

THE DEVELOPMENT OF A PORT PERFORMANCE MEASUREMENT SYSTEM USING TIME, REVENUE AND FLEXIBILITY MEASURES

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ABSTRACT

Ports are considered as a necessary element for facilitating seaborne traffic. A wide range of performance measurement systems and frameworks have been developed for this purpose using different techniques. This helps to monitor the performance of operations and terminals in a port through providing a port with indicators that will assist in assessing port productivity, and management of complicated operations. Findings considered that current systems are limited as they focus primarily on measuring containerised cargo and lack the focus of measuring overall port performance. This paper aims to contribute to the development of knowledge and develop a port performance measurement system at Damietta port, Egypt which considers not only containerised cargo but also other types of cargo namely: general cargo, dry bulk and liquid bulk. Three measures were used for this purpose, namely time, revenue and flexibility measures. Multiple regression analysis has been applied as a quantitative approach for the time based performance measures. Revenue measures help to add visibility to revenue created by the port. Flexibility measures help the port manager to deal with uncertainty in demand. Data has been collected from structured interviews, port reports and dedicated workshops for five years from 2004 to 2008, on monthly basis.

KEYWORDS: Port Performance, Operations Time, Regression Analysis