

System Dynamics Modelling for Humanitarian Supply Chain

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Abstract

Humanitarian Logistics has been traditionally explained as a system involved in mobilizing people, resources, skill and knowledge for disaster relief operations. Social Welfare Supply Chains happen to be a distinctive type of Humanitarian Supply Chain working in slow onset disasters like poverty and drought. The paper discusses the case of “Goonj” which works as a social welfare supply chain. This paper analyses the operations of Goonj through a system dynamics model. The paper also suggests the policy decisions and their effect on the system. This study highlights that increasing the collection stock may result in accumulated unused stock even after implementing the policies to deter it. To make the supply chain sustainable, management should not only invest in outreach programs to improve the collection stock but they should also invest in promotion of new product to acquire new customers. The paper can help the policy makers in effective planning of humanitarian supply chain and test the effects of policy decisions on the supply chain.

Key Words: Social Welfare Supply Chain, Humanitarian Logistics, Causal Modelling, System Dynamics

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