US and EU Aid and Trade, and the Relationships with Human and Environmental Crises

Extended Abstract

Both the US and the EU have been significant contributors to official development aid. However, there is increasing political pressure in many countries to reduce future aid disbursements. By conducting a system-wide association study between detailed trade flows and aid purposes including untied, humanitarian, and typically non-trade related aid, we aim to identify a wide range of potential relationships and understand how aid and trade may indirectly interact.

Using comprehensive standardized and official data from the OECD's Creditor Reporting System and global trade data from the CEPII BACI dataset [1], we evaluate pairwise edge-weight Pearson correlations between aid and trade layers in a hierarchical multiplex, network which evolves over time, taking aid disbursements and imports in current prices. Each level in the network hierarchy corresponds to a finer resolution of aid or trade flows. Nodes are world regions, with certain large economies separated out. We identify strong and persistent correlations for specific sets of traded products and aid purposes.

The results calculated for the broadest level using 21 Harmonized System (HS) trading product sections (as defined by the WCO) and 32 aid sectors (as defined by the DAC) for 2022 can be seen in Figure 1. For both the USA (a), and bilateral EU 27 country flows (b), we see strong correlations across a wide range of aid sectors for trade in Precious Stones and Metals. These correlations point to countries which trade in these products receiving a wide range of aid. Mineral Products stand out across a wide range of sectors for the EU, however show strong correlations in particular for aid related to Conflict, Peace, and Security for both regions.

At the finest level of granularity, we identify 26,400 correlations a year across an eleven-year time span, for up to 96 categories of traded products, with up to 275 distinct aid purposes. Our results highlight how certain imported products associated with the interests of donor nations are strongly correlated with certain types of development aid, at a much larger scope compared to aid declared as Aid-for-Trade (AfT), with correlations persisting over time. We find strong and persistent correlations between agricultural products such as coffee and cocoa and mined products such as precious metals or critical minerals, and aid designed to address health, emergencies, or conflict. These findings are underscored by the human and environmental impacts of trade in these areas reflected in the academic literature [2][3][4], motivating evidence of potential relationships between trade, donor interests, and aid deployment beyond AfT.

Crucially, our results signal connections between trade and human and environmental crises, mirroring many known trade-offs between the UN's 2030 Sustainable Development Goals [5], and suggest that a major cessation of US aid flows would likely result in a substantial reduction in attempts to mitigate the impacts of the US's food and precious metal imports. Furthermore, they highlight the sensitive relationship between aid, minerals, and conflict, and the risks of removal of aid in this area.

For the EU, filling the vacuum left by the US may be seen as an opportunity to reduce its supply chain vulnerabilities. A further opportunity to assess the current relationship between aid and trade arises.

References

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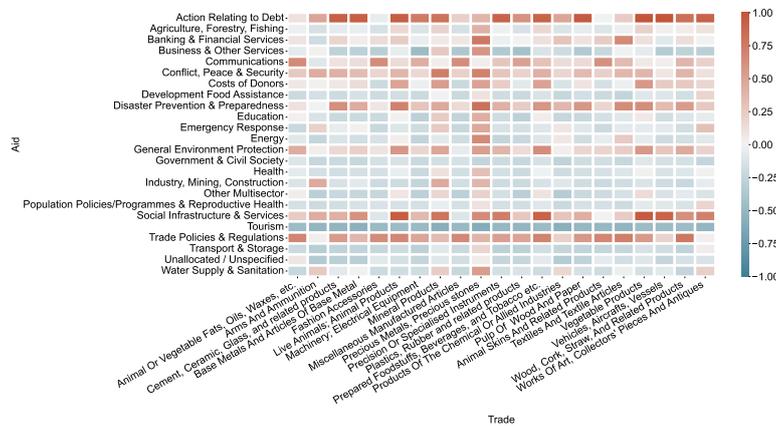
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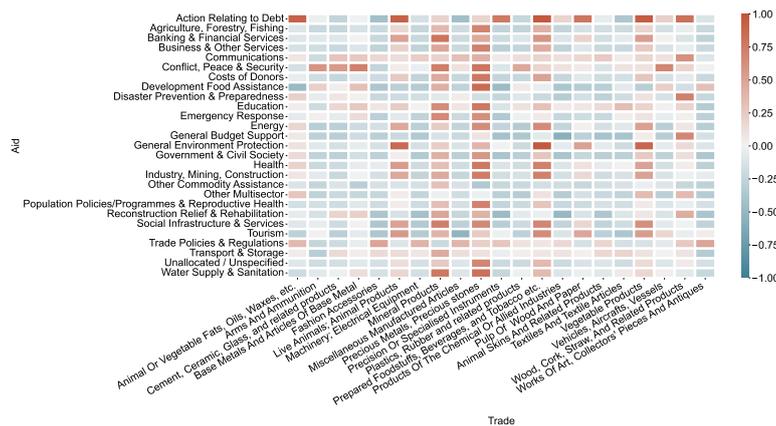
(b) EU 27

Figure 1: Aid-Trade correlations in 2022 for (a) the US, (b) the EU 27, and (c) EU institutions. The heatmaps show correlations between aid purposes (rows) and trade in product categories (columns) with green (red) colours indicating a positive (negative) correlation. Captions are shortened for readability.