

## City selection for new manufacturing e-commerce market entry strategy: Based on urban logistics competitive landscape

Ariyan Sarshar

PhD in Computer Engineering - Network, Artificial Intelligence, Karaj Branch Azad University, Tehran-Iran

### Abstract

Urban logistics is critical to Fresh Produce E-commerce (FPE) and the significant development of urban logistics plays a significant role in increasing the competitiveness of online grocery players. This research examines the characteristics of e-commerce logistics of fresh food and constructs an index to evaluate the competitiveness of urban logistics.

(CLC), also known as urban procurement competition (ULC) based on basic requirement scale, en- productivity. The level of hancers and the level of technology and innovation. By observing thirty-seven cities in China's Yangtze River Delta, we improved the competitiveness score of their urban logistics through TODIM (Portuguese acronym of interactive decision making and multi-attribute) Method: TODIM entropy weighting method and K-means analysis Cluster using MATLAB software. Through TODIM calculation and clustering evaluation, four groups of cities are extracted and suggestions are made on new market entry strategies for fresh food e-commerce in the dust.

Keywords: logistics-Strategy- City -Competition-Analysis

## Introduction

Urban logistics has been identified as a method of optimizing the transportation system in urban areas with regard to the surrounding urban environment, traffic, transportation safety and fuel efficiency Taniguchi et al., 2003. Urban logistics capabilities and the key supply chain level E-commerce success is fresh products based on terminal services in cities Ivanov, 2019; Zhu, 2012; Securities, 2020b. During the 2019 coronavirus disease (Covid-19) pandemic, FPE has spread throughout China's megacities, and many companies are aggressively moving to new cities to capture market share. Regardless of local transportation capability, business expansion is a serious problem, that is, low distribution efficiency has led to customer dissatisfaction and increased consumerism (Ivanov, 2019). Therefore, to stand out in such a highly competitive market, before developing a business in a new market, the ability of urban logistics, which is calculated by ULC, should be carefully considered. In the literature, logistics competitiveness analysis has been evaluated by various methods, such as: fuzzy cluster analysis for sample cities (Xu and Gong, 2020), Analytic Hierarchy Process (AHP) improvement for logistics competitiveness (Wu et al. ., 2020) etc. Although existing research has yielded rich results on procurement competition, manufacturing has not been in a specific industry. Not discussed yet. Therefore, how to make a competitive index of urban procurement according to the characteristics of FPE and evaluate it by a Specific model so as to support the company's decision makers (DMs) to Appropriate design of market entry policies in an emerging economyIt is vital.

## Research method

Our research proposes a data-driven method to optimize the evaluation process. This method includes the stage of building evaluation criteria, the stage of calculation with the entropy weight method, and the stage of evaluation with the improvement of the TODIM model and clustering analysis of the fuzzy equivalence relation. In the first stage, in combination with existing research and fully considering the characteristics of FPE, representativeness and availability of indicators, a specific ULC evolution system is built from three dimensions: urban logistics, basic competition required, increasing competition efficiency. and the competition of technology and innovation. In the second step, a new multi-criteria decision-making MCDM method is proposed to improve the TODIM method, which is a combination of entropy weighting method to weight large companies with comparison methods. Using this method, the data collected from the urban density of the Yangtze River Delta in China is evaluated with the previously established evaluation index system. In addition, based on TODIM analysis, K-means clustering is introduced to identify city clusters, and cities in the Yangtze River Delta region are divided into four levels regarding their competitiveness score. Finally, according to the result of the cluster analysis, it is possible to point out the order of entry of the next target markets and the corresponding suggestions are presented. Although the individual methods of this paper are not unique, the integration of these MCDM methods has never been proposed, and the assessment of logistics and competitiveness of fresh produce e-commerce supply chains has not yet been proposed. In this paper, in order to reduce the arbitrariness of weight assignment caused by human subjective and reduce the sensitivity to weight change (Wang et al., 2017), an improved TODIM model is designed to calculate subjective experimental data. This model can help managers to make a judicial decision without perfect skills or previous experience. Order to enter new cities The definition of urban procurement was first defined by Eiichi Taniguchi (Taniguchi, 2001). Helen et al used empirical data from documents and semi-structured expert interviews to conduct a Brussels case study to find out how package distribution is organized (Buldeo Rai et al., 2019). Taking a qualitative approach, Marko et al. developed a blockchain decision framework for combining courier, express and parcel carriers in an urban environment (Marko et al., 2020). Some multi-crisis decision making techniques are commonly used, such as: AHP (Analytic Hierarchy Process), TOPSIS (Technique of Order Preference with Similarity to Ideal Solution) and so on. Ivana took the AHP method for sustainable urban logistics to explore the main component of the sustainable transition process (Ivana and Siddhartha, 2019). Factorial cluster analysis (Xu and Gong, 2020). FPE is an emerging business model implemented by a retailer or supermarket to market its food products through e-commerce. Currently, most of the studies on online grocery shopping are based on surveys and they focus on the motivations for online grocery shopping. Two surveys, one in Germany and the other in America, including tailored questions about online food shopping were presented by Jonathan et al. Blitstein et al., 2020. Wisynu collects data by distributing a questionnaire that includes questions to measure PU (Perceived usefulness, PEOU, perceived ease, PR (perceived risk), SI is social impact, collected. VIS (view), ATU (attitude towards use) and BI variable behavioral intention to understand consumer attitude towards online grocery shopping in Malang (Wisynu) Eri and Anggya Puspita Dewi, 2017). The study of Reema and Magnus evaluates consumers' online shopping actions by adopting a theoretical framework that includes both performance-related characteristics. Tunes and comprehensive experience Singh and Soderlund, 2020. Our research presents a new city logistics competitiveness index system from the perspective of online grocery shopping (OGS) and introduces a multiple decision-making approach, an improved method that combines the entropy weight method and the traditional TODIM model. is, to support online food players by choosing a new market (city). None of the previous models provide such realistic case studies

