A MULTI-SIDED PLATFORM TO SUPPORT TRANSPORTATION OPERATORS

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Recent studies show that the transportation of products and goods fills more than one third of the roads of the cities centre leading to a strong impact on the urban sustainability. Crowded cities also imply diseconomies for transportation players, who are trying to face such a phenomenon by investing in new technologies (e.g., intelligent routing systems, etc.) and in more efficient and low CO2 emission vehicles. However, in some cases, these investments imply a heavy burden that, in particular, small transportation operators cannot afford, which may result in low customer service.

To make transportation operators more efficient and competitive, and to increase the social and environmental sustainability of urban areas, this research suggests to build a web-based multi-sided platform aimed to connect different players, from demand and supply side, operating in the distribution logistics. A multi-sided platform can be defined as a business based on enabling value-creating interactions between two or more categories of users, commonly identified as *seekers* and *solvers*. These web-based platforms provide an open and participative infrastructure to facilitate the exchange and sharing of goods and services among users.

The suggested platform aims to connect seekers (demand side), such as local business, private consumers and even couriers called to deliver a parcel, with solvers (supply side). Solvers can be both delivery capacity (couriers) and parcel lockers providers. The platform's role is to facilitate the matching process between the demand and the supply of transportation services. Both seekers and solvers for the transportation services provided by the platform are requested to pay a commission fee. To understand how to design and evaluate a successful multi-sided platform business model aimed at supporting transportation operators, a System Dynamics model has been built. Simulation results show the critical roles played by the users' commission fees policies platform managers can set to fuel the network effects and to attain platform financial sustainability.