

Assessing Public-Private Partnerships at Aden Container Terminal Using SWOT Analysis

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Abstract:

Private Sector Participation (PSP) in port operations has emerged as a pivotal strategy worldwide, aimed at enhancing efficiency, promoting investment, and fostering competitiveness in the maritime industry. In the context of Aden container terminal, a crucial gateway for trade and commerce in the region, the exploration of Private Sector Participation presents both opportunities and challenges.

This study aims to evaluate the influence of Public-Private Partnerships (PPP) on bolstering the competitiveness of the Aden Container Terminal. Additionally, it seeks to assess the current status, propose remedies for existing shortcomings, and pinpoint the causes of inefficiencies. This research can be classified as an inductive research approach. This research aims to enhance the competitive position of Aden container terminal and achieving sustainability impact through participating private sector in port's activities. In this context, this research is limited to Aden container terminal for the year 2023; using SWOT analysis.

Keywords: Public-Private Partnerships, Aden Container Terminal, SWOT, Yemen.

تقييم الشراكة بين القطاعين العام والخاص في محطة حاويات عدن باستخدام تحليل SWOT

الملخص :

برزت مشاركة القطاع الخاص في عمليات الموانئ كاستراتيجية محورية في جميع أنحاء العالم، تهدف إلى تعزيز الكفاءة، وتشجيع الاستثمار، وتعزيز القدرة التنافسية في الصناعة البحرية. وفي سياق محطة حاويات عدن، وهي بوابة مهمة للتجارة والتبادل التجاري في المنطقة، فإن استكشاف مشاركة القطاع الخاص يمثل فرصًا وتحديات.

تهدف الدراسة إلى تقييم تأثير الشراكة بين القطاعين العام والخاص على تعزيز القدرة التنافسية لمحطة حاويات عدن. بالإضافة إلى ذلك، فهو يسعى إلى تقييم الوضع الحالي، واقتراح علاجات لأوجه القصور الموجودة، وتحديد أسباب عدم الكفاءة. يمكن تصنيف هذا البحث على أنه منهج بحث استقرائي. يهدف هذا البحث إلى تعزيز المكانة التنافسية لمحطة حاويات عدن وتحقيق أثر الاستدامة من خلال مشاركة القطاع الخاص في أنشطة الميناء. وفي هذا السياق يقتصر هذا البحث على محطة حاويات عدن لعام ٢٠٢٣؛ باستخدام تحليل SWOT.

الكلمات المفتاحية: الشراكة بين القطاعين العام والخاص، محطة عدن للحاويات، نقاط القوة والضعف والفرص والتهديدات، اليمن.

1. Introduction:

Sea Ports have played a crucial role in both national economic growth and international trade, as the majority of goods exchanged between nations are transported via maritime vessels (Cong, Zhong, Wang, Xu, & Li, 2020). Nevertheless, seaports have encountered significant competition, as evidenced by the rising number of acquisitions and mergers within the industry (Garcia-Alonso, Monios, & Vallejo-Pinto, 2019). This heightened competition is primarily driven by factors such as the increasing globalization, containerization, market integration, and the global redistribution of capital and labor. Consequently, these trends have substantially altered the governance, operation, and competitiveness of seaports, particularly container ports (Ismail, 2019).

The shipping industry has become highly competitive due to factors like intense competition, high capital requirements, and heavy reliance on global economic conditions and oil prices. This has led to three major trends in the container shipping sector (Haralambides, 2019): a growing demand for larger container vessels, the formation of container shipping alliances, and the adoption of slow steaming. Container ship sizes have notably expanded over the past two decades, with the largest containerships now reaching capacities of up to 24,000 TEUs, exemplified by vessels like the Evergreen container ship (Garrido, Sauri, Rua, Marrero, & Gul, 2020). Consequently,

ports need to enhance their competitive standing by attracting these larger vessels.

Port competition has surged in recent years, shaped by various dynamic forces. Strategic planning has become crucial for survival and success, with competitiveness analysis being a key aspect of such planning. Many countries have turned to private sector partnerships to support port operations (Kang, Mulaphong, Hwang, & Chang, 2018), ensuring financial backing for development and enhancement initiatives, particularly in container ports. These partnerships aim to improve the efficiency and performance of container terminals, elevate their competitiveness, and ensure their sustainability.

Various types of partnerships with the private sector have emerged, tailored to the specific needs and circumstances of each country. Among these, Landlord Public-Private Partnerships (PPPs) have become widespread and extensive (Chechurina & Grin, 2020).

The importance of private sector participation:

Many developing countries, in particular, are grappling with inefficiencies in their public service facilities and infrastructure. These inefficiencies stem from significant output losses and suboptimal labor utilization, compounded by various challenges in governmental management such as administrative complexities, a lack of technical expertise, low wages,

insufficient independence, ineffective anti-corruption mechanisms, and environmental degradation due to neglectful maintenance and management practices (Tamošaitienė, Sarvari, Chan, & Cristofaro, 2020).

