

## Seaport tariffs

# **Challenges to application and implications for the Caribbean – Part 1**

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This 3-part technical paper (serialised in *Portside Caribbean* journal, Vol.1, Nos. 4, 5 and 6) outlines the major factors that impact the development and implementation of seaport tariffs in the Caribbean region. A seaport tariff is a schedule of duties based on an assessment by the port authority (but not necessarily collected by them) or a private port on import and export cargo of that specified port/ terminal. It may also include a listing of charges arising from the usage of services at the facility. The extent to which a port is able to develop a range of tariff-related charges varies and mirrors the quantity of services that it is able to offer. As a cost recovery tool, the role of tariff has changed significantly internationally, hence the need for Caribbean ports leadership to reconsider their approach and strategy.

**T**raditionally seaport tariffs have been treated in two ways. Firstly, it was viewed as a small contributor of total voyage cost. Secondly, prior to the 1990s, ports were considered a part of a country's social infrastructure and consequently a significant portion of the costs were to be borne by the state, through taxation and subsidies, as opposed to a tariff which was required to recover cost fully.

A tariff should satisfy the following requirements:

- i. Allow for proper reallocation of benefits: designed so that the benefits derived can be apportioned to the service/facility area
- ii. Facilitate a comparison between charges and costs: tariff charges must not be burdensome to the port user and must have a direct relationship with the cost of providing that service
- iii. Contribute to the utilization of the facility: tariff rates must be so designed that they can make a contribution to creation and maintenance of the facility or service for which the charge has been created
- iv. Allow for economical operations: the method and the charges of the tariff should enable the port or terminal to be a sustainable entity. Where a port has monopoly status, port users should not fear the authority's abuse of power through the tariff
- v. Transparent in the billing of port services: billing process ought to be simple and clear so that it can be easily understood by the port user
- vi. Comparable to other ports: cost as quoted in the tariff of a comparable service or for the use of a facility of a port in that same country or a neighboring port should be similar *i.e.* port pricing must be competitive

## **OBJECTIVES OF SEAPORT TARIFF**

A tariff is a reflection of policy but the policy rarely contains an explicit statement of its objective. But implicit is the endeavour to incorporate the following:

- To promote the most efficient use of the port's facility: the pricing system for the utilization rate for assets/equipment is highly influenced by market conditions such as price elasticity of demand.

- To retain the benefits resulting from investment within the country/region/municipality: this enables the port to retain the benefits arising from port improvements.
- To recover sufficient revenue to meet financial objectives: this enables the port to finance its own undertakings, build up reserves and be less dependent on the government.

Successful implementation of a tariff requires a design that facilitates:

1. Clarification of the relationship between port facilities and port users:  
The tariff must clearly identify the relationship between charges and who pays for what service. In respect of charges a tariff must also be perceived as being fair and flexible.
2. Prevention of double payment  
Tariff structure should provide a one-to-one relationship between facilities and the port tariff, this will aid in ensuring a clear understanding of the relationship between a facility/ service and a charge.
3. Simplification  
Simplification and standardization of all terms in the tariff will serve to minimize confusion of the port user
4. Price mechanism to prevent congestion  
As traffic increases it may be necessary to eliminate a ‘free of charge’ from that tariff as this may contribute to port congestion or, alternatively, charges for such services.

#### CLASSIFICATION OF SEAPORT TARIFF

Tariff design and its nomenclature must conform to an international classification system. In general terms a seaport tariff can be broken down into: basic and non-basic charges. Basic charges arise from services to the vessel and non-basic charges are the result of services to the merchandise or cargo. Alternatively, there is a general tariff, facility tariff and service tariff.

In Caribbean circumstances, tariff systems must also address the importance of cruising, yachting and small pleasure craft sector to the region’s economy. Cruise vessels tariff classification is similar to that of cargo vessels in respect of the navigational aspects. Differences exist in the non-basic services. These are customs user fees and a passenger per head charge. In the yachting and small pleasure craft subsectors, a number of differences exist. Principal among these are: cruising permit, yacht and marine related service, dockyard entry and license for small craft used for pleasure.

