

Driving Maritime Progress: The Role of the Penang Port Commission in the Infrastructure Development of Penang Port, 1956–1980

Memacu Kemajuan Maritim: Peranan Suruhanjaya Pelabuhan Pulau Pinang dalam Pembangunan Infrastruktur Pelabuhan Pulau Pinang, 1956–1980

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ABSTRACT - The Penang Port Commission (PPC), established on 1 January 1956 under the Penang Port Commission Act 1955, represents a pivotal moment in the administration and development of Penang Port. While Penang had long been recognized for its strategic location since its founding in 1786, the development of the port's infrastructure was relatively limited compared with other regional ports, such as Singapore. The need to modernize and expand Penang Port became increasingly urgent after the independence of Malaya in order to accommodate growing international trade demands. This study examines the role of PPC in advancing the infrastructural development and operational modernization of Penang Port between 1956 and 1980. This study employs a qualitative historical approach based on documentary analysis, supported by descriptive statistical data derived from annual reports, official records, and legislative documents. The study reveals that PPC played a crucial role in improving Penang Port's facilities, expanding berthing capacity, initiating mechanized and container handling systems, as well as improving logistical efficiency. The significant increase in cargo throughput and container traffic, which was contributed by PPC's initiatives, reflects Penang Port's transformation into a competitive maritime gateway in northern Malaysia. The study concludes that the strategic planning and infrastructural investments by PPC facilitate trade expansion and operational growth, laying the foundation for Penang Port's continued relevance in Malaysia's maritime economy.

ABSTRAK – Penubuhan Suruhanjaya Pelabuhan Pulau Pinang (PPC) pada 1 Januari 1956 di bawah Akta Suruhanjaya Pelabuhan Pulau Pinang 1955 merupakan satu titik perubahan dalam pentadbiran dan pembangunan Pelabuhan Pulau Pinang. Walaupun Pulau Pinang telah lama diiktiraf kedudukannya yang strategik sejak penubuhannya pada tahun 1786, pembangunan infrastruktur pelabuhannya di bawah pentadbiran kolonial adalah terhad berbanding dengan pelabuhan serantau lain seperti Singapura. Selepas kemerdekaan Persekutuan Tanah Melayu pada tahun 1957, keperluan untuk memodenkan dan memperluaskan Pelabuhan Pulau Pinang menjadi semakin mendesak bagi memenuhi tuntutan perdagangan antarabangsa yang semakin meningkat. Kajian ini meneliti sumbangan PPC terhadap pembangunan infrastruktur dan pemodenan operasi Pelabuhan Pulau Pinang antara tahun 1956 hingga 1980. Dengan menggunakan pendekatan kualitatif, kajian ini memanfaatkan kaedah analisis dokumen serta interpretasi sumber primer dan sekunder, termasuk laporan tahunan dan dokumen rasmi kerajaan. Hasil kajian menunjukkan bahawa PPC memainkan peranan penting dalam memperkukuh kemudahan pelabuhan, memperluaskan

kapasiti dermaga, memperkenalkan sistem pengendalian kargo dan kontena, serta meningkatkan kecekapan logistik. Inisiatif ini secara langsung menyumbang kepada peningkatan ketara dalam jumlah kargo dan trafik kontena, sekali gus mencerminkan transformasi Pelabuhan Pulau Pinang sebagai pintu masuk maritim yang berdaya saing di utara Malaysia. Kajian ini menyimpulkan bahawa perancangan strategik dan pelaburan infrastruktur oleh PPC merupakan pemacu utama kepada perkembangan perdagangan dan pertumbuhan operasi, serta meletakkan asas kepada kesinambungan peranan Pelabuhan Pulau Pinang dalam ekonomi maritim Malaysia.

Kata Kunci: Pengkontenaan, Pembangunan Infrastruktur, Pelabuhan Pulau Pinang, Suruhanjaya Pelabuhan Pulau Pinang, Pengembangan Perdagangan

INTRODUCTION

Penang was established by the British in 1786. British East India Company trader, Captain Francis Light, played a significant role in the acquisition of Penang Island from the Sultan of Kedah. Following the transfer of Kedah, he raised the British flag, an act that symbolized the official acquisition of Penang by the British. The primary factor that attracted Francis Light to Penang was its strategic location, which had the potential to be developed into an important port. The British needed a strategic port as a centre for the collection of goods produced by the states in the Malay Archipelago. They also need an anchoring port for ships sailing along the Indian-China trade routes and to refill food and water supplies for the trading ships. Towards the beginning of the 1900s, the merchant community voiced complaints that the development of Penang Port was disproportionate to the increase in the amount of cargo and the number of large ships that stopped at this port.

However, the government of the Straits Settlements made a very slow progress in Penang Port.¹ This is because the Penang Port was administered under the Penang Port Department until 1913 and later, the administration of Penang Port was transferred to a separate administrative body, the Penang Harbour Board until 1954 where it merged with the Singapore Harbour Board and shared a joint chairman for both authorities. Under the management of the Penang Harbour Board, many developments were carried out from time to time until the Japanese occupation of Malaya, which caused severe destruction at Penang Port. British destroyed most of the facilities at Penang Port during their retreat from Malaya after being attacked by the Japanese army.

