

THE FEASIBILITY OF BLOCKCHAIN SOLUTIONS IN THE MARITIME INDUSTRY

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ABSTRACT

Purpose / Value

The concept of Blockchain technology in supply chain management is well discussed, yet inadequately theorized in terms of its applicability, especially within the maritime industry, which forms a fundamental node of the entire supply chain network. More so, the assumptive grounds associated with the technology have not been openly articulated, leading to unclear ideas about its applicability.

Design/methodology/approach

The research is designed divided into two Stages. This paper (Stage one) enhanced literature review for data collection in order to gauge the properties of the Blockchain technology, and to understand and map those characteristics with the Bill of Lading process within maritime industry. In Stage two an online questionnaire is conducted to assess the feasibility of Blockchain technology for different maritime use-cases.

Findings

The research that was collected and analysed partly from deliverable in the Connect2SmallPort Project and from other literature suggests that Blockchain can be an enabler for improving maritime supply chain. The use-case presented in this paper highlights the practicality of the technology. It was identified that Blockchain possess characteristics suitable to mitigate the risks and issues pertaining to the paper-based Bill of Lading process.

Research limitations

The study would mature further after the execution of the Stage Two. By the end of both Stages, a framework for Blockchain adoption with a focus on the maritime industry would be proposed.

Practical implications

The proposed outcome indicated the practicality of technology, which could be beneficial for the port stakeholders that wish to use Blockchain in processing Bill of Lading or contracts.

Social implications

The study may influence the decision makers to consider the benefits of using the Blockchain technology, thereby, creating opportunities for the maritime industry to leverage the technology with government's support.

Keywords: Digitalization, Blockchain, Maritime, Bill of Lading, Feasibility study.