and industry-specific models to tackle the logistics capability problem in the online grocery industry and emerging economies.

## The result

Based on the characteristics of e-commerce logistics, urban transportation and fresh food industries, the evaluation index system is combined with the level of basic need, the level of increasing productivity and technology and innovation. The dominance score of each city is calculated by the improved TODIM method, which is a combination of the weighted entropy method and the TODIM model. Based on the value of mastery; A cluster analysis is presented that divides the cities into four groups.

Frontier group and scoregestions center on market entry strategies for new e-commerce players. The first group of cities including Ningbo, Taizhou (Zhejiang), Suzhou (Jiangsu) and Wenzhou should be given priority.

. ULC assessment is comprehensive and complex. Although this paper has conducted an in-depth research on the urban logistics competition of thirty-seven cities in the urban Yangtze River Delta from the perspective of fresh produce e-commerce, there are still shortcomings. In the future work, the following two points should be observed. (a) Internal data of new e-commerce companies will be added. Not only from a macro perspective, but also from a micro perspective to determine the city selection for new electricity business enterprises. (b) Cities in China are developing rapidly, so we need to evaluate the logistics competition of the city dynamically, this needs to predict the development of the logistics competition of different cities. In addition, since the fresh food e-commerce industry is an emerging industry that is constantly changing and developing, we need to adjust and anticipate the criteria according to different conditions. The demand for different stages of development of the online food industry. By monitoring the development of logistics competitiveness of Yangtze River Delta cities, adopting a good forecasting model and accurately predicting the evolution, the future work will help the economy and society.

## Future research

With the advancement of science and technology, the boundaries and manner of world trade have changed. Nowadays, everyone is used to online shopping and quick access to everything. For example, through online stores such as Amazon, which are pioneers in fast delivery services depending on where people live, you can receive your desired product less than an hour after ordering. This technological improvement has increased productivity in the supply chain and minimized costs and errors. These developments are useful for all areas of the logistics industry, including cargo transportation, international transportation (ocean and air), supply chain management, and shipment tracking.

## Resources

health a factor? J. Food Products Market. 26 (3), 212–224.

Buldeo Rai, H., Verlinde, S., Macharis, C., 2019. City logistics in an omnichannel environment. The case of Brussels. Case Studies on Transport Policy 7 (2), 310–317

Gomes, Luiz Flavio Autran Monteiro, Rangel, Luis Alberto Duncan, Maranhão, Francisco Jos'e Coelho, 2009. Multicriteria analysis of natural gas destination in Brazil: An application of the TODIM method. Math. Comput. Modell. 50 (1-2), 92–100.

Ivana, S., Sidharta, G., 2019. A Collaborative Stakeholder Decision-Making Approach for Sustainable Urban Logistics [M], Sustainability.

Research Interdisciplinary. Perspectives 100274.

SECURITIES H 2020a. In-Depth Report on new retail industry: fresh food consumption grows steadily, and fresh food supermarkets have broad space [M].

SECURITIES Z 2020b. New Retail Research in the Retail Industry [M].

Singh, R., So'derlund, M., 2020. Extending the experience construct: an examination of online grocery shopping. Eur. J. Marketing 54, 2419–2446.

Taniguchi E., 2001. City logistics management[C]//Tokyo:the North publishing company.

Taniguchi, Eiichi, Thompson, Russell G., Yamada, Tadashi, 2003. Predicting the effects

of city logistics schemes. Transport Rev. 23 (4), 489–515.

Wang, Peng, Zhu, Zhouquan, Huang, Shuai, 2017. The use of improved TOPSIS method based on experimental design and Chebyshev regression in solving MCDM problems. J. Intell. Manuf. 28 (1), 229–243.

Wisynu Ari G, Anggya Puspita Dewi I, 2017. Consumer acceptance towards online grocery shopping in Malang, East Java, Indonesia [M], Agrise.

Wu, Z., Huang, S., Hu, W., 2020. Research on the selection of green building projects based on combination weighting-improved topsis. Method J. World Sci. Res. J. 6.

Xu, W., Gong, X., 2020. Factor cluster analysis of qingdao port logistics competitiveness.