Stay or Leave? The Impact of Global Warming on Internal Migrations*

Giovanni Peri† UC Davis and NBER

Akira Sasahara‡ University of Idaho

January 28, 2019

Abstract

This paper examines the long-run impact of temperature changes on internal migrations within countries using a 56km×56km grid cell level dataset on net migrations, temperatures, and precipitation. Our dataset covers 162 countries in the world at the 10-year frequency during the period 1970-2000. We find that rising temperatures reduce rural-urban migrations in poor countries while they increase such migrations in middle-income countries. These differential migration responses are consistent with a simple economic model where earning incentives to migrate and liquidity constraints on migrants interact to determine net migration flows. Both regressions using grid-cell level micro data as well as aggregate country-level regression, constructed by aggregating the grid cell level data confirm these findings.

Key Words: Internal Migrations, Global Warming, Rural and Urban Economies
JEL Codes: F22, Q1, R12

*The authors would like to thank Jongkwan Lee, Vladimir Tyazhelnikov, Vasil Yasenov, and seminar participants at UC Davis for helpful comments. Thanks are also given to Brock Smith for his guidance to construct the dataset.

†Department of Economics, University of California, Davis, One Shields Avenue, Davis, CA 95616, E-mail: gperi@ucdavis.edu

‡College of Business and Economics, University of Idaho, 875 Perimeter Drive MS 3161, Moscow, ID, 83844, E-mail: sasahara@uidaho.edu