TOWARDS OPTIMAL CONFIGURATION OF TRUCK PROCESSING OPERATIONS AT THE DETROIT-WINDSOR BORDER CROSSING

Michael A. Haughton and Sapna Isotupa¹ School of Business & Economics Wilfrid Laurier University Waterloo, Ontario, Canada N2L 3C5 Telephone: (519) 884-1970 (Ext. 2853)

Fax: (519) 884-0201 Email: sisotupa@wlu.ca

Abstract

Addressing the overarching goal of balancing trade efficiency and security translates to crucial decisions about the configuration of truck processing operations at Canada-US borders. These decisions include the number of primary customs booths required and how to allocate them between certified carriers (e.g., those that satisfy the security mandates of the Free and Secure Trade (FAST) program) and uncertified (non-FAST) carriers. Using a simulation model of operations at the major Canada-US truck crossing (Detroit-Windsor), we propose methods to help make these decisions and evaluate the resulting configurations. The evaluation is multi-objective as it accounts for both truck waiting time and truck processing resources.

¹Corresponding author