After the defeat of Japanese Army, the British had taken over the administration of Malaya and re-established the Penang Harbour Board. Later, the Penang Board Harbour had succeeded in restoring the condition of the port in a short time. After the establishment of the Federation of Malaya in 1948, control over the port was under the government. The facilities of Penang Port were still provided by the Penang Harbour Board and the Malayan Railway Administration. Nevertheless, the need to establish an independent Port Authority became very acute in the early 1950s to plan and implement the long-term development of Penang Port. The Korean War and the continued development of national trade and entrepot trade as well as the political development of Malaya has accelerated the process of establishing an independent Port Authority for Penang Port. On 2nd July 1952, a Federal Ports Committee was formed by the British High Commissioner to study the long-term development of federal ports. According to the Committee's findings, this division of power was considered ineffective in ensuring the maximum efficiency required for the development of Penang Port. Consequently, the Committee recommended the establishment of a new port authority in the form of an independent Port Commission, constituted under legal provisions, to assume full responsibility for the management and administration of Penang Port.²

Penang Port Commission (PPC) was established under Penang Port Commission Ordinance, 1955 (No. 56 of 1955), which came into force on 1st January 1956. The Ordinance, under Section 58, defined the duties of the Commission as being responsible for managing and operating the former undertakings of the Penang Harbour Board, as well as the Prai Wharf operations previously under the Malayan Railway Administration. In addition, the Penang Port Commission (PPC) was tasked with maintaining

¹ Sani A, The Development of Port Infrastructure in Penang: A Historical Perspective, (Journal of Maritime Studies, 2005), 46.

² Suruhanjaya Pelabuhan Pulau Pinang, (1981). *25 Tahun Suruhanjaya Pelabuhan Pulau Pinang*.

and providing adequate, efficient and reasonably priced port services and facilities for all the port users, in line with the public interest. Furthermore, the Commission was responsible for coordinating port activities and promoting the continuous improvement and development of the port.³

In Penang Port history, this would be the first time that the port has been given a controlling body whose authority extends over the entire port area as defined under section 6 of the Merchant Shipping Ordinance 1955.⁴ The first meeting of PPC was held on the 26 January 1956. Three committees were formed under PPC, the Establishment, Port Development and Budget Committee whose duties are self-explanatory. All this committee were responsible for planning and implementing the measurements that were needed to develop Penang Port.

Problem Statement

Penang Port's development during the colonial era was not as extensive as some other major ports in the region. The primary focus of the British in Penang was to establish it as a trading post and administrative centre rather than making it a major port. While they recognized its strategic location and potential as a harbour, the development of the port infrastructure was not prioritized to the same extent as ports in Singapore or Hong Kong. The lack of significant development during colonial times may have contributed to some limitations in Penang Port's capacity and efficiency compared with other ports in the region. Penang is normally the first port of discharge for ships coming from Europe and the last port of call of ships returning there. However, work in Penang Port is generally not to be as fast as other ports, particularly the port of Singapore. Penang port is constantly faced with stowage problems because of less scope for mechanization in Penang Port as individual consignments are too small to provide a long enough run of similar cargo, for instance of crates, for which mechanized handling is suitable.⁵ The composition of Commission's trade in the early stages of Malaya's Independence showed decrease in both inward and outward cargo handling.⁶ In addition, during year 1959, the Commission handled only about one- third of the general cargo passing through Penang. This figure is not only indicating the degree of the Commission's unused port facilities but is a measure of the competitive conditions which the Commission has to face in carrying out port operations. Reductions in port charges made in 1958 failed to attract cargo to the Commission's facilities to any worthwhile extent.⁷

OBJECTIVES

This paper aims:

- I. To identify the purpose of establishing the PPC.
- II. To analyse PPC's efforts in developing Penang Port from 1956 to 1980.
- III. To evaluate the importance of Penang Port development in trade expansion and operational growth at Penang Port.

METHODOLOGY

In order to achieve the objectives, this study applies qualitative methods to obtain data by using document analysis approaches. Primary and secondary sources are the main reference materials for the study. Primary sources consist of Malaysian and British official records referenced in the National Archives and Penang Archives. Among the main materials referred are the Penang Port Annual Report by Penang Port Commission, Penang Port Commission Act, agreement documents and departmental files. The secondary source consists of books, thesis, journals, articles and newspapers and magazines related to PPC and Penang Port Development Authority. These sources were analyzed and interpreted to obtain information and data related to the study.

³ Penang Port Commission Act 1955, *Laws Of Malaysia Act 140*, (2006). The Commissioner of Law Malaysia & Percetakan Nasional Malaysia Bhd.

⁴ Penang Port Commission. (1956). *First Annual Administration Reports and Accounts of Penang Port Commission for the Year Ended 31st December 1956*. Penang: University Press.

⁵ Allen, D.F. (1951). *Report on the Major Ports of Malaya*, Pg 21.

