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TITLE: CO2 EMISSIONS LINKED TO INTERNATIONAL FREIGHT TRANSPORTATION AND THEIR IMPACT ON THE EMISSIONS BALANCE

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ABSTRACT:

International freight transportation has a growing impact on climate change, as it increases considerably greenhouse gas emissions. CO2 emissions linked to international shipping and air transportation in EU-27 have grown from 3.81% of total CO2 emissions in 1990 to 6.56% in 2006 (European Commission, 2007). International fragmentation of production, also known as offshoring, is responsible for an important part of that rise, as firms break up their production in different tasks and locate them where costs are lower. The aim of this paper, based on the literature focused on consumer responsibility (Gay & Proops, 1993; Proops et al., 1993; Munksgaard & Pedersen, 2001; Sánchez-Chóliz & Duarte, 2004, Peters & Herwich, 2006; Serrano & Roca, 2007), is to calculate a new and widened emissions balance that includes contamination linked to international freight transportation. We propose a new method to quantify and assign by industry the CO2 pollution linked to this transportation as both IPCC and satellite accounts criteria present some trouble in correctly assigning it. We will apply this method to the Spanish economy using input-output tables and trade data.