

## ***ABSTRACT***

*PT. X is a company that produces essential goods, specifically crystal sugar, and implements a make-to-stock (MTS) production strategy. With the MTS approach used by PT. X, customer needs can be met through the sale of finished product stock. The shift towards digitalization has introduced new strategies that can be utilized in the development of supply chains, particularly in Indonesia. To achieve success in the digitalization process, the role of omnichannel is to integrate online and offline channels and provide more real-time information and services to customers to enhance their engagement. A deep understanding of the implementation of omnichannel is required, so this research uses the foundation of game theory as a tool to test the success of omnichannel. Furthermore, it is necessary to compare the best strategies that can be generated from game theory modeling. The aim of this research is for the company to have a strategy in the implementation of digitalization to be more responsive to market changes in the sale of 1 Kg sugar. This study presents several scenarios, each with two cases such as uniform pricing and non-uniform pricing. The results of the various scenarios and cases indicate that the best profit for the company is achieved with the strategy where PT. X is operated as a franchise store with differentiated pricing.*

*Keywords: supply chain, omnichannel, game theory, sugar*