⁶ Penang Port Commission, (1958). *Third Annual Administration Report and Accounts of the Penang Port Commission for the year ended 31st December 1958*. Kuala Lumpur: Arkib Negara Malaysia. 2006/0034656.11.

⁷ Penang Port Commission, (1959). *Fourth Annual Administration Report and Accounts of the Penang Port Commission for the year ended 31st December 1959*. Kuala Lumpur: Arkib Negara Malaysia. 2006/0034657, 7.

LITERATURE REVIEW

Among the scholars who have examined the history and transformation of Penang Port are Singh, C., Rasiah, R., and Wong, Y.T.,⁸ Gullick,⁹ and Ooi,¹⁰ who explored the economic changes and trading shifts in Penang. Their work contributed in the understanding of Penang's economic restructuring and its repositioning in Malaysia's broader national development plans. Most of the existing scholarship shows a noticeable trend as there is a greater emphasis on the colonial era, with extensive focus on Penang's role as a British free port and its socioeconomic functions from the eighteenth to the twentieth centuries. In contrast, less scholarly attention was given to the post-independence period, particularly the years Penang Port was managed under PPC from 1957 to 1980, despite being a phase of crucial infrastructural and administrative transition. Even though these studies equip valuable insights into administrative and economic aspects, they largely overlook the detailed physical development of the port, such as the construction of new jetties, deepening channels, expanding cargo terminal and modernizing the port facilities. This presents a clear result gap, particularly in the concept of PPC's role in Penang Port's development,

The study 'Disparate Identities: Penang From A Historical Perspective, 1780-1941' offers a rewarding discovery of Penang's multi-ethnic society and the sociocultural dynamics that shaped the island during the colonial era. This study effectively tracks the evolution of Penang's urban identity, trade networks, governing structure particularly under the British rule. This study highlights the Penang Port's central role in regional commerce and its function as a cultural and economic melting pot. However, the study finalized his scope in 1941, and while it provides important historical context, it does not extend the research into post-independence period which was a critical era in the history of Penang Port. During this period in time, the Penang Port underwent various transitions in port administration and operation particularly when the PPC was assumed to be responsible for modernizing and expanding the port's physical infrastructure. As such, there is a clear knowledge gap concerning the detailed physical and institutional development of the Penang Port after 1956, including the initiatives taken by PPC to revitalize port operations, improve facilities and to respond to changing maritime and economic demands in the second half of the 20th century.

Besides that, the study by Frankelin, E.G¹¹ focused on the development of Penang Port in 1973. The studies primary aim is to project the trade growth and the broader development of Penang state up to 1990. This research mainly relied on the *Annual Reports* of the Penang Port Commission as well as documents from the Penang State Government between 1970 to 1973. This study is also projecting a forecast of Penang's economic and social trajectory. However, the scope and the objectives of Frankel's work is different from the present study, as his priority was on the forward looking projection rather than a historical analysis of Penang Port's development. Thus, this study seeks to fill the void by examining the specific role of the PPC in infrastructure development and its relationship to trade and operational growth at the port during the post independence period, specifically between 1957 to 1980.

Singh, C., Rasiah, R., and Wong, Y.T.,¹² in 'From Free Port to Modern Economy', offer a detailed analysis of Penang's economic and social transformation from 1969 to 1990, highlighting the central role of Chief Minister Tun Dr. Lim Chong Eu. The study comprises eight chapters that explore into various aspects of Penang's development, including industrial policy, state and federal relations, and socioeconomic changes. The volume also emphasizes on the challenges faced during the research period such as unemployment and the loss of free port status. While this research provides valuable insights into Penang's economic policies and institutional changes, it offers limited details on the precise physical developments of Penang Port between 1957 to 1980. The book primarily emphasizes on wider economic transformation and does not substantially document the infrastructural projects, such as the construction and expansion of Penang Port's facilities in early period.

⁸ Singh, C., Rasiah R., & Wong Y.T., (2019). *From Free Port to Modern Economy: Economic Development and Social Change in Penang, 1969 to 1990*. Penang Institute & ISEAS.

⁹ Gullick, J.M, (2013). *Recollection of My Time in Malaya (1945-1956) Part 1*. Journal of the Malaysian Branch of the Royal Asiatic Society, 86(1), 59-76.

¹⁰ Ooi, K.G, (2015). "Disparate Identities: Penang from a Historical Perspective, 1780-1941". *Kajian Malaysia*, 33 (Supp.2), 27-51.

¹¹ Franklin, E.G, (1975). *Penang Port Study*, Penang Port Commission, Government of Malaysia, Book 2, Vol.1, 2.

¹² Singh, C., Rasiah R., & Wong Y.T., (2019). *From Free Port to Modern Economy: Economic Development and Social Change in Penang, 1969 to 1990*. Penang Institute & ISEAS.