In response to limited financial resources and a desire to streamline the state's role for optimal efficiency, many developing nations have increasingly turned to outsourcing public projects and infrastructure initiatives to the private sector. This trend has been spurred by the success stories of developed countries in establishing partnerships between the public and private sectors to deliver infrastructure services effectively (Gantman & Fedorowicz, 2020).

The rationales and incentives for partnering with the private sector can be summarized as follows:

1. **Government Inefficiency:** Public sector inefficiencies often lead to high costs and declining quality in service delivery, resulting in citizen dissatisfaction. Private sector participation can improve efficiency through better management, operation, and competition (Dron, Gaebler, & Roesel, 2021).

2. **Economic Growth and Competitiveness:** Infrastructure facilities are crucial drivers of economic growth and global competitiveness. Given the substantial investments required and the limitations of state resources and administrative capacity, private

sector involvement is essential for enhancing the efficiency and expansion of these facilities (Jones & Bloomfield, 2020).

3. Financial Relief: Partnering with the private sector helps alleviate the financial burden on governments by diversifying funding sources and reducing public expenditure (Xie, Zhao, Chen, & Allen, 2022).

4. Attracting Investments: Private sector participation attracts both domestic and foreign investments, fostering economic development and project sustainability (Haralambides, 2019).

5. Technology Transfer: Collaboration with the private sector facilitates the transfer of advanced technology and modern management practices, benefiting from the expertise of both national and foreign investors (Smith & Hensher, 2020).

6. Time and Cost Efficiency: Private sector involvement streamlines project implementation, reduces time and costs, and transfers risks to entities capable of managing them (Cherkos, Jha, & Singh, 2020).

7. Enhanced Operational Efficiency: Private sector flexibility allows for quicker responses to consumer needs and more agile decision-making, factors often lacking in government administration. However, this may lead to reduced government employment opportunities and potential negative impacts on tax revenue (Akopova, Przhedetskaya, Przhedetsky, & Borzenko, 2020).

In summary, private sector participation in infrastructure projects offers numerous benefits, including improved efficiency, increased investment, technological advancements, and reduced financial burdens on governments.

2. Literature review:

Partnership agreements between the public and private sectors have emerged as crucial prerequisites for societal transformations due to their pivotal role in fostering local development, facilitating sophisticated project implementation, and aligning with global shifts. This issue has garnered significant attention on a global scale, as economic and social progress hinges on leveraging the collective capabilities of society, including its energies, experiences, and resources, with institutional organizations actively participating in project operation and management (Abood, 2016).

Public-private partnerships (PPPs) serve as a mechanism through which governments can procure and execute public infrastructure and services by leveraging the resources and expertise of the private sector. In situations where governments grapple with aging or insufficient infrastructure and seek more efficient service delivery, collaboration with the private sector can engender innovative solutions and provide financial support (WorldBank, 2022).

Several studies have delved into the dynamics and implications of Public-Private Partnerships (PPPs) in various sectors, including infrastructure projects and port management. These studies offer valuable insights into the effectiveness, challenges, and potential of PPPs in different contexts.

For instance, (Lopes, et al., 2021) conducted a case study on the Tibar Bay Port in Timor-Leste, focusing on assessing the performance of PPPs in the country. Through interviews and analysis of contract documents, they explored the legal framework, influencing factors, and application of PPPs in infrastructure projects. The study highlighted the readiness of the Timor-Leste government for PPP implementation but also revealed challenges regarding private sector engagement.

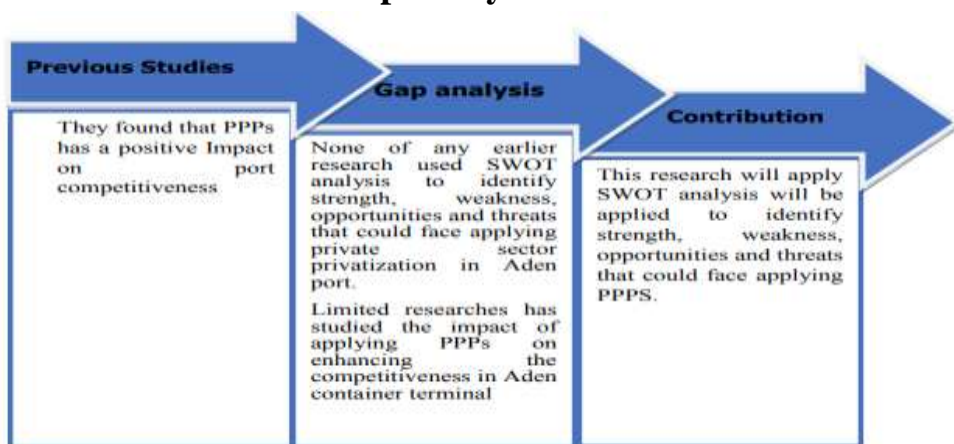
(Estruch, 2021) analyzed PPPs in transportation projects across the Caribbean, evaluating their adherence to good practices and benefits to the public sector. Despite improvements, issues like legal compliance and limited market engagement persist, affecting risk management and overall effectiveness. (Chechurina & Grin, 2020) examined PPPs in port management globally, emphasizing the underutilization of PPPs in Russia. They advocated for leveraging international best practices, particularly the Landlord model endorsed by organizations like the World Bank, to enhance port development in Russia. Meanwhile, (CELIK & UMAR, 2020) explored the impact of PPPs on