In 1989 Economic and Social Commission of Asia and the Pacific/United Nation Development Programme (ESCAP /UNDP) created a Model Tariff Structure. This model included products a nomenclature of port charges on shore and at sea, cost elements and relationships between port charges and port facilities in recovering costs. Its tariff structure consisted of four groups:

- Navigation: all services and facilities relating to the vessel

- Berth: all services and facilities relating to the vessel berthing/unberthing requirement or while at anchorage
- Cargo operation: services relating to handling of cargo through the port
- Other business: all other port facilities and services

This model is considered a leading method for the structuring of tariffs and is in common use outside of the Caribbean.

## METHODOLOGIES FOR THE CARIBBEAN REGION

Ports in the Caribbean region have a fairly long tradition of tariff generation. Many have only in recent times had these schedules published. Length and complexity of tariffs vary from port to port and this reflects the extent of services provided by each port. The factors which are of major importance for reviewing the methodologies towards the tariff are of two types:

- Factors which are specific to tariff development in the Caribbean
- Factors which are generic to the development of tariffs irrespective of location

As regards the former, the factors which impact on the methodologies of tariff development and their effect is a result of specific conditions in the Caribbean environment. The small size of the Caribbean market inclusive of its hinterlands has resulted in the region's market being one in which there is much rivalry for business (*See: Evolution of Port in a Competitive World, World Bank, Port Reform Tool Kit, page 5*). In this scenario Caribbean ports are forced to compete for all types of cargo and the tariff becomes a powerful tool of intra-port rivalry.

Competition is most acute in the region's containerized transshipment sector where it is a long established truism that shipping lines prefer to conduct their hub business at locations where the domestic cargo base is substantial enough to facilitate some level of saving for the carrier (cargo volume and or labour) if not outright economies of scale. Where such savings are inconsistent, leading ports may in the short run take the risk to cross-subsidizing certain activities where there is great rivalry for business and as they expect to recoup on other items. This type of strategy makes it impossible for smaller ports to compete as they have weaker balance sheets or less governmental support.

Rivalry in oligopolistic port industry (*i.e.* industry which consist a few firms, there is a leading firm and there is interdependence of behavior amongst firms) of the Caribbean results in market leaders with the greatest investment risk being willing to make the greatest effort at ensuring preservation of market share. In this situation, the usage of the tariff means a willingness to make significant adjustments in price. This decision challenges issues relating to port pricing and, in particular, the extent to which a seaport tariff should be directly related to the recovery of the service that it provides (Cost Based Pricing) as opposed to the extent to which such ports are able to absorb loss; or (if they are public entities) the willingness and capability of government to offset losses.

Towards the end of the 20<sup>th</sup> century a new era of port administration began to unfold for public entities. This change process began with liberalization and was followed by the principle of commercialization. The objective of these two principles was to make port administration and operations more businesslike. Currently there is a movement in some of the larger territories such as Jamaica to privatize port operations and management.

Two situations are driving port privatization. These are: (a) the role of the port authority, as regulator and operator, is viewed as conflicting; and (b) the need for international capital and expertise which will enable such ports to become truly global entities.

In this dynamic environment, the extent changing strategies have impacted the design and nature of respective Caribbean port tariffs is unclear.

## **Seaport tariffs**

# **Challenges to application and implications for the Caribbean – Part 2**

### **Approaches to Tariff Design**

The approach to the design of seaport tariff in the Caribbean region is influenced by a number of factors. Foremost of these include:

1. Commercial elements of port operations
2. Frequency of Tariff Review & Review Methodology
3. Paucity of scholarly work in the Region

#### **Commercial Elements of Port Operations**

International literature relating to principles governing the approach and design of seaport tariffs highlight commercial considerations as the major factor in the determination of port pricing and, as a result, cost recovery is viewed as critical to tariff design. In reviewing tariff studies of North America, the European Union and the Asia Pacific region, tariffs are categorized according to their costing approach. These approaches included:

- (a) Cost-based pricing this is applicable to services such as (pilotage, towage berthing/unberthing, mooring/unmooring, stevedoring, wharf-handling, receiving/delivering, cargo processing *etc.*) The costing principle that governs this tariff is the cost of providing the service plus a mark-up. Cost-based ports can sub-divided into averages cost, variable cost and marginal cost.
- (b) Performance-based pricing: the objective of this tariff is to facilitate efficient use of the port's facilities and, as a result, the tariff focuses on performance.
- (c) Value-based pricing is applicable to general tariff items such as port dues and wharfage. The objective of value-based pricing is to generate enough revenue so as to cover the cost relating to services and facilities
- (d) Market-based pricing: Tariff design is correlated to potential market demand so as to improve profitability.