FINDINGS AND DISCUSSION

Penang Port Commission

In 1956, the PPC was established as a statutory body under the Penang Commission Act, 1955. This is more aimed to centralize the administration and development of Penang Port, ensuring a more focused to its growth.¹³ PPC has few major roles in developing Penang Port. The PPC was responsible for managing the day-to-day operations of the ports in Penang. This involved overseeing cargo handling, vessel movements, and other port activities to ensure smooth operations. Besides, the commission was also focused on the development and expansion of the port facilities in Penang to accommodate the growing maritime trade and commerce. This included building and maintaining docks, berths, warehouses, and other necessary infrastructure. PPC also worked to facilitate trade through the ports in Penang by streamlining customs procedures and reducing bureaucratic barriers.¹⁴ Ensuring efficient and timely clearance of cargo was a key aspect of its duties. Other than that, the commission was responsible for the maintenance and repair of the port's infrastructure and equipment to ensure safe and efficient port operations. The PPC is also responsible to regulate port activities to maintain safety standards, security measures, and compliance to relevant laws and regulations.

The Role of the Penang Port Commission (PPC)

The PPC has played a crucial role in ensuring the growth and development of Penang Port since its establishment. Its accountability has evolved gradually, adapting to the needs of varying time frames. The initial objectives of PPC is to centralize the administration and development of Penang Port, ensuring more attentive efforts towards its progress. The key role of PPC is to manage the daily port operations, which includes the supervision of cargo handling, vessel movement and general port activities to assure seamless port operations.

Moreover, PPC has been played a vital role in expanding and upgrading port facilities to accommodate the increasing volume of maritime trade that involve Penang Port. The development that carried out by PPC during 1956 to 1980, involved the construction and maintenance of docks, wharves, warehouse and other critical infrastructure. The commission also took essential measurements to simplify the port procedures by minimizing bureaucratic hurdles and improving custom process, thus facilitating more efficient cargo handling process. Besides, the PPC also plays an important role by taking full responsibility for maintenance and repair the port infrastructure and equipment to ensure the safety of port users and the effectiveness of the port operation. In its early years under the Penang Port Commission Act of 1955, the commission's duties included enforcing port-related laws, overseeing port activities, licensing harbor pilots, and regulating marine activities through the Piloting Committee.¹⁵ The commission also issued licenses and permits related to coastal and port transport activities, promoted port development, and coordinated feedback systems from port users. Notably, in 1987, PPC established a Port Development Committee comprising its senior officials to spearhead development programs with the goal of making Penang Port a major transshipment hub for regions such as North Sumatra, Southern Thailand, Burma, and Bangladesh.¹⁶ This committee was tasked with identifying port users and analyzing cargo flow, and it engaged with stakeholders including the Penang Development Corporation (PDC), importers, exporters, and shipping and haulage agencies to ensure cooperation in port advancement programs.

In addition, PPC formed a liaison committee with stakeholders such as *Keretapi Tanah Melayu* (KTM), shipping agents, and hauliers to strengthen trade relations with Thailand. The aim of this move is to facilitate the export of goods such as rubber from Thailand to the Far East through Penang Port¹⁷. As a part of broader efforts to enhance bilateral trade, PPC also actively participated in international trade mission such as the mission to Burma in 1988. PPC held meetings with Indonesian consular officials and local traders to support the trade with Northern Sumatra. This meeting was held to explore the

¹³Laws Of Malaysia Act 140, *Penang Port Commission Act 1955*. (2006). The Commissioner of Law Malaysia & Percetakan Nasional Malaysia Bhd., 13.

¹⁴ Portal Rasmi Suruhanjaya Pelabuhan Pulau Pinang, penangport.gov.my. Dicapai pada 22/6/2023.

¹⁵Suruhanjaya Pelabuhan Pulau Pinang, (1973). *Laporan Tahunan Pentadbiran yang Kelapan Belas dan Kira- Kira Bagi Tahun Berakhir 31hb Disember 1973*, 2006/0034671, Arkib Negara Malaysia. 3.

¹⁶ Suruhanjaya Pelabuhan Pulau Pinang, *Berita Pelabuhan*, (Vol. 18 No 1-1988 Versi Melayu dan Inggeris), 2006/0034693. Arkib Negara Malaysia, 4.

¹⁷Ibid, 5.

opportunities for strengthening commercial ties, particularly in the export of agricultural products such as fresh vegetables, potatoes, spices, and ginger.¹⁸ These efforts were part of PPC's wider strategy to position Penang Port as a key transshipment and a logistics hub in the Bay of Bengal.

Under the Ports Privatization Act 1990, PPC shift into a regulatory authority after the privatization of Penang Port on January 1, 1994. Under this role, PPC presumed responsibilities such as overseeing land usage, monitoring port operator performance, issuing licenses to operating companies, and facilitating feedback mechanisms from port users. Its administrative jurisdiction was extended to include other ports under the amendments of Penang Port Commission Act in 1995.¹⁹

PPC also took over the role of managing the Northern Region Port Resource Center. It is responsible for collecting and providing port related data and statistics to government and corporate bodies, and for being as intermediary between public agencies and private stakeholders. In addition, the commission was tasked with the administration of the Free Commercial Zone (FCZ) at the Butterworth Deep Water Wharves. The responsibilities includes putting up fences and adding lights in the area, establishing custom inspection offices, ensuring the compliance with regulations of the Free Zone Acts 1990, and submitting annual reports to the Ministry of Finance. Moreover, PPC also acted as a trade facilitator, guiding the conduct of commercial activities at the port and supporting national trade strategies.