Nigerian seaports, specifically the APAPA Ports complex in Lagos. Their study revealed significant improvements in port efficiency and operations following the transfer of terminal management to private entities, highlighting the positive outcomes of port reforms in Nigeria.

Finally, (Malek & Gundaliya, 2020) focused on value for money (VFM) in Indian PPP road projects, identifying and evaluating VFM factors through questionnaire surveys and factor analysis. Their research aimed to enhance decision-making regarding PPP procurement by providing insights into VFM considerations.

Collectively, these studies underscore the diverse applications and implications of PPPs in infrastructure development and management, highlighting opportunities for improvement and best practices for future implementations.

Research Gap Analysis and Contribution



3. Research problem:

The establishment of the Aden Container Terminal marked a significant milestone in private sector partnerships within the maritime industry. Initially, the construction and operation of the terminal were entrusted to a private sector partnership under the Build-Operate-Transfer (BOT) model. However, this partnership was short-lived. Three years after its initiation, the initial collaboration with the private sector concluded. Subsequently, the terminal engaged in a new form of cooperation with the private sector, adopting the Landlord model for its operation and management and also has failed to continue. Hence it is necessary to investigate the reasons beyond the PPP experience failures through the application of SWOT analysis.

4. Research aim and objective:

This study aims to evaluate the influence of Public-Private Partnerships (PPP) on bolstering the competitiveness of the Aden Container Terminal. Additionally, it seeks to assess the current status, propose remedies for existing shortcomings, and pinpoint the causes of inefficiencies.

The findings of this research will provide valuable insights for decision-makers contemplating collaboration with the private sector, allowing them to capitalize on successful precedents from other ports. The primary objective is to conduct a comprehensive analysis of the strengths, weaknesses, opportunities, and threats

associated with the implementation of private sector involvement at Aden port.

5. Research methodology:

To enhance the competitiveness of Aden container terminal; researcher identifies strength, weakness, opportunities and threats that could face applying private sector privatization in Aden port using SWOT analysis.

This research can be classified as an inductive research approach. This research aims to enhance the competitive position of Aden container terminal and achieving sustainability impact through participating private sector in ports. In this context, this research is limited to Aden container terminal for the year 2023; using SWOT analysis.

6. Empirical analysis:

Absolutely, conducting a SWOT analysis can indeed provide valuable insights into the feasibility and potential success of implementing Public-Private Partnerships (PPPs) at the Aden Container Terminal. Below is an outline of how a SWOT analysis could be applied to assess the situation:

Strength (Internal Factors):

- The strategic geographical location of the port of Aden enhances its significance, particularly due to its proximity to major international shipping routes that connect key global trade hubs between the East and the West.

- The port benefits from being a natural and year-round protected harbor, immune to seasonal wind patterns or climate disruptions, ensuring continuous operation.
- Historically, the port of Aden has been a prominent maritime supply center on a global scale, a status that could be revitalized with the availability of supportive factors.
- The port boasts a skilled and cost-effective workforce capable of executing tasks with proficiency and efficiency.
- It hosts the largest and sole container terminal in the Republic of Yemen, equipped with state-of-the-art facilities that contribute to high operational efficiency.
- The container terminal operates using advanced Terminal Operating Systems (TOS), optimizing its efficiency and performance.
- The legislative and procedural framework within the container terminal facilitates partnerships with the private sector, built on a foundation of collaboration with private entities.
- The container terminal's attractiveness to specialized private sector firms is amplified by the aforementioned factors, as well as the Chinese government's interest in projects like the Silk Road, which recognizes the strategic importance of the port of Aden.
- The container terminal at the port of Aden benefits from exemptions from customs and tax regulations by being situated within the geographic boundaries of a free zone, availing it of the advantages conferred by free zone legislation.
- The distance of the Aden container terminal from urban centers positions it favorably for autonomous management of business and service activities, potentially fostering greater collaboration between the government and private sectors in its management and operation, provided other supporting factors are in place.

