Utilizing Microsoft Power BI to Identify Asymmetries in Intra-ASEAN International Merchandise Trade Statistics (IMTS): the Size and Potential Sources

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ABSTRACT

International merchandise trade statistics (IMTS) is frequently used to support the monitoring of ASEAN integration. It could indicate the degree of openness and the intensity of cooperation between ASEAN Member States. Therefore, the quality of IMTS is crucial, particularly for analysis at regional level.

Mirror analysis is one of the most commonly used techniques for assessing data quality, particularly for comparison of trade data between partner countries. This paper, which aims to contribute in the improvement of IMTS data quality, illustrates the mirror analysis conducted by ASEANStats on the data of IMTS provided by ASEAN Member States (AMS), both at aggregate level (for the period of 2010-2019) and the detailed Harmonised System (HS) at 6-digits level. Utilising Microsoft Power BI which has outstanding visualization capabilities to support interactive thinking and analysis, this paper identifies the asymmetries and discrepancies of intra-ASEAN exports and imports data. It shows the size of discrepancies as well as the commodities and the partner countries with the most discrepancies. It also indicates the potential sources of the discrepancies.

The results of this study could be used as starting point to develop strategies and methods for conducting reconciliation exercises e.g. by focusing on reconciling the data with main partners and/or for targeted commodities. The results could also contribute in increasing awareness on the issues in methodology and the challenges in data compilation, as well as on the importance of strengthening cooperation between agencies involved in the production of IMTS.