

Discussion 1 week 10 comparing transshipment models to inventory applications

[Science](#), [Statistics](#)



Comparing Transshipment Models to Inventory Applications at Affiliation

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1. Can we apply transshipment models to inventory applications? Why or why not?

It was learned that by definition, a transshipment model is “ an extension of the transportation model in which intermediate transshipment points are added between the sources and destinations” (Taylor, 2010, p. 235). This type of model could be applied to inventory applications because they share similar flow patterns, where goods or items were sourced from one location and moved (or transferred) to another. As emphasized by Bengue (2014), “ transshipment models can be applied to inventory systems to achieve optimal inventory levels” (par. 1). It simply means that there is an objective of minimizing costs by ensuring that the most effective level of inventory is deemed to be maintained to maximize revenues and returns.

2. Is the transportation model an example of decision making under certainty or decision making under uncertainty? Why?

The transportation model, defined as a special type of linear programming method which aims to allocate items or products from a source (or sources) to identified destinations (Taylor, 2010). The objective is to minimize costs of transporting these products. From the explanation of Taylor (2010), the transportation model could be considered an example of decision making under certainty.

Decision-making satisfy the certainty condition when the evaluators or decision makers have the essential information to make a responsible decision. As emphasized, “ people are reasonably sure about what will

happen when they make a decision. The information is available and is considered to be reliable, and the cause and effect relationships are known” (Decision making under certainty, uncertainty and risk, 2007, par. 2).

Transportation models contain all the required information to enable decision makers to identify the actual cost of transporting goods from the source/s to the specific destinations. As such, the formulation of the transportation problem includes identification of the objective function, which is usually to minimize transportation cost. Likewise, all decision variables and constraints are also appropriately identified and explicitly certain, in the formulation process to enable the decision makers to recommend the most viable solution.

In contrast, a decision under uncertainty would leave the decision-makers at a quandary due to the lack of comprehensive information which would enable them to make a viable solution.

References

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