Merchandise Trade
TRANSPORTATION TIME LAG: ITS IMPACT ON THE SYMMETRY BETWEEN WORLD EXPORTS AND IMPORTS

Goods shipped from one country to another are recorded in one’s exports and the other’s imports. The statistical value of these bilateral trade flows, however, virtually never match. One of the main reasons for asymmetries in merchandise trade statistics lies in the treatment of freight transportation and insurance included in the value of imports (c.i.f valuation) and excluded from exports (f.o.b. valuation). Other causes stem from practical difficulties in geographical attribution, “double counting” in triangular trade schemes, different collection and compilation practices, reporting errors and different times of recording, among others.

Despite the existence of asymmetries, mirror exports and imports generally follow similar patterns in their changes over time which trade statisticians often use in validating data and producing estimates. Mirror statistics, however, happen to be misleading and need to be used with sound judgment. The example below illustrates the discrepancies between actual and mirror trade developments due to transportation time lags.

An example: The time lag impact illustrated using Mauritania’s oil exports

Mauritania started exporting petroleum in 2006, on a relatively small scale, yet significant for its economy. Its oil exports stagnated in 2008. Its partner countries’ oil imports from Mauritania, on the other hand, show to have increased by 33 per cent. Which data then reflect the real change of its oil exports? Despite this apparent contradiction, both developments are true – the difference lies simply in the transportation time lag which leads to different times of recording in the sending and receiving country. Monthly statistics shown in the first two rows of table 1 below track the country’s sporadic oil shipments to their final destination which is reflected in mirror statistics only one to two months later. Annualised values of reported exports and unadjusted mirror imports display the high above-mentioned asymmetry, mainly because of the November 2007 shipment which was recorded as an import only in January 2008.

Table 1. Mauritania oil exports and mirror imports, 2006-08
(million dollars and percentage change)

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<thead>
<tr>
<th></th>
<th>Dec06</th>
<th>Jan07</th>
<th>Feb07</th>
<th>Mar07</th>
<th>Apr07</th>
<th>May07</th>
<th>Jun07</th>
<th>Jul07</th>
<th>Aug07</th>
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<th>Oct07</th>
<th>Nov07</th>
<th>Dec07</th>
<th>Jan08</th>
<th>Feb08</th>
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<tbody>
<tr>
<td>Exports</td>
<td>57</td>
<td>52</td>
<td>58</td>
<td>65</td>
<td>73</td>
<td>81</td>
<td>75</td>
<td>87</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirror imports (raw)</td>
<td>58</td>
<td>55</td>
<td>57</td>
<td>64</td>
<td>69</td>
<td>75</td>
<td>87</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mirror, adjusted for time lag</td>
<td>55</td>
<td>57</td>
<td>64</td>
<td>69</td>
<td>75</td>
<td>87</td>
<td>91</td>
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<thead>
<tr>
<th></th>
<th>Mar08</th>
<th>Apr08</th>
<th>May08</th>
<th>Jun08</th>
<th>Jul08</th>
<th>Aug08</th>
<th>Sep08</th>
<th>Oct08</th>
<th>Nov08</th>
<th>Dec08</th>
<th>Annual value</th>
<th>% change</th>
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<tr>
<td>Exports</td>
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<td>91</td>
<td>113</td>
<td>91</td>
<td>44</td>
<td>330</td>
<td>330</td>
<td>0</td>
<td></td>
<td></td>
<td>320</td>
<td>426</td>
</tr>
<tr>
<td>Mirror imports (raw)</td>
<td>91</td>
<td>113</td>
<td>91</td>
<td>44</td>
<td>352</td>
<td>339</td>
<td>339</td>
<td>-4</td>
<td></td>
<td></td>
<td>320</td>
<td>426</td>
</tr>
<tr>
<td>Mirror, adjusted for time lag</td>
<td>113</td>
<td>91</td>
<td>44</td>
<td>352</td>
<td>339</td>
<td>339</td>
<td>339</td>
<td>-4</td>
<td></td>
<td></td>
<td>320</td>
<td>426</td>
</tr>
</tbody>
</table>

Source: Mauritania, Comité National de Suivi des Revenus des Hydrocarbures (CNSRH), and Global Trade Information Service, GTA

The third row of Table 1 includes “corrected” mirror data by allocating mirror oil imports to the respective months when they left Mauritania. The 2008 annual change indicated by “adjusted” mirror data is a 4 per cent decrease, which is much more consistent with the reported stagnation in exports.

