

The dynamics of Indonesian rice supply chain

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Abstract-This study is an investigation on the dynamics of Indonesian rice supply chain. Considering the kind of staple food, the system contained of four sub-system which is developed, such as production, consumption, government, and trade modules. Based on the causal loop diagram, the complexity of Indonesian rice supply chain system is constructed. We show that rice supply and demand equation reflected on whole system. The simulation approach using to verify and validated the non-linear dynamics at the system. We also generate the scenario analysis to improve the rice supply chain performance. The results obtained in this study help us to understand the complexity of dynamics rice supply chain study case in Indonesia and provide the alternatives strategy to improve the rice supply chain performance.

Keywords—rice supply chain; simulation; system dynamics