PPC's Effort in Penang Port Development, 1957-1970

Penang Port experienced a decline in cargo volume after the independence of Malaya in 1957. This decline occurs due to global trade downturns, restriction on thin exports, the collapse of the entrepot trade, and the decrease of commodity prices.²⁰ To response this situation, PPC promptly initiated various physical development to modernize and restore port operations. PPC had begun implementing plans for infrastructural upgrades even prior to independence. In 1956, PPC had plans for relocating Victoria Pier and reconstructing the wharf near Godown seven and eight, as well as acquiring a new despatch launch and approving the construction of a sail loft and aluminium fabrication shop at the Bagan Dalam dockyard.

A significant strike by a contract port laborers in 1956, which halted port activities due to dissatisfaction over the lack of modern cargo handling equipment has lead to the urgency and necessity for port modernization. Even the port contract workers were not directly employed by the PPC, the commission took the incident as a serious disruption to the port operation. As a result, PPC has initiated a major plan to modernize the Bagan Dalam dockyard, including the construction of a new slipway and improves facilities with an estimated cost of \$3 million.²¹

In the following years, PPC commissioned engineering consultants to develop a tidal model studies and site investigations to build a new wharf at Bagan Luar. This measurement was enhanced by ferry service modernization between the island and Butterworth which turned to be a landmark project in 1957 with estimate cost of \$11 million. In 1959, new ferry terminals were completed and officiated by Prime Minister Tunku Abdul Rahman.

The launching of new ferries, including the prototype 'Pulau Pinang', substantially increased the port's vehicle handling capacity and helped reduce traffic congestion at both terminals.²² Furthermore, PPC implemented other key improvement measures to upgrade ferry service in Penang Port. These included of a new 200 tonnes self propelled water boat from Hong Kong, which has the capability to supply fresh water to ships more efficiently compare to the previous tug-assisted methods.²³ In addition, the maintenance and repair works, such as wharf crane refurbishments and full electrical rewiring at the Bagan Dalam dockyard showed the dedication of PPC in Penang Port infrastructure enhancement.

¹⁸ Suruhanjaya Pelabuhan Pulau Pinang, *Berita Pelabuhan*, (Vol. 18 No 1-1988 Versi Melayu dan Inggeris), 2006/0034693. Arkib Negara Malaysia, 6.

¹⁹ Laws of Malaysia, *Ports (Privatization) Act 1990*, 8.

²⁰ Franklin E.G, (1975). *Penang Port Study*, Penang Port Commission, Government of Malaysia, Book2, Vol 1,2.

²¹ Penang Port Commission, (1956). *First Annual Administration Report and Accounts of the Penang Port Commission for the year ended 31st December 1956*, 2006/0034654, Arkib Negara Malaysia, 3.

²² *Ferry Service*, Penang Port Commission Minute Sheet, 21st March 1961. Arkib Negara Malaysia, A13.

²³ Penang Port Commission, (1959). *Fourth Annual Administration Report and Accounts of the Penang Port Commission for the year ended 31st December 1959*. 2006/0034657, Arkib Negara Malaysia, 9.

New mooring buoys were installed, and a welding center was introduced as an experimental facility in Penang Port by 1959.

In the early 1960s, PPC expanded the aluminum barge fleet as a part of a broader initiative to replace the old and outdated wooden and steel barges. The fleet had grown to ten aluminum vessel by 1962. The construction of Ayer Dalam wharves in Butterworth which cost \$60 million marked as a major milestone in the late 1960s. This construction included five berths and three conventional cargo which was completed in 1968. Besides, the construction of two container cargo was finalized in 1970, which has marked Penang's shift towards containerization. This persistent endeavor by PPC has laid a strong physical foundation for modern port operations and contributed to the resurgence of the trade activity in Penang in 1960s.

The commission which has acted as an agent of the Federal Government of Malaya, has constructed the second phase of the Customs Import and Export Examination Station at Butterworth. This construction was completed in 1959 and officially handed over to the Government of Malaya on 1 October of the same year. Moreover, a new self-propelled water boat with a capacity of 200 tons, built in Hong Kong, was delivered to Penang Port. This new vessel offering amenities to supply fresh water to ships calling at Penang Port, while concurrently reducing reliance on tugboats that had previously required to service vessels with water supply. At the same time, the PPC's contribution in enhancing the infrastructures and facilities in Penang Port included with repair works. The deteriorating crane jetty at Penang Port was repaired at a cost of \$20,000 and the Bagan Dalam dockyard underwent a complete rewiring of its electrical system in 1959 to 1960. In 1959, two swinging moorings for ocean going vessels were also installed at Penang Port. In addition, an experimental aluminum welding centre was established at the PPC dockyard in Bagan Dalam in response to the increasing demand for berthing facilities from the shipowners. In 1962, PPC develop further its facilities by introducing three additional aluminum lighters, accordance with its policy of replacing wooden and iron lighters with aluminum ones. This bring the total number of aluminum lighters in operation in Penang Port to ten by end of 1962.