### **Cost Recovery and Profitability Models**

In the Caribbean the usage of cost recovery models vary in their levels of importance. They tend to be more important in privately owned facilities where commercial consideration is paramount in tariff design and implementation. An example of this is at Kingston Wharves Ltd. where tariff, the subject of negotiations, its framework is based on a cost apportionment and a profitability mark up.

Cost apportionment relates to variable cost (vessel, cargo volume), and fixed assets. In publicly owned ports (the majority of ports of the region) for example Kingston Container Terminal (Jamaica), Deep Water Port of St John's (Antigua) and the Port of Port of Spain (Trinidad) tariff design and its implementation are influenced by non-cost recovery

considerations such as the socio-political factors. Historically this has occurred as seaports in small island states play a significant role in national development not only through its sustainability and its related factors but as an important to national community welfare.

### Tariffs and Subsidies

The importance of seaports have lead governments in the region to review tariff rates and introduce elements of subsidies and/or cross subsidies where they are of the view that commercial rate considerations are to the detriment of their constituents . In the early 1990s cost recovery methods for tariff design for public entities was proposed for Barbados. The perception of the leadership of the day was that, despite its good intention of cost recovery and mark up, it would make the Port of Bridgetown non-competitive when compared to neighbouring facilities. As a result, the recommendations of this study were abandoned. The decision-makers feared social and political dislocations at the port and its multiplier effect on the wider society. The highly discussed head tax on cruise ship passengers and compulsory pilotage for cruise vessels also provide more recent examples of efforts at ensuring that tariffs in public facilities do not become burdensome or that shipping lines are not able to play one destination against another.

At the dawn of the twenty first century public port owned facilities began to be influenced by modernization of port administration the objective of which was the introduction of a business-like environment. These changes began with the principle of liberalization to be followed by commercialization. More recently in the larger international ports/terminals, such as the Kingston Container Terminal, there is a strategy towards privatization and the welcoming of international port operating companies. To date however it is unclear what effect this strategy has had on the design, size and competitiveness of the tariff of these facilities.

### Frequency of Tariff Review & Review Methodology

The pattern of reviewing tariffs in the Caribbean is left to the leadership of individual seaports. And, as a result, standards vary from an annual reviews, in well-developed facilities where tariffs are usually published ( *e.g.* Point Lisas, Kingston Wharves Limited, Oranjestad and Barcade), as compared to ports where such rates are infrequently reviewed as in Antigua and Barbuda and tariff details are only available to port users who purchase a Tariff Book from the Port Authority. Across the Caribbean port users have raised a number of issues in respect of the frequency, size and purpose of fee increases. Some of the socio-economic and political discussions have been:

- a. Where tariff review is frequent
  - the extent of such changes will ensure profitability and competitiveness of port
  - or alternatively, given rising port pricing, the possibility of social dislocation resulting from a reduction in ship calls and other forms of reduced business.
- b. Where tariff reviews are infrequent:

- the sustainability of the port and the need for subsidies in an era where governments are finding such measures increasingly unaffordable and less acceptable by international lending agencies which the region is becoming more reliant on.

The extent to which tariff review system, frequent or infrequent, connotes more than an arbitrary change of percentages it of so raises concerns on the methods that are used in reviewing these tariffs.

### Review Methodology - Historical Rate Comparison

In respect of review methodology, the Historical Rate Comparison is the most common instrument used. The Historical Rate Comparison measures the difference between port cost at the time the tariff was written against the current situation, *i.e.*, it attempts to discern the adequacy of the earnings that are generated for the same port (World Bank Port Reform Tool Kit, Module 6, Port Regulations, page 9). Tariff Differential Rate Comparisons are used periodically by some ports but to a significantly less extent than Historically Rate Comparison. A Tariff Differential Rate Comparison is an analysis in which the differences in tariff rates between the port under review and that of its closest competitors in same types and classification of cargo or service are measured.

