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Determining the Criteria Used in the Selection of a Third-Party Logistics Supplier: Borda-AHP Combination

Abstract

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Determining the Criteria Used in the Selection of a Third-Party Logistics Supplier: Borda-AHP Combination Doç. Dr. Özge DEMİRAL Samime KELEŞ In the global world, companies operate in a highly competitive environment. Manufacturing companies choose a suitable Third-Party Logistics (3PL) company service provider according to various criteria in the process where they try to deliver their goods to the buyers in the most appropriate way by the right way. Meanwhile, the sustainability demanded in all areas of the business world also affects the logistics processes. The logistics industry as a whole is seen as the most important source of CO2 emissions. For this, it is inevitable to consider the economic, social and environmental characteristics/criteria in the logistics sector, in particular sustainability. The motivation and difference of this study are that when the literature is searched, no research has been found on the selection of a 3PL firm according to the opinions of broad experts, providing services to Free Zones on the basis of sustainability. This study aimed to determine which criteria the manufacturers operating in Kayseri Free Zone use for the selection of sustainable 3PL companies and to reveal the importance they attach to the criteria. The criteria are listed separately in 3 separate groups under economic, social, and environmental factors, with 17 criteria in each. In the stage of grouping and selecting the criteria, 7 criteria to be evaluated in each group were determined by using the Board Count method, which works based on consensus. By interviewing 17 experts from 17 different companies, consisting of experts working in the foreign trade/logistics departments of companies operating in the Kayseri Free Zone, geometric averages representing common judgments were calculated according to consistent answers, and criteria weights were obtained by the AHP method. Accordingly, in the selection of 3PL companies, on the basis of sustainability, the economic criteria were found to be 70.67%, the social criteria 16.04%, and the environmental criteria 13.29%. On the other hand, in economic criteria, the total cost was in the first place with a weight of 19.95%, mutual trust in the social criteria was in the first



place with a weight of 19.43%, and in the environmental criteria the occupational health and safety criteria took the first place with a weight of 30.57%. The results obtained are presented as information to decision-makers, researchers and stakeholders on the subject of 3PL selection. Keywords: 3PL, Sustainability, Borda, AHP

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