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## Minimizing stock outs of essential medicines in public health facilities: Antecedents of Medical Store Department (MSD) logistics services performance

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Public health facilities in Tanzania have been critically suffering from common medicines stock out problems. Several factors which include budget constraints have been associated with such problems and solutions, thereon, have been sought. However, supply logistics management factors have received limited attention in the health sector. Building on transaction cost theory, principal-agent theory and resource based view theory of the firm, this paper examined the antecedents of supplier logistical service performance, while controlling for purchasing centralization, geographical location, environmental uncertainty and organization size.

### Therefore, this paper intend to:

- i. Identify key factors which may improve supplier logistics service performance by testing the impact of specific investments, ex-post transaction costs, cross functional integration, supplier integration and supplier output monitoring on supplier logistics service performance.
- ii. Determine the moderating effects of cross-functional integration on the relationship between supplier integration and supplier logistics service performance.
- iii. Determine the moderating effects of supplier output monitoring on the relationship between supplier integration and supplier logistics service performance.

A total of 183 public health facilities (hospitals, health centers and dispensaries) in Tanzania mainland were surveyed from seven regions. Stratified random sampling was employed to select them. A structured questionnaire was used to collect data from key informants (purchasing officials at the health facility level). All measurements were adapted from previous studies and measured in a seven point likert scale. The hierarchical moderated multiple regression model was used to analyze the data. The unit of analysis is the public health facility (buyer) - Medical Supplies Department (supplier) exchange relationship.

The results indicated that specific investments, supplier integration and supplier output monitoring significantly improve supplier logistics service performance, while cross functional integration does not. Moreover, evidence indicates that ex-post transaction costs negatively influence supplier logistics service performance. Evidence also show that cross functional integration and supplier output monitoring positively and significantly moderated the effects of supplier integration on supplier logistics service performance. Purchasing centralization negatively influenced supplier logistics service performance, which implies that public health facilities with higher involvement of district/regional medical office in purchasing, experience low MSD logistics service performance. Similarly, the negative influence of geographical location suggest that rural public health facilities experience low MSD's logistics service performance compared to urban ones.

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