin America and elsewhere have noted that lengthy procurement cycles can deter bidders, reduce effective competition, and create temporary performance dips during transitions.<sup>18</sup>

By contrast, performance-conditioned extensions can often achieve similar or better outcomes (e.g., updated investment commitments, revised royalties, and stronger KPIs) at a fraction of the cost and time. They allow governments to focus scarce institutional capacity on oversight and strategic planning rather than repeatedly recreating complex procurement exercises.

For high-performing concessions, the trade-off is particularly stark. Disrupting a proven operator through a full re-tender risks undermining momentum, while a carefully structured extension can preserve continuity and incentivize continued capital expenditure without sacrificing accountability.

### **Counterargument 2: The Value of Institutional Relationships, Operational Knowledge, and Workforce Continuity**

A second major advantage of merit-based extensions lies in preserving the institutional relationships and operational knowledge that incumbent concessionaires accumulate over decades—assets that are difficult to quantify but fundamental to performance. Port operations depend not only on physical infrastructure and equipment, but also on embedded networks of trust, coordination, and experience developed among

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<sup>18</sup> Studies of port PPPs and concession programs consistently note that procurement processes can be lengthy, resource-intensive, and transaction-cost heavy, often requiring substantial public-sector staffing, specialized advisors, and extended preparation and negotiation periods. Such complexity can discourage bidder participation and weaken effective competition, while poorly managed handovers may create costly and operationally disruptive transition periods. See World Bank, *Port Reform Toolkit, Module 4: Private Sector Participation* (noting the complexity, transaction costs, and time required for tendering and negotiation, and the need for dedicated public capacity and transition programs to ensure continuity of service); also, World Bank, *Project Procurement Strategy for Development (PPSD): Long Form Detailed Guidance, 2025* (both highlighting how protracted procurement cycles can deter bidder participation and reduce competitive tension).

terminal operators, shipping lines, regulators, service providers, and the local workforce. These forms of “institutional capital” are built gradually and can be disrupted quickly. Mandatory re-tendering risks erasing this accumulated knowledge, imposing learning curves and transition frictions precisely when reliability and speed are most valued.

Incumbent operators typically maintain long-standing commercial relationships with major carriers and alliances. These relationships facilitate berth planning, schedule coordination, equipment deployment, and rapid resolution of operational issues. In transshipment environments in particular, where carriers can shift volumes across competing hubs with minimal switching costs, performance depends heavily on trust and predictability. Established working relationships reduce disputes over service levels, enable collaborative planning for peak periods, and reinforce the port’s reputation for reliability. A change in operator may require carriers to reassess commitments, introducing commercial uncertainty and, in some cases, the loss of discretionary volumes.

Similar considerations apply to regulatory and community interfaces. Experienced operators develop familiarity with local permitting processes, environmental compliance requirements, customs procedures, hinterland logistics constraints, and communities where the terminal is operated and terminal employees live. This tacit knowledge and relationships shorten approval timelines and reduces operational friction. During transitions, new entrants must recreate these relationships from scratch, often resulting in delays, misunderstandings, or temporary inefficiencies. Empirical experience in Latin America and elsewhere suggests that throughput can decline during handovers as new management teams adapt to local conditions and rebuild coordination mechanisms.

An often-underappreciated component of this institutional continuity concerns the workforce itself. Despite advances in automation, ports remain labor-intensive environments requiring specialized skills, operational judgment, and strict adherence to safety procedures. Crane operators, yard planners, maintenance technicians, and supervisors acquire experience over years, not months. When concessions approach expiration, uncertainty regarding employment terms, compensation, and retention can prompt skilled workers to seek alternative opportunities well before a handover occurs. Even in non-unionized settings, the absence of guaranteed continuity may lead to attrition, lower morale, or productivity declines during the transition period. New operators, however capable, must then recruit, train, and integrate replacement staff while maintaining service levels, precisely when operational stability is most critical.

Viewed through an economic lens, this accumulated human capital represents another form of sunk, relationship-specific investment. Disrupting it imposes real costs: recruitment expenses, training time, learning curves, and elevated operational risk. Extensions, by contrast, preserve established teams while still allowing governments to require enhanced training standards, safety metrics, and workforce development commitments. In this sense, workforce stability is not merely a social consideration, but an operational asset that supports reliability and efficiency.