This example is an exceptional case where annual trade statistics and their mirror flows reflect contradictory developments. In general annual changes in actual and mirror trade flows are identical: “supplementary” imports in the first months are usually balanced by “supplementary” year-end exports.

The time-lag effect was, however, not so neutral on asymmetries in 2008 since a five-year-long increasing trend was suddenly disrupted in the fourth quarter. The discrepancy induced by “supplementary” imports (i.e. corresponding to high exports of late 2007) could not be completely balanced by the “supplementary” exports of late 2008, which were at a considerably lower level. Although the global symmetry of merchandise trade was not affected (exports and imports grew at a similar rate), the transportation lag did impact on some specific commodities and countries typically trading over long distances. This had to be factored in for the compilation of 2008 trade values, especially for oil-exporting countries: asymmetries were high not only because of the transportation time but also because of the price of crude oil which had fallen more sharply than that of other products at the end of 2008. (YM)
“Data Day” was a two-day inter-agency programme that took place from 18-19 May 2009 at the WTO in Geneva in order to raise awareness on a range of data-related issues. It aimed to familiarize users with multiple data applications, draw attention to continuing needs for data, and to promote coherence and cooperation among international agencies that manage data. The event was a huge success and is definitely one to be repeated.

Inter-Agency and Academic Cooperation meetings
- Geneva, Switzerland 8-11 June: Conference of European Statisticians and OECD Committee on Statistics
- Durban, South Africa 15-17 June: WB Workshop on Statistics of International Trade in Services Statistics for the BRIC and other countries
- Pfäffikon, Switzerland 17-19 June: Statistical Aspects on the Conference on Valuing International Trade Rules
- Geneva, Switzerland 25 June: WB Seminar on Services Trade and Policy
- Aix en Provence, France 8-9 July: International Workshop on Firm Productivity Trade and Development Université de la Méditerranée
- Bangkok, Thailand 9-11 September: 14th Session of the Committee for the Coordination of Statistical Activities
- Bressanone, Italy 18-19 September: Brixen Workshop on International Trade and Finance
- Geneva, Switzerland 28-30 September: WTO Public Forum Globalized Supply Chains and Trade in Value Added
- Paris, France 28 October: Roundtable on Impact of the Economic Crisis on Globalisation and Global Value Chains
- New York, United States 3-6 November: Expert Group on International Merchandise Trade Statistics
- Paris, France 16-18 November: 2nd Meeting of the Working Party on International Trade in Goods and Trade in Services Statistics
- Paris, France 19-20 November: Inter-Agency Task Force on Statistics of International Trade in Services
- Rio de Janeiro, Brazil 1-4 December: UNSD/ECLAC/IBGE/BCB Workshop on Statistics of International Trade in Services Statistics for LA countries
- Paris, France 3-4 December: OECD World Input-Output Database
- Plovdiv, Bulgaria 13 December: ITTC Academic Cooperation Programme

Participation in Regional Trade Policy Courses covering tariff data and scheduling
- Singapore, 8 June: Asian economies
- Mbabane, Swaziland, 23-25 June: English-speaking African countries
- Accra, Ghana, 15 October: Short course for African countries
- Cotonou, Benin, 27 October: French-speaking African countries

Technical Assistance Activities
- Kuala Lumpur, Malaysia 2-5 June: Regional Workshop on NAMA for Asian countries
- Kingston, Jamaica 30 June – 2 July: WTO-IDB/INTAL Regional Workshop on NAMA for Caribbean countries
- Geneva, Switzerland 13-17 July: Workshop on Scheduling for WTO Members
- Abu Dhabi, UAE 20-22 July: Regional Workshop on NAMA for Arab and Middle East countries
- Bogotá, Colombia 28-31 July: WTO-IDB/INTAL Regional Workshop on NAMA for Latin American countries
- Apia, Samoa 24-26 August: National Workshop on Accessions
- Nairobi, Kenya 7 September: ECA Regional Seminar (Scheduling)
- Dhaka, Bangladesh 4 November: National Workshop on NAMA
- Ouagadougou, Burkina Faso 7-10 December: Regional Workshop on NAMA for French-speaking African countries
- Tunis, Tunisia 14-15 December: WTO-AFD Seminar on Accessions for African countries
- Taipei, Chinese Taipei 14-15 December: National Workshop on Scheduling

Participation in Geneva Trade Policy Courses
- 18 June: Measuring Trade in Services

The Statistics Group supports WTO Members and the Secretariat with quantitative information in relation to economic and trade policy issues. The group is the principal supplier of WTO trade statistics and information on tariffs.

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