The Historical Rate Comparison is more commonly used in the Caribbean than the Tariff Differential Rate Comparison, as data on the former is easier to obtain and often classes of services outside of a country differ and, as a result, such comparisons are difficult. Ports in the region are unfamiliar with the Theoretical Rate Comparison. A Theoretical Rate Comparison is an analysis based on actual and theoretical cost. Actual cost is derived from a specific port while theoretical cost is compiled from the general cost from the conditions which prevail within ports in the country.

### Paucity of Scholarly work in the Region

Very little exist in the public domain in respect of the factors which influence seaport tariff in terms of their design, review mechanism. This is in contrast to other regions (*e.g.*, Asia and the Pacific) of the world where a significant body of literature exists on seaport tariff for developing countries. The paucity of scholarly works or general information relating to seaport tariff is alarming, given the importance of the maritime industry and ports in particularly to the economic development of the Caribbean region. Inadequacy of research and general discourse relating to the tariff begs questions related to the adequacy of considerations relating to the pricing of port services; the appropriateness of port pricing methodology; and, the region or country's ability to make comparison with alternative models or systems.

### Factors Generic to the Development of Tariff

The factors which are commonly used in the development of tariffs are:

\* Vessel size and or tonnage (GT, NT, DW, and LOA) for navigation related services (basic services) such as pilot age, towage, harbor dues, mooring and unmooring and berthing and un-berthing



- \* Cargo type: weight and measurement of cargo, cargo characteristics and time spent in storage, service to cargo, containerization classification and service to container;
- \* Equipment: type of equipment hire, hireage period
- \* Port pricing through the port charges needs to recover the charges of the port entity as this enables the port to meet its financial obligation and put it on a path to being self-supporting
- \* Cost parameters: these can be quite wide and extend well beyond United Nations Economic and Social Commission for Asia and the Pacific discussion of Cost based pricing, performance-based pricing, value-based pricing and market-based pricing. Heggie (Charging for Port Facilities) have suggested that included in the tariff is an inescapable cost and a social cost. Inescapable cost once identifiable sets the minimum charge for the tariff. (Social cost is the difference between market price and that of social opportunity cost.)
- \* The elasticity of demand for a port service is critical in the determination of the pricing system of assets and the extent to which there will be utilized.
- \* The role of the port authority is a critical factor in respect of tariff this is determined by the structure and the extent of its power and role:
  - In some developing countries port authorities play a critical role this is so as in many of these countries domestic private sector does not have the capacity or capability to engage in large scale port investment hence the port authority becomes a very powerful national organization that is engaged in port development, finance, policy, protector of the public's interest and port pricing/tariff. In respect of the tariff the Authority sets the rates relating to basic services inclusive of harbour fees. It also regulates the fees for services of private service-providers. In some instances providers of these services are required to pay a portion of such fees to the port authority.
  - Since the 1990s, it has become a commonly held view, especially in the developed world; that a port authority should be able recover all of its cost, inclusive capital cost. Port Authorities should function in a manner that they become sustainable and bring to an end the need for all types of subsidies.
  - Reorganizing of Port Authorities will also include the extent to which they will be involved in the development and implementation of tariffs. The increasing levels of landlord and privatized ports especially in the EU has resulted in a situation in which port authorities involvement in the tariff has become restricted to:
  - Landlord ports: as a result of the leasing of the port facilities to carriers and shippers. The authorities' involvement in the tariff is now limited to the area of navigation and harbour dues

Privatization: this has resulted in a number of actors providing services, making a complex tariff pattern for the tariff structure.



## **Seaport tariffs**

# **Challenges to application and implications for the Caribbean – Part 3**

### REGIONAL TARIFF COMPARISONS & RELATED ISSUES

A tariff comparison refers to an analysis of port charges for similar services amongst ports within a similar category and consequently provides useful marketing information. Quality of service is not usually included in such a review as the cost of a providing a service may differ even amongst neighbouring ports. Price variations are the result of differences in labour and capital cost in providing these services.

A Tariff comparison is not considered a benchmark for ports in respect of volume of business. It is however an important measure in the determination of competitiveness and marketability within its region. In the Caribbean, tariffs are particularly important given the small and intensively competitive nature of the region's port industry.