Proponents of periodic re-tendering can argue that new entrants will introduce fresh ideas and prevent complacency. While this may be true in some contexts, continuity need not imply stagnation. Concession extensions can be structured to mandate technology upgrades, digitalization, environmental performance improvements, and revised commercial terms, ensuring that incumbents continue to innovate while preserving the institutional knowledge that underpins day-to-day performance. Chile’s pragmatic approach—

combining competitive tenders for new developments with extensions for well-performing terminals—illustrates that accountability and continuity are not mutually exclusive.

Ultimately, institutional memory, established relationships, and workforce continuity function as productive assets that lower transaction costs, enhance resilience during shocks, and sustain the operational momentum built over years of investment. Disrupting these assets through mandatory re-tendering may generate theoretical competitive benefits, but it can also impose avoidable transition costs that undermine precisely the efficiency gains that concession policy seeks to achieve. Merit-based extensions, conditioned on transparent performance criteria and updated obligations, allow governments to retain these advantages while maintaining oversight and competitive discipline.

### **Counterargument 3: Investment Recovery, Capital Cycles, and Long-Term Incentives**

The third key reason to consider merit-based extensions arises from a foundational principle of infrastructure economics: investors must have a reasonable opportunity to recover sunk capital over the productive life of long-lived assets. Ports are among the most capital-intensive elements of national logistics systems. Berths, dredging works, quay cranes, yard equipment, gates, and digital operating systems routinely require hundreds of millions of dollars in upfront expenditure, while their economic lives extend twenty to forty years or more.

When concession terms are short or renewal is highly uncertain, these investment characteristics create what the economics literature describes as the classic “hold-up” problem.<sup>19</sup> Because late-stage investments may yield benefits that accrue primarily to a successor rather than to the incumbent operator, firms rationally hesitate to commit additional capital as expiration approaches. The result is not typically visible deterioration, but rather incremental underinvestment: modernization projects are postponed, replacement cycles are extended, and capacity upgrades are deferred.

In operational terms, this theoretical mechanism manifests as what practitioners commonly observe as an end-of-term slowdown. As the remaining concession horizon shortens, capital planning becomes increasingly defensive. Operators prioritize short-term cash preservation and operating margins over longer-horizon improvements whose returns may not be fully realized before handover. Governments may then inherit facilities requiring catch-up investment, while prospective bidders factor anticipated rehabilitation costs into lower offers or reduced participation. Ironically, the very process intended to refresh competition can leave assets less attractive and more expensive to modernize.

By contrast, when operators have credible confidence that strong performance can lead to renewal or extension, investment incentives change fundamentally. Capital planning becomes continuous rather than cyclical. Projects are evaluated based on operational need and economic return rather than on arbitrary concession deadlines. In effect, performance-based extensions align private incentives with public objectives by encouraging steady reinvestment instead of periodic resets.

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<sup>19</sup> The “hold-up” problem is a standard result of incomplete-contracts theory: when investments are sunk and not fully contractible, parties anticipate ex post bargaining and consequently underinvest. See Engel, E., Fischer, R., and Galetovic, A. (2006), *Renegotiation Without Holdup: Anticipating Spending and Infrastructure Concessions*, NBER Working Paper No. 12399. For applications in the port and terminal concession context, see Theys, C., and Notteboom, T. (2010), *Determining Terminal Concession Durations in Seaports: Theoretical Considerations, Applicable Techniques and Current Practices*, *Journal of International Logistics and Trade*, 8(1): 13–40; and Trujillo, L., and Nombela, G. (1999), *Privatization and Regulation of the Seaport Industry*, World Bank Policy Research Working Paper 2181.

This logic can be illustrated through a simplified investment lifecycle typical of a medium-sized container terminal, shown in Table 2. The comparison highlights how uncertainty compresses investment into the early years of a concession while discouraging spending precisely when assets begin to age and require renewal.

**Table 2. Illustrative Port Investment Lifecycle Under Alternative Renewal Scenarios**

Year of Concession	Typical Investment Activity	Annual Capex (illustrative)	Incentive if Renewal Uncertain	Incentive if Extension Possible
Years 1–5	Initial build-out, cranes, yard equipment	\$150–250M	Invest (early recovery period)	Invest
Years 6–10	Capacity optimization, IT systems, incremental upgrades	\$40–60M/year	Invest	Invest
Years 11–15	Major expansion (berth deepening, new cranes)	\$200–300M	Invest cautiously	Invest confidently
Years 16–20	Asset replacement & modernization	\$50–80M/year	Defer or minimize	Continue investing
Years 21+	Long-life assets still productive	—	Benefits captured by successor	Benefits captured by incumbent/public

Result:

- Uncertain renewal leads to back-loaded underinvestment and asset “sweating”
- Performance-based extension enables steady reinvestment and sustained modernization

This pattern is not unique to ports; it is widely documented across infrastructure sectors characterized by large sunk costs and long asset lives. Where payback horizons exceed the remaining concession term, rational investors postpone spending. The consequence is a cycle of heavy early investment followed by late stagnation -- the opposite of efficient asset stewardship.

