



Faculty of Commerce  
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# TOWARDS A SUPPLY CHAIN MANAGEMENT MODEL IN EGYPTIAN SEAPORTS

A Dissertation Submitted in Fulfilment of the Requirements for the  
Degree of Doctor of Philosophy in Business Administration

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

﴿أَلَمْ تَرَ أَنَّ الْفُلْكَ تَجْرِي فِي الْبَحْرِ بِنِعْمَتِ اللَّهِ لِيُرِيَكُمْ مِنْ آيَاتِهِ إِنَّ

فِي ذَلِكَ لآيَاتٍ لِكُلِّ صَبَّارٍ شَكُورٍ﴾

صدق الله العظيم

سورة لقمان الآية 31

*In the name of Allah, the Beneficent, the Merciful*

﴿Do you not see that the ships run on in the sea by Allah's favor that He may show you of His signs? Most surely there are signs in this for every patient endurer, grateful one﴾

Surah Luqman Verse 31



كلية التجارة  
إدارة الدراسات العليا والبحوث

قرار لجنة المناقشة والحكم  
على رسالة الدكتوراه في إدارة الأعمال

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## ABSTRACT

This dissertation primarily aims to develop a framework for supply chain management to improve the performance of Egyptian seaports through examining the relationships between Port Supply Chain Orientation (PSCO), Port Supply Chain Management Practices (PSCMP) and Port Performance (PP), the dissertation also attempts to test whether the proposed relationships of the framework can be applied across different types of ports and different port groups.

The current dissertation applied the philosophy of pragmatism, which supported the researcher's choice of mixed methods. Mixed methods research is utilised in the current dissertation to achieve the listed research objectives by both qualitative and quantitative data. Mixed methods is regarded in the current study as appropriate and consistent with the nature of interpretivist and positivist enquiry.

The current dissertation was carried out by means of a literature review, interviews and questionnaire surveys in two Egyptian seaports, which are Alexandria and Sokhna ports. The two ports were selected based on different characteristics between them regarding these items: port management, the level of automation, geographical position, the total amount of throughput and the number of shipping lines deal with them.

With respect to the response rate for each port, 341 questionnaires were distributed in Alexandria port, 179 out of the 185 returned responses were found to be valid (valid response rate=52.49%), while in Sokhna port 98 questionnaires were distributed and 92 out of 95 returned responses were identified to be valid (valid response rate=93.8%). The total valid response rate was 61.73%. The data collected through questionnaire were analysed using SPSS version 24 and partial least squares SEM (PLS-SEM) approach SEM analysis techniques.

The findings of this dissertation showed that PSCMP has a direct and positive impact on port effectiveness and efficiency, PSCO has a direct and positive impact on PSCMP, PSCO has a direct and positive influence on port effectiveness while it has no positive impact on port efficiency. Moreover, the results revealed that PSCMP partially mediates the relationship between PSCO and effectiveness as well as mediates the relationship between PSCO and efficiency.

Finally, the Multi-group analysis showed that the research model can be applied across Alexandria and Sokhna ports as well as port operators and users groups. However, the proposed relationships of the model have significant differences across operators and users groups in Alexandria port.

Regarding the practical contribution of the dissertation, The outcomes are expected to aid port managers and other port supply chain partners that have direct or indirect power over port performance to focus their attention on improving port performance through applying port supply chain orientation and port supply chain management practices.

**Keywords** Port supply chain orientation, Port supply chain management practices, Port performance, Value added logistics services, Lean practices.

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