PPC's Effort in Penang Port Development, 1971-1980

The period of 1970s was marked as a transformation phase for Penang Port as the PPC intensified its efforts to modernize the port's infrastructure to meet the demands of global shipping and Malaysia's industrial goals. The emergence of containerization as the predominant mode of cargo transport urged PPC to undertake major investments in enhancing physical facilities and equipment to ensure Penang Port maintained a competitive edge and productive capability.²⁴ The port management provided necessary equipment such as heavy duty cranes, prime movers and wagons in order to comply the policy to expand container traffic at Penang Port. Another aspect that was given priority by PPC was to overcome the water- depth issues particularly in the entrance area of Penang Port as it was only 33 feet high during high tide. The PPC did not anticipate that larger container vessels could call at the port in early 1970s, thus, it planned to provide facilities to cater to semi container vessels and feeder ships. Besides, the expansion and modernization of Butterworth wharves was carried out as an important transformation, particularly in completing Berths No.4 and No.5 by end of 1970s. These berths were strategically designed to support the increasing needs of container cargo which is the essential signal that shows the readiness of PPC to adopt modern shipping technologies. During the Second Malaysia Plan (1971- 1975), Penang Port was identified as a key asset in Malaysia's maritime network and PPC worked closely with the federal government to secure funding for further development.²⁵ When the Asian Development Bank approved a loan of USD 15.1 million to support the Penang Port Expansion Project in 1974, a pivotal milestone was achieved by PPC in the effort of upgrading Penang Port.²⁶

Following this, PPC focused on acquiring state-of-the-art port equipment to enhance the operational efficiency. The key purchases during mid of 1970s included a 30 tonnes self propelled mobile crane, prime movers, trailers, and container handling gear such as spreader slings.²⁷ An addition, the PPC bought a new crane, Coles Colossus LT 4.000 with a safe workload of 30 tonnes, further demonstrating its commitment to upgrade port handling capacity. These efforts were supported by the construction of

²⁴ Suruhanjaya Pelabuhan Pulau Pinang, (1973). *Laporan Pentadbiran Tahunan Yang Kelapan Belas dan Kira- Kira Bagi Tahun Berakhir 31hb Disember 1973*. 2006/0034671, Arkib Negara Malaysia.

²⁵ *Second Malaysia Plan 1971-1975*. Government of Malaysia.

²⁶ Asian Development Bank (ADB), (1974). *Report and Recommendation of the President on the Penang Port Expansion Project*.

²⁷ Suruhanjaya Pelabuhan Pulau Pinang, (1974). *Laporan Pentadbiran Tahunan Yang Kesembilan Belas dan Kira- Kira Bagi Tahun Berakhir 31hb Disember 1974*. Arkib Negara Malaysia 2006/0034672.

supporting infrastructure, such as a Container Freight Station (CFS) and a 16 acre container yard to manage the increasing container volumes.²⁸ The sixth berth was completed in 1977, which was designated for container and Ro-Ro (roll on and roll off) traffic, further expanded the port's operational scope and capacity.²⁹

PPC also introduced several improvements in port layout and support system. A 42,000sqf freight station was constructed to support the new container facilities. The PPC also enhance road and storage access helped streamline logistics and cargo movement within the port complex.³⁰ Penang Port had firmly entered the containerization era by the end of 1970s, where it could handle significantly higher volumes of diversified cargo, including heavy machinery, vehicles and bulk goods, aligning it with international maritime network trends.

In overall, the PPC's effort from 1970 to 1980 reflect a crucial period of physical transformation as well as infrastructure expansion and modernization. These substantial advancement not only boost the trade capacity, but also reinforced Penang Port's position as a key driver in northern Malaysia. Despite the challenges that posed by the changes in global trade patterns and competition from other ports, the progress made during this decade laid as a groundwork for further port expansion in the 1980s and beyond.

Trade Expansion and Operational Growth in Penang Port as a Result of Penang Port Development by PPC

The period between late 1950s to 1980, mark as a very important phase in the expansion of trade and the strengthening of operational capacity at Penang Port. This expansion trajectory was closely linked to the infrastructure initiatives and strategic planning carried out by PPC. The development by PPC such as the extension of wharves, modernization of cargo handling equipment, and the upgrading of storage facilities significantly enhanced the port's ability to manage the increasing volume of cargo, which consolidating its role as a vital maritime gateway for northern Peninsular Malaysia.

