

# Trade Elasticity: Estimates from Product-level Data

Juyoung Cheong\*, Do Won Kwak<sup>†</sup>, and Kam Ki Tang<sup>‡§</sup>

## Abstract

This paper estimates the trade elasticity using bilateral tariff data for 63 importing and 135 exporting countries at the product level from 2001 to 2010. We use the Helpman et al. (2008) (HMR) two-stage approach that controls for self-selection and firm heterogeneity with many zero observations of trade flows. To apply the HMR approach at the product level estimation, we propose new exclusion restriction variables that vary across products using the entry and exit decisions model in exporting markets learning literature such as Fernandes and Tang (2014). We found substantial upward bias in the estimates of the trade elasticity in previous studies that only use positive trade flows. Accounting for zero trade flows and firm heterogeneity at the product level substantially lowers the product level (HS-2 digit) estimate of the trade elasticity from -3.65 to -2.26, which imply much larger welfare gains from trade. We also find large heterogeneity in the trade elasticity across the income level of country-pairs.

*JEL Code: C13; C23, F10; F15*

*Keywords: Gravity Model; Firm Heterogeneity; Disaggregate Data; Trade Elasticity;*

*Learning*

---

\*Department of Economics, Kyung Hee University, Korea; e-mail: jcheong@khu.ac.kr

<sup>†</sup>Graduate School of International Studies, Korea University, Korea; e-mail: dwkwak@korea.ac.kr

<sup>‡</sup>School of Economics, University of Queensland, Australia; e-mail: kk.tang@uq.edu.au

<sup>§</sup>The authors would like to thank Peter Egger, Pao-Li Chang, James Lake, Benedikt Heid, Jason Query, Hais-han Yuan and other participants at the WEAI conference in 2019, the Australian Trade Workshop in 2016 and 2017, 2016 Asia-Pacific Trade Seminar, 2018 Asian Meeting of the Econometric Society, seminars at Kyung Hee University, Sungkyunkwan University and Korea University for their valuable suggestions. This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2018S1A5A2A03037147).