



Regional trade agreements (RTAs) have been sweeping the world and have become ubiquitous in facilitating international trade and investment<sup>1-3</sup>. After an 8-year-long negotiation, the ten countries of ASEAN (Association of Southeast Asian Nations), China, Japan, South Korea, Australia, and New Zealand finally concluded the Regional Comprehensive Economic Partnership (RCEP) in November 2020 and it became the largest RTA in the world in terms of both economic size and population. According to the Schedule of Tariff Commitments in the RCEP Agreement, most trade in goods will be duty-free

effect (columns 3 and 4) and terms of trade effect (columns 5 and 6), which are further decomposed separately into the results of trade with RCEP members versus trade with other economies

due to RCEP tariff reductions also change the production costs,

exports of some non-RCEP economies to RCEP members for reasons we discussed in the previous section, which will reduce





globalization is far from a possible strategy for global emission mitigation. Although de-globalization could reduce international trade and the corresponding embodied carbon emissions in the short term<sup>41</sup>



nations are highly motivated to ensure economic development and environmental sustainability in tandem<sup>12</sup>

world consists of  $n$  countries, and there are

Eq. (16), we develop the following equation:

$$\Delta e^r = w^r (I - \mathbb{A})^{-1} e$$