Table 1: Cargo Handled in Penang Port

	1958	1968
Total Cargo (Metric Tonne)	969,700	3,239,900

Source: *Annual Administration Report and Accounts of the Penang Port Commission, 1957-1968.*

Referring to Table 1, Penang Port witnessed a remarkable surge in cargo throughput from 1958 to 1968 which reflect the tangible outcomes of infrastructure initiative by PPC. The port recorded a total cargo volume of 969,700 metric tonnes in 1958. Within a decade, this amount had increased to 3,239,900 metric tonnes which was almost 234 percent increment over the ten year period from 1958 to 1968. This exponential growth has showed the close link between a PPC's strategic efforts in modernizing the port's facilities, expanding dock areas, and procuring essential cargo handling equipment. The development of berthing facilities, the mechanization of cargo operations, and the improvement of warehouse infrastructure played crucial role in accommodating the increasing volume of trade in Penang Port. Moreover, the transition from conventional break bulk cargo handling system which has began to incorporate semi containerized methods in the late 1960s further contributed to the port's efficiency and throughput.

²⁸ Suruhanjaya Pelabuhan Pulau Pinang, (1975). *Laporan Pentadbiran Tahunan Yang Kedua Puluh dan Kira- Kira Bagi Tahun Berakhir 31hb Disember 1975*, 2006/0034673, Arkib Negara Malaysia.

²⁹ Penang Port Commission, *Cargo Statistics 1973-1976*.

³⁰ Suruhanjaya Pelabuhan Pulau Pinang, (1977). *Laporan Pentadbiran Tahunan Yang Kedua Puluh Dua dan Kira- Kira Bagi Tahun Berakhir 31hb Disember 1977*, 2006/0034674, Arkib Negara Malaysia.

Table 2: Cargo Handled in Penang Port, 1971-1980.

Year	Cargo (Metric Tons)
1971	3,215,000
1972	3,323,400
1973	3,797,300
1974	4,360,686
1975	3,843,744
1976	4,216,853
1979	5,467,210
1980	6,101,260

Source: *Penang Port Annual Report, 1970-1981*

As shown in Table 2, Penang Port recorded a clear and sustained increase in the volume of cargo handled from 1971 to 1980 underscoring the impact of infrastructural development undertaken by PPC. In 1971, the port managed 3.2 million metric tonne of freight, and this figure rose steadily to 3.8 million metric tonne by end of 1973. The positive trajectory continued through a decade with total cargo reaching 4.36 million metric tonnes by 1974 and 5.47 million metric tonnes in 1979 and peaking at 6.1 million metric tonnes in 1980. This expansion represents an overall growth of approximately 89.7 percent over a decade, nearly double the port's cargo handling capacity within nine years. Such an achievement highlights the effectiveness of PPC's initiatives to expand and modernize port infrastructure.

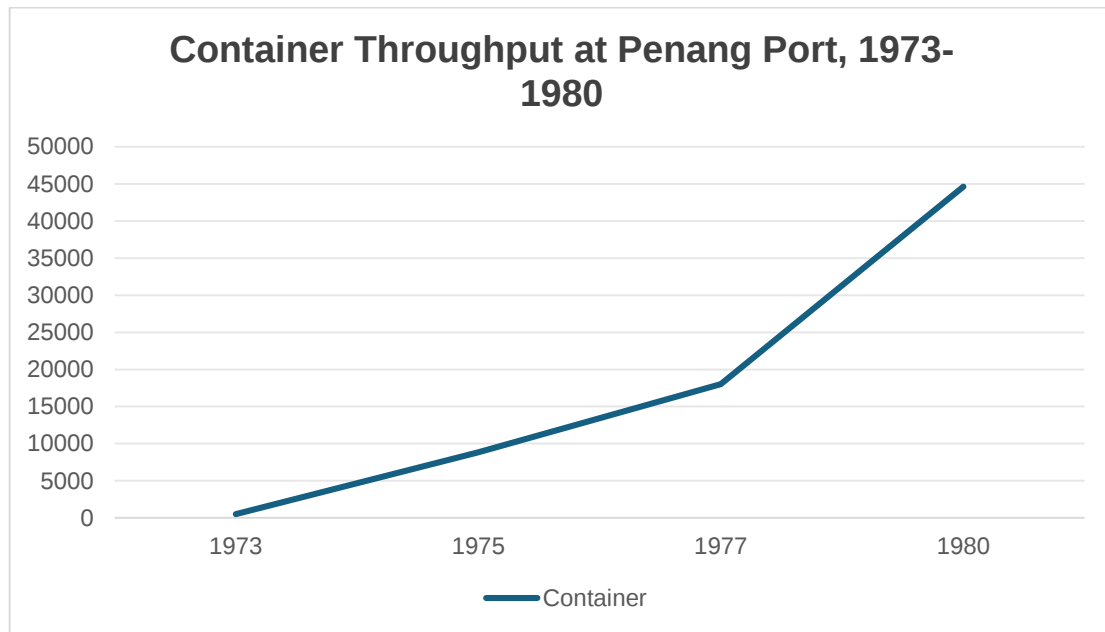
The consistent upward momentum in cargo throughput demonstrates that the Penang Port's infrastructural improvements directly connected into higher trade performance, positioning the port as a vital gateway for the economic activities of northern Peninsular Malaysia. The statistical evidence thus affirms that the PPC's infrastructural development was central to driving Penang Port's expansion and operational growth during this formative period. The efforts of PPC during this period was not only facilitated the expansion of physical capacity but also redefined the operational identity of Penang Port. The port was able to secure a competitive position along the Straits of Malacca, positioning itself as an alternative gateway to Malaysia's west coast by embracing containerization. This foundational developments in 1970s were critical in laying the groundwork for Penang Port's continued growth and integration into the global maritime network in subsequent decades.

