Global Value Chains indicators fully consistent with EU official statistics

Topic: Trade and Global Value Chains Policies
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GVCs indicators can assist policymakers and businesses in understanding the changes in the global trade landscape, such as the growing significance of services, the emergence of regional value chains, and the potential vulnerabilities to trade disruption. Due to these reasons, Eurostat will annually produce and distribute Global Value Chains (GVC) type indicators for the EU and its primary trade partners, estimated using the EU Inter-Country Supply, Use and Input-Output Tables known as â€˜FIGAROâ€™ tables. The initial version of the FIGARO-based GVC-type indicators database will include 12 indicators grouped into six categories of varying complexity and coverage: i) Basic trade statistics, including gross imports and exports. ii) Value added in trade indicators (VAiT), encompassing domestic value added in gross exports and foreign value added in gross exports. iii) Trade in value added (TiVA) indicators, covering domestic value added in foreign final demand, and foreign value added in domestic final demand. iv) Resilience indicators, including forward and backward participation and GVC participation. v) Employment indicators, comprising domestic employment in gross exports and domestic employment in foreign final demand. vi) Other developments, referring to a new indicator called single exposure indicator (SEI), which is a combination of TiVA and VAiT to encompass all exported value added pathways.

The main innovation of this database is that these indicators will be calculated using two approaches: the national perspective and the EU regional perspective. The need for these two approaches is justified by the very nature of the EU project and the system of competence distribution. The key difference between the two lies in how intra-EU trade is accounted for, either as international trade (national perspective) or domestic trade (EU regional perspective). Consequently, each approach requires a different input-output model.

In the national perspective, Local Leontief matrices are utilized, which are based on a single-country input-output table, as represented by the expression L^rr=(I-A^rr)^(-1), where r is a country in FIGARO, and A is the domestic input coefficients matrix of that country. On the other hand, in the EU regional perspective, an EU single-region Leontief matrix needs to be obtained, which internalizes intra-EU spillover effects following R=(I-A^rs)^(-1) for r,sâ^{EU}. However, this is not required for TiVA indicators and employment supported by final demand, which are based on the global Leontief matrix B=(I-A)^(-1). As a result, the difference between both approaches solely relates to the final trade products included. This means the regional perspective only includes no-EU countries, while the national perspective includes both no-EU countries and other Member States' final exports.

In this paper, we initially elucidate the calculation methods for each indicator based on the FIGARO tables for the period 2010-2021, illustrating how they are interrelated while conveying distinct messages for policymakers. Additionally, we outline the quality assurance methods developed to ensure that the main input-output accounting identities are maintained when computing the GVC indicators at full resolution. Furthermore, we highlight the principal variances from other approaches, such as the OECD TiVAâ€™s database or GVC indicators databases provided by specific EU member states. These differences pertain to the perspectives mentioned above, as well as other aspects such as how industriesâ€™ value added is calculated, or the inclusion/exclusion of direct purchases abroad by residents when compiling exports and imports. We also expound on how limitations in data processing and distribution were overcome, and introduce new terminology aimed at facilitating communication to a broader audience. Lastly, we briefly analyse the main results and

EU trends following both perspectives, and outline the policy implications for the EU, including policies on open strategic autonomy.