Mining equipment exports

Content
This document presents additional figures that were elaborated for the monitoring of mining equipment exports in the 2018 Raw Materials Scoreboard. The final version of the Scoreboard indicator elaborates on figures 1, 3 and 4, while figures 2 and 5 were not included. This document also provides more details about the methodological changes in the indicator as compared to the 2016 version of the Scoreboard.

Novelties from the 2016 version of the Scoreboard
- An official trade statistics data source is used, i.e., UN Comtrade, which replaces the former private provider, i.e., Freedonia.
- In addition the update of the single chart present in the 2016 Scoreboard, the following four new charts have been constructed:
  - Evolution of world and EU-28 exports of mining equipment over the period 2011-2015 (Figure 2 below);
  - Top ten global exporters of mining equipment in 2015 (Figure 3 below);
  - Top destinations of EU-28 exports of mining equipment to the rest of the world in 2015 (EU-28 as a trade bloc; Figure 4 below);
  - World’s top ten mining equipment exporting countries in 2015 (Figure 5 below).

Key points
- Between 2011 and 2015 the EU, Japan, United States and China were the biggest net exporters of mining equipment.
- Both world and the EU-28 exports of mining equipment decreased by around 30% over the period 2011-2015.
- The EU was the world's leading exporter of mining equipment over the period 2011-2015.
- In 2015, 5 EU countries – namely, Germany, the United Kingdom, the Netherlands, Italy and France – were among the world’s top 10 exporters in the world. Belgium and Italy were also among the top 10 exporters of mining equipment in the previous four years.
Facts and figures

- Figure 1 shows the evolution of net exports (exports minus imports) of mining equipment by world region and main country between 2011 and 2015\(^1\), based on official statistics from the United Nations commodity trade statistics database (UN Comtrade).

- The figure shows that the EU-28 was the world's biggest net exporter of mining equipment, together with Japan, the United States and China.

- For the EU-28, the declining trend in net exports is due to the strong decrease of exports, of around 35 percent in 2015 as compared with 2012, whereas the imports remained relatively constant. Significant export decline resulted in lower net exports for the United States. In the case of China, the increase of net exports is mostly a result of a substantial decline of imports (around 75% less in 2015 compared with 2011).

- As far as the emerging mining regions are concerned, whereas Africa/Middle East almost double almost doubled their imports of mining equipment, in Central and South America and Asia/Pacific they decreased significantly (35 percent and 42 percent respectively).

![Figure 1: Net exports of mining equipment by world region and main country (EU-28 as a trade bloc\(^2\); 2011-2015)\(^3\).](image)

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1 Data are also available from 2007, which could be added to the analysis.
2 Intra EU-28 trade flows are not considered.
3 Source: DG JRC calculations based on UN Comtrade data, accessed via World Integrated Trade Solution. See methodological notes.
- Figure 2 presents the evolution of both world exports of mining equipment and those of the EU-28 over the period 2011-2015. Both exports decreased by around 30% over the period.

![Figure 2: Evolution of global and EU-28 exports of mining equipment (EU-28 as trade bloc) (2011-2015)](image)

- As shown in Figure 3, EU-28 (as a trading bloc) remained the world's leading exporter of mining equipment in 2015 (as it was in the preceding four years).

![Figure 3: Top 10 global exporters of mining equipment (EU-28 as trade bloc) (2015)](image)

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4 Source: DG JRC calculations, based on UN Comtrade data, accessed via World Integrated Trade Solution. See methodological notes.

5 Source: DG JRC calculations, based on UN Comtrade data, accessed via World Integrated Trade Solution. See methodological notes.
- Figure 4 shows the top 10 destinations of EU-28 exports of mining equipment to the rest of the world in 2015.

- United States, China, Norway and Russian Federation were the leading importers of EU-28’s exports of mining equipment.

![Figure 4: Main destinations of EU-28 exports of mining equipment to the non-EU countries (2015)](image)

- Figure 5 shows the world’s top ten individual countries (i.e., without taking EU-28 as an aggregate exporting bloc) exporting mining equipment in 2015.

- United States, China and Japan were the leading exporting over the entire period 2011-2015.

- In 2015, five EU countries – i.e., Germany, United Kingdom, Netherlands, Italy and France - were among the top 10 main exporting countries in the world. Another four EU countries, i.e., Austria, Belgium, Finland and Sweden - were also present in the world’s top 15 supplying countries of mining equipment in the previous four years.

