## The Analysis of Decision Criteria for The Selection of Cold Chain Logistics Providers in The Food Industry

Nalinee Wiangkam<sup>1,a</sup>, Thitipong Jamrus<sup>1,b,\*</sup>, and Panitas Sureeyatanapas<sup>1,c</sup>

E-mail: analineew@kkumail.com, b,\*thitja@kku.ac.th (Corresponding author), cpanisu@kku.ac.th

**Abstract**. Managing the value chain of perishable food is generally known as cold chain management. The cold chain is likely to expand in the future and has an important role in maintaining food quality. Thus, cold chain logistics (CCL) providers are important to make the cold chain more efficient. This study presents the criteria related to the selection of appropriate CCL providers. The initial list of criteria was collected from a review of literature addressing a selection of logistics service providers in various industries. The criteria were then synthesized and classified into 11 main criteria, which were broken down into 26 sub-criteria, including both qualitative and quantitative ones. The criteria have been validated through the index of item-objective congruence (IOC) and interviews of food industry experts. The results finally indicate the group of significant criteria that influence the selection of CCL providers for the perishable food industry.

**Keywords**: Cold chain logistics, Logistics service provider, Multiple criteria decision making, Index of item- objective congruence (IOC).

<sup>&</sup>lt;sup>1</sup> Department of Industrial Engineering, Faculty of Engineering, Khon Kaen University, Khon Kaen, Thailand