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Establishing contexts in urban logistics measures to enhance policy transfer

Abstract

Cities located in various economic levels have a diverse level of exposure to urban logistics (UL) measures. The adoption of best practice experiences in terms of policy transfer plays an influential role to bridge those exposure gaps. The process of policy transfer always involves a range of variables and multiple steps. The success of the transferability process to the target city highly hinged on the precise understanding of favoring contexts. The study aims to create these contexts with wider urban logistics measures around the world. The established contexts will assist in facilitating the choice of similarities in contexts, identifying the potential measures for transfer, and common and typical barriers along with their respective drivers based on objective sets. To achieve this objective, four-stage methods were applied. The first stage was retrieving relevant UL measures from the literature using systematic literature review (SLR) methods; the second stage was filtering the measures into six continents of the world as geographic regions and four economic-level classes (as developed, economies-in-transition, emerging and developing) depending on the origin of the literature; the third stage was to conduct topic-based analysis for establishing the contexts, and the fourth stage was to identify the typical barriers and drivers with developing countries considering the transfer of measures from developed countries.

The retrieval of the measures from literature resulted in 325 articles and then identified into 19 different topics of discussion. The topics of discussion categorized into different geographic regions and economic-levels and establish contexts with analysis based on the major objective or the main focus/approach. The majority of the topics, around 80% of the developed economies, were originated from Europe. *Vehicle routing and scheduling (VRP)* and *stakeholder participation* topics were the main focus of both developed and emerging

economies, followed with *solution performance* for developed and *sustainability* for emerging economies. For the same economic-level classification the contexts of the measures mostly differed, e.g. for the topic of *cargo bikes* in which studies from Europe focused on evaluating the policy perspectives in the use of electric cargo bikes whereas the performance and economic viability aspects were the focus in North American context.

The results from the analysis highlighted the level of exposure to UL measures across different continents and economic classes. The regions in the developed economies were highly exposed compared to the regions in the developing economies. Specifically, Europe was the highest and Africa was the lowest. The transfer of urban logistics policy between these two economic classes will diminish the gaps in the exposure levels. The transferability process can also be enhanced through the identification of common barriers and drivers to adopt the measures based on the prevailing problems and opportunities of direct and indirect aspects related to UL measures. The physical, operational, financial, institutional, and technological barriers along with related drivers (opportunities) at each UL measures were identified. Among others, the physical and institutional bottlenecks were the main spotted common barriers in considering UL measures transferability to the context of cities in the developing economies. Moreover, a range of drivers was found related to the transfer of UL measures such as a rise in efficiency, enhanced economic activity, improvement in service quality, and reduce environmental problems.

Overall the study will assist in facilitating the choice of similar contexts and identify applicable relevant UL measures for transfer into the new context of the receptor city. Besides, the identification of barriers and drivers provides an early response to the questions of *"what needs to be done first?"* and *"what will be gained after the transfer?"*.