Weaknesses (Internal Factors):

- Since 2011, the port of Aden has experienced disruptions in service and commercial activities due to security and political instability, exacerbated by the summer war in 2015 and its ongoing repercussions.
- The port's operations were significantly impacted by the closure of land routes to local markets and population centers, leading to a twofold increase in overland transportation costs for shipments destined for the northern and central regions of Yemen from the port of Aden.
- Implementation of a second customs duty in areas controlled by the Houthi group on shipments originating from the seaport in Aden resulted in a doubling of shipping costs through the port.
- Levying duties and tolls on trucks transporting commercial shipments along the road from the port of Aden to various regions of Yemen, including those under legitimate government control, has added to logistical costs.
- Industrial activities related to export and re-export have come to a halt due to the war and political instability, leading to heightened container transport expenses, particularly as inbound containers often return empty.
- The lack of security and political stability resulting from the war has weakened administrative discipline.
- Many workers at the port have transitioned to lighter duties due to work-related injuries and aging, with no strategic plan in place for workforce management and competency-based hiring.
- Limited navigational and pier depths at the port of Aden pose challenges, especially in light of advancements in container activity globally and in the Red Sea region.

- Equipment limitations, including insufficient wharf and yard storage equipment, further hinder port operations.
- Restricted storage areas and inadequate electricity connections for refrigerated containers present additional logistical challenges.

Threats External Factors:

- The ongoing security and political instability in Yemen pose a significant risk to commercial and service operations, particularly in the port of Aden.
- Heightened security concerns in the Red Sea region, compounded by escalating conflicts with the Houthi group and a lack of progress towards peace, are likely to result in increased maritime transportation costs to Yemeni ports.
- The presence of modern container terminals in neighboring countries incentivizes many Yemeni importers to bypass Aden port, opting instead to utilize these facilities and transport goods overland to Yemeni markets.
- The closure of key land routes and the imposition of customs duties by the Houthi group on shipments originating from Aden port to their controlled areas effectively doubles shipping costs through the port.
- The continued operation of Hodeidah port without access to local markets and population centers via land routes from Aden port further exacerbates the cost disparity between the two ports in favor of Hodeidah.
- Currency depreciation against the US dollar in government-controlled areas mirrors similar exchange rate challenges in areas controlled by the Houthi group.

- With non-payment of salaries and deteriorating living conditions due to the ongoing war and absence of a political settlement, the recession deepens, reducing demand for goods and impacting commercial activities in Aden city and its port.
- Persistent security and political instability complicate efforts to establish partnerships with specialized private sectors for infrastructure development projects at Aden port, particularly the container terminal.
- Decreased import activities through Aden port, coupled with challenges such as Hodeidah port's reopening, road closures, higher maritime shipping fees, and currency instability, pose significant threats to port operations.

Opportunities External Factors:

- The strategic location of the port of Aden presents a valuable opportunity that can be leveraged with the presence of other favorable factors.
- The announcement of peace in Yemen and the subsequent power-sharing agreements among conflicting authorities since 2011 provide a favorable environment for stability and development.
- Granting administrative independence to the port of Aden, thereby neutralizing it from conflicts and government interventions, presents an opportunity for streamlined operations and enhanced efficiency.
- Developing a comprehensive strategic plan for the governance of Aden will support the city's service and commercial activities, facilitating long-term growth and development over the next twenty-five years.
- Designating the city of Aden as a free zone with autonomous

management will stimulate commercial activity and consolidate the port's role in facilitating imports and re-exports.

- Improving infrastructure by opening roads and establishing dedicated transportation routes for shipments from the port of Aden to local market centers will streamline logistics and reduce both time and costs.
- Strengthening customs operations and transitioning to a single-window system in collaboration with the port of Aden and relevant stakeholders will enhance efficiency and facilitate smoother trade processes.
- Consolidating security operations at the port of Aden, particularly the container terminal, by integrating disparate entities into a specialized and well-trained unified force will enhance security measures and mitigate risks.

7. Conclusion:

The analysis above has brought to light certain weaknesses and potential threats that need to be addressed, as they could compromise the effectiveness of opportunities and undermine sources of strength. These factors pose obstacles to leveraging development opportunities for the Aden Container Terminal. To overcome these challenges, it is imperative to engage in partnerships with specialized sectors, ensuring access to adequate funding and expertise to support strategic initiatives. By implementing these plans, efforts can be directed towards

enhancing development projects and bolstering the competitiveness of the Aden Container Terminal.

Henceforth, the researcher advocates for the implementation of essential strategies by the management of the Port of Aden to bolster its competitiveness. From the researcher's standpoint, two pivotal strategies are deemed necessary: a defensive strategy and a remedial strategy, to be executed concurrently. The defensive strategy will harness strengths to counteract threats, whereas the remedial strategy will target weaknesses and capitalize on existing opportunities. This approach is envisaged to fortify and elevate the stature of Aden Container Terminal, both on the domestic front and in the international arena.

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