Table 3: Total Container Handled in Penang Port, 1973-1980

Year	Total Container (TEU)
1973	516
1974	2,994
1975	8,854
1976	14,192
1977	18,037
1978	24,000
1979	35,179
1980	44,638

Source: *Penang Port Annual Report, 1973-1981*

Figure 1: Container Throughput at Penang Port, 1973-1980 (TEUs)



Source: Penang Port Annual Report, 1973-1980

Statistics in Table 3 and the illustrated in figure 1 shows that container throughput in Penang Port increased dramatically over years from a modest 516 TEUs in 1973 to 44,638 TEUs by 1980, representing a spike of over 8,500 percent in less than a decade. The growth was particularly sharp in the mid 1970s, and between 1974 and 1975, the container traffic was almost tripled rising from 2,994 to 8,854 TEUs. In the same way, between 1976 and 1977, traffic increased from 14,192 to 18,037 TEUs, a significant rise of nearly 27 percent in just one year. By 1979, the figure had further accelerated to 35,179 TEU before reaching 44,638 TEU in 1980, an increase of approximately 27 percent compared to the previous year.

The correlation between the rising cargo volumes and the accelerated adoption of containerization underscores the effectiveness of PPC's development policies. Infrastructure enhancement such as the construction of dedicated container yards, the procurement of container specific cranes and handling equipment, and the upgrading of berthing facilities enabled Penang Port to seamlessly integrate container operations into its existing cargo handling system. This effort has not only improved the operational efficiency but also reduced turnaround times which enhance the port's competitiveness within the Straits of Malacca.

Table 4: Total Passengers and Vehicles Using the Penang Port Ferry Service, 1971-1980

Year	Passanger (million)	Vehicles (Million)
1971	15.4	2.2
1972	16.9	2.6
1973	17.9	2.88
1979	21.4	10.0
1980	21.5	10.1

Source: Penang Port Annual Report, 1972-1981.

As indicated in Table 4, the growth of trade and port operations at Penang between 1970s and 1980s was not limited to cargo and container handling operations but also reflected in the expansion of ferry services. Ferry service was a vital component in Penang Port's operations. From 1957 to 1970, the ferry service had experienced a substantial growth in both passenger and vehicle numbers as a result of infrastructure development. Passenger traffic rose from 15.4 million in 1971 to 21.5 million in 1980. For vehicle movements, it grew more than fourfold from 2.2 million to 10.1 million when comparing from

1971 to 1980. The rapid increase highlights the growing importance of Penang Port was not only as a hub for maritime trade but also a crucial link in regional mobility and connectivity.

The impact of PPC's infrastructural initiatives were seen clear in the simultaneous growth in cargo volumes, container handling and ferry traffic throughout 1956 to 1980. Investments in new facilities, modernization of equipment, and policy shifts towards accommodating modern shipping practise had enable Penang Port to expand its trade capacity and operational functions. Thus, the period between 1956 and 1980 stands as a transformation era in which the Commission's developmental efforts firmly positioned Penang as a vital maritime and logistical centre in Malaysia.

CONCLUSION

PPC played a decisive role between 1956 to 1980 in shaping the trajectory of Penang Port's infrastructural and operational development. The steady rise in total cargo handled, the unprecedented growth in containerized traffic, and the substantial expansion in ferry service collectively providing compelling evidence that PPC's policies, investment, and physical development in Penang Port were the central to the driving maritime progress during this period. By expanding the berthing facilities, pioneering container handling infrastructure, modernizing cargo handling systems, and upgrading ferry operation, PPC not only the port's efficiency but also strengthened its role as a comprehensive maritime hub. The initiatives by PPC had enabled the Penang Port to align with global shipping trends while simultaneously improving regional mobility and connectivity between Penang island and the mainland. The effectiveness of PPC's vision and strategy was clearly visible in the transformation of Penang Port from a conventional break bulk hub into a modernized maritime gateway. Its simultaneous focus on the trade facilitation and passenger and vehicle movement through ferry service illustrates a holistic approach to port development, where the commercial efficiency and the public accessibility were advanced in tandem. Eventually, the period from 1956 to 1980 reflects how the foresight and strategic planning of PPC drove both trade expansion and operational modernization. The initiatives taken by PPC in Penang Port's infrastructural development were not merely responses to the rising demands in trade but it's a proactive measures that redefined Penang port's role within Malaysia's maritime economy, laying the foundation for its continued relevance in the following decades.

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During the preparation of this work, the authors used ChatGPT (Open AI) to enhance the clarity of writing. After using the ChatGPT, the authors reviewed and edited the contents as needed and take full responsibility for the content of the publication.

Ethic Statements

Not Applicable

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