Performance-conditioned extensions offer a pragmatic remedy. By linking renewal to measurable outcomes such as throughput targets, service standards, environmental performance, and new capital commitments, governments can maintain accountability while preserving the predictability necessary for continued reinvestment. The objective is not to guarantee tenure, but to ensure that economically justified projects proceed without delay.

In capital-constrained environments, where private investment remains the primary enabler of port modernization, maintaining these incentives is especially important. A policy framework that inadvertently discourages late-cycle capital expenditures risks slowing precisely the improvements that concession programs were designed to deliver.

**Conclusion: Toward a Pragmatic, Performance-Based Framework for Concession Renewal**

Three decades after Latin America helped establish the modern landlord-concession model, the central achievement of those reforms is difficult to dispute. Across the region, private participation mobilized capital,

accelerated modernization, and delivered productivity gains that public budgets alone could not have financed. Terminals that once struggled with congestion and chronic underinvestment became competitive nodes in global supply chains. The success of ports such as San Antonio, Valparaíso, Cartagena, Santos, and others illustrates how sustained private stewardship, combined with regulatory oversight, can transform infrastructure performance over time.

Today, however, many of those first-generation concessions are reaching maturity. The policy challenge confronting governments is no longer how to attract private investment for the first time, but how to manage the renewal of assets that are already operating efficiently. In this context, the debate over extensions versus mandatory re-tendering is sometimes framed too starkly as a choice between competition and continuity. The analysis in this paper suggests that such binary framing is misleading.

Retendering remains an important governance instrument. Competitive bidding can test market valuations, refresh contractual terms, and provide discipline where performance has lagged. Yet it is not costless. Full re-tendering entails substantial transaction expenses, lengthy preparation timelines, and operational risks during handovers. It can disrupt established commercial relationships, dissipate institutional knowledge, unsettle skilled workforces and, perhaps most importantly, discourage investment late in the concession cycle through the well-documented hold-up effect. In ports where assets are long-lived and service reliability is paramount, these frictions can outweigh the theoretical gains from operator turnover.

By contrast, merit-based extensions, when properly conditioned and transparently administered, can preserve the strengths that successful concessions have built over time. Continuity supports steady capital reinvestment rather than cyclical spending patterns. It protects embedded operational knowledge and workforce capabilities that underpin productivity. And it avoids avoidable transition risks in environments, particularly transshipment traffic, where traffic is mobile and performance differences are quickly penalized by the market. Importantly, extension does not imply complacency. Renewal decisions can and should incorporate updated obligations, stronger performance targets, and revised commercial terms that reflect current market conditions.

The choice, therefore, is not between competition and continuity, but between rigid rules and pragmatic policy design. Extensions and re-tendering are complementary tools within the same regulatory toolkit. Where operators have underperformed, failed to invest, or abused market power, re-tendering may be the appropriate course. Where operators have delivered sustained efficiency, met contractual commitments, and operated within competitive port systems, renewal may better serve the public interest. In practice, the appropriate choice should be informed by a case-specific economic assessment comparing the full public costs of re-tendering -- including transaction, transition, and incentive effects -- against the negotiated terms of a performance-conditioned extension.

For policymakers, the guiding principle should remain performance. Concession regimes function best when they reward results, maintain contestability, and align private incentives with long-term public objectives. A transparent, criteria-based renewal framework, grounded in audits, measurable outcomes, and updated commitments, can achieve those goals while preserving the momentum that has characterized the most successful port reforms.

As the next wave of concession expirations approaches in Colombia, Chile, and elsewhere, governments face not a test of orthodoxy, but of judgment. The legacy of Latin America's port reforms demonstrates that

thoughtful institutional design is a prerequisite for concession success. Applying that same pragmatism to concession renewal can ensure that high-performing ports continue to invest, innovate, and compete -- sustaining the gains of the past concession generation while preparing for the next.

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