# Estimating Ownership-Based Bilateral Trade and Its Contribution to World GDP

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Bilateral trade balance is one of the issues that has garnered significant attention from academia and government. Large trade deficit is often used as a motivation for trade protection policies. However, in the context of the development of foreign direct investment and the expansion of global value chains, countries around the world have been closely interdependent through the establishment of a commercial presence. This has had a subversive impact on the traditional international trade statistics that measure the gains from international trade.

On the one hand, the sales by subsidiaries established in Country B through direct investment from Country A to the local sectors in Country B are essentially extensions of exports from Country A to Country B. These sales largely reflect the gains of Country A. However, the traditional international trade statistics based on the â€œrule of residenceâ€• do not include these transactions as exports from Country A to Country B. On the other hand, a significant portion of the exports from Country B to Country A are completed by foreign-owned enterprises. However, the ownership of these exports belongs to the foreign enterprises and does not represent the gains of Country B. In addition, to avoid the trade protection in Country A, Country B could establish affiliates in Country C for production and further export to Country A.

Considering the substitutive effect of foreign direct investment on traditional trade, the traditional â€œrule of residenceâ€• for identifying bilateral trade no longer accurately reflects the actual trade benefits of both parties. Academia has been attempting to re-estimate the bilateral trade from the perspective of ownership. Ownership-based trade is identified based on whether the transfer of commodity (service) ownership changes â€œnationalityâ€•, rather than whether the commodity (service) is cross-border or not. Therefore, ownership-based trade can be achieved not only through cross-border transactions between resident and non-resident units, but also by establishing a business presence abroad.

This paper attempts to estimate ownership-based bilateral trade and its contribution to world GDP by using the OECD Activity of Multinational Enterprises (AMNE) Database. The novelty includes: i) The â€œOECD Inter-Country Input-Output table split according to ownershipâ€• in the AMNE database distinguishes domestic-owned and foreign-owned firms. We further spilt the foreign-owned firms in these tables according to their parent countries. This provides basic data for estimating ownership-based bilateral trade; ii) We propose a systematic approach to estimating ownership-based bilateral trade by using the â€œinter-country input-output tables split according to ownership of parent countriesâ€•; iii) We evaluate the contribution of ownership-based bilateral trade to world GDP by using inter-country input-output model with hypothetical extraction method and give implications on the potential impact of ownership-based trade protection policies.

The preliminary study finds that horizontal FDI and export platform FDI play a significant role in substituting traditional residence-based trade. Some economies export a large amount of goods and services to its trading partners by establishing affiliates through investments in third countries. For instance, the third-country platforms for U.S. exports to China are mainly distributed in the Asia-Pacific region, including Singapore, Australia, Japan, Malaysia, and South Korea. The gap between China and the United States in terms of FDI has substantially reduced the trade balance between the two sides. The traditional residence-based trade balance seriously distorts trade benefits. Formulating trade policies based on residence-based trade statistics will lead to biases and may even trigger unnecessary trade friction.