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An AHP Approach to Prioritize Sustainability Enablers in Vaccine Supply Chain

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Abstract—

The pharmaceutical industry that discovers, develops, manufactures and market drugs are considered as one of the key contributors to the growth of India's GDP. One of the key products of the pharmaceutical industry is the vaccine, which plays an important role in saving human lives. The incorporation of sustainability into the Vaccine Supply Chain (VSC) has become a key focus for pharmaceutical companies. To achieve this, fifteen means for attaining sustainability in the supply chain of basic vaccines have been identified based on literature review and experts' opinion. These fifteen means are then categorized into four main classes - economical, environmental, operational and social. These criteria (classes) and sub-criteria (means) are then evaluated to determine their relative importance using an Analytical Hierarchy Process (AHP) technique. Based on the results of AHP, the sustainability enablers in VSC can be prioritized. The results of this work provides guidelines for the managers in taking right decisions for making VSC sustainable.

Keywords: Sustainability, Vaccine Supply Chain (VSC), Analytical Hierarchy Process (AHP), Pharmaceutical Industry, Enablers



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