### TARIFF COMPARISON CHALLENGES

An accurate comparison of tariffs with a region can be difficult for the following reasons:

- a. There are differences in the systems and regulations in respect of pricing amongst states.
- b. Longstanding agreements amongst stakeholders of individual territories that influence their respective tariff, some of which are of a confidential nature.
- c. Social and political factors that are unique to a country.
- d. Tariff setting organization might not be the same as the entity responsible for its approval *e.g.* Nicaragua and to some extent Jamaica. Port Authority of Jamaica *versus* Kingston Wharves Ltd.
- e. Flow of charges differ from port to port reflecting differences in operating practices mirrored in the tariff.
- f. Differences between private sector and public sector entities *i.e.* private ports have various private parties engaged in port operations and responsible for various aspects of the tariff, resulting in more complex tariff structures in private ports.

Table 1 summarizes the countries and the types of port charges compiled from Caribbean states.

**Table 1: Matrix of Basic and Non-basic Tariff Data**

	Pilotage	Towage	Harbour	Mooring &	Container			Break	Stuff &	Equip.
			Dues	Unmooring	Lo/ Lo	Ro/Ro	Reefer	Bulk	Unstuff	Hire
<b>Port/ Country</b>										
Oranjestad / Aruba	✓	✓	X	✓	X	X	X	X	X	X
Dominica	X	✓	X	✓	X	X	X	X	X	X
Port of Bridgetown/ Barbados					✓	X	X	✓	✓	✓
Port of Spain/Trinidad & Tobago	✓	✓	X	✓	✓	✓	✓	✓	✓	X
Point Lisas/Trinidad & Tobago	✓	✓	X	✓	✓	✓	✓	X	✓	✓
St. John's Deep Water Port A & B	✓	✓	✓	✓	✓	X	X	X	X	X
APN/ Haiti	✓	X	X	X	X	X	X	X	X	X
St. Kitts	✓	✓	✓	✓	✓	X	X	✓	X	✓
Jamaica	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A
Kingston Wharves/ Jamaica	N/ A	N/A	N/A	✓	✓	✓	✓	✓	✓	✓
St. Vincent	✓	X	X	✓	X	X	X	X	X	X
St. Kitts	✓	✓	✓	✓	✓	✓	✓	✓	X	✓
Freeport/ Bahamas	X	X	X	X	X	X	X	X	X	✓

**Key**

N/A	Not applicable to that country/location	
	Pilotage, towage, harbour dues, mooring & Unmooring is a single charge	
✓	Tariff Data available	
X	No tariff Data available	

**COMPARISON OF BASIC SERVICES**

A comparison of basic marine services (pilotage, towage, harbour dues and mooring and unmooring) reveals that this type of tariff is more widely existing throughout the region than non-basic. In fact, in some states it is the only aspect of the tariff that is widely published and in some states these tariffs can even be accessed via the internet, as in Aruba, Point Lisas, Port of Spain, and St Kitts and Nevis. Despite the relative ease in accessing this information, only very limited regional comparisons can be made.

In the case of pilotage in Aruba and Jamaica Gross Tons (GT) is used while in Trinidad and Tobago, Antigua and Barbuda, St Vincent and the Grenadines, St Kitts and Nevis it is Gross Registered Tons (GRT). In Haiti pilotage is charge per foot of draught.

In providing the service of towage, comparison becomes more complex as only two countries are using the same unit of measurement (Antigua and Barbuda and St Kitts and Nevis) GRT. Aruba uses GT; Point Lisas (LOA); and, Jamaica (NRT). Similar situations prevail in respect of mooring and unmooring and harbour dues. For some services, a comparison is not possible because operating interest differ combination of (public and private sector) e.g. pilotage and towage and rates for private contractors are not readily available.

There is also considerable dissimilarity in the structure of the basic services. This is reflective in the variation in the breadth of tonnage received (major and minor ports) amongst states and projections for the future growth. The factors impacting on the range of the tonnage category in the tariff includes market size, types of shipping services in respective ports, for example, cargo versus cruise, main line container versus feeder service and domestic versus transshipment terminals.

The varying units of measurement in respect of vessels indicate that there is an urgent need towards standardization in tonnage. This type of standardization is in keeping with IMO International Convention on Tonnage Convention for the Measurement on Ships 1969. This convention was entered into force for new ships July 1982. Since the 18<sup>th</sup> July 1994 it created a new standard of calculating ships volume and cargo space based on its gross tons or net tons. []

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