

# **Solving supplier allocation problem in dual offshore sourcing considering green tax - application of bilevel programming methods**

Nivedita Haldar, O.P. Jindal Global University, Haryana, India  
Sanjeet Singh, Indian Institute of Management Calcutta, Kolkata, India

## **Abstract**

The paper designs dual offshore sourcing contracts for an original equipment manufacturer (OEM) of a developed country who sources from two contract manufactures located in two different developing countries. Bilevel programming technique is used to help the OEM to allocate the ordered quantities between the suppliers in the ratio of their fill rates and to set the retail price of the product in the global market. The contracts also find the optimal transfer prices after taking into consideration all costs pertaining to production, export duties and the green tax rates applicable in the respective countries of the contract manufacturers.

**Keywords:** dual sourcing contract, bilevel programming, transfer price