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7 That means that each EU country’s exports include both intra- and extra-EU exports.
Summary of other options not considered

- **Option 1 – Use of former data provided by Freedonia**
  - The data on mining equipment exports used in 2016 Scoreboard were from a private provider, i.e., Freedonia. Using the same data source was considered an unsuitable option due to i) the lack of transparency in the underlying methodology and ii) impossibility of obtaining updated the data.

Methodological notes

- **Name of indicator:** Mining equipment exports.
- **Organization (data provider):** UN Comtrade data, accessed via World Integrated Trade Solution.
- **Website (URL):** [https://wits.worldbank.org/](https://wits.worldbank.org/)
- **Definition and description of data:** trade data in monetary values covering imports and exports of a complete set of economic commodities classified according to the Harmonized Commodity Description and Coding System (HS) at 6-digit code.
- **Update frequency:** annual.
- **Data format:** online, downloadable in .csv and .xls format.
- **Geographic coverage:** The country composition of regions included in Figure 1 is:

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8 Source: DG JRC calculations, based on UN Comtrade data, accessed via World Integrated Trade Solution. See methodological notes.
• ‘Central & South America’ includes Aruba, Argentina, Antigua and Barbuda, Bahamas, Belize, Bolivia, Brazil, Barbados, Chile, Colombia, Costa Rica, Cuba, Cayman Islands, Dominica, Dominican Republic, Ecuador, Grenada, Guatemala, Guyana, Honduras, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, Nicaragua, Panama, Peru, Puerto Rico, Paraguay, El Salvador, Suriname, Saint Maarten, Turks and Caicos Islands, Trinidad and Tobago, Uruguay, St. Vincent and Grenadines, Venezuela and Virgin Islands.


• ‘Africa-Middle-East’ includes the United Arab Emirates, Bahrain, Djibouti, Algeria, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia and Yemen.

**JRC processing methodology for the indicator:**

• Selection of mining equipment-related commodities. The starting point for identifying the mining equipment-related commodities to be included in this analysis are the products covered by the 4-digit NACE class 28.92, ‘Manufacture of machinery for mining, quarrying and construction’, as listed in Eurostat’s PRODCOM List 2013. This selection is made possible by the statistical correspondence between NACE Rev. 2, the Classification of Products by Activity (CPA) and PRODCOM. The PRODCOM codes were then transformed into HS commodity codes (the nomenclature followed by UN Comtrade), following the statistical correspondence between the PRODCOM product codes and the corresponding (one or more) 6-digit HS headings.

Out of the resulting 30 6-digit HS codes, the JRC retained 21. The remaining 9 codes were not retained since they appear to refer to equipment mostly used in infrastructure and construction (see table below).

<table>
<thead>
<tr>
<th>HS 2007 codes</th>
<th>Product description</th>
<th>Areas of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 842831</td>
<td>Continuous-action elevators &amp; conveyors, for goods/materials, specially designed for underground use (excl. of 8428.10 &amp; 8428.20)</td>
<td>mining + others</td>
</tr>
<tr>
<td>2 842911</td>
<td>Bulldozers and angle dozers: -- Track laying</td>
<td>mining + others</td>
</tr>
<tr>
<td>3 842919</td>
<td>Bulldozers and angle dozers: -- Other</td>
<td>mining + others</td>
</tr>
<tr>
<td>4 842951</td>
<td>Mechanical shovels, excavators and shovel loaders: - Front-end shovel loaders</td>
<td>mining + others</td>
</tr>
<tr>
<td>5 842952</td>
<td>Mechanical shovels, excavators and shovel loaders: - Machinery with a 360 degree revolving superstructure</td>
<td>mining + others</td>
</tr>
<tr>
<td>6 842959</td>
<td>Mechanical shovels, excavators and shovel loaders: Other</td>
<td>mining + others</td>
</tr>
<tr>
<td>7 843031</td>
<td>Coal or rock cutters and tunnelling machinery: -- Self-propelled</td>
<td>mining + others</td>
</tr>
</tbody>
</table>

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Based on current knowledge, there is no methodological way of separating the HS codes referring to equipment used exclusively in mining from those used in other activities, especially construction. This is because many of the selected HS codes refer to multi-purpose equipment that is used not only in mining but also in other activities such as infrastructure and construction. This limitation is recognised both by the US Department of Commerce and by Farooki (2012). Also, to our knowledge, it is not possible to group the resulting HS codes into coal-, metal- and mineral-mining equipment.

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11 Farooki (2012) tried ‘to separate out mining and construction equipment, remaining aware that an (unknown) proportion of global construction equipment is used, at least for some of its life, in the mining sector’.
Calculation of exports and net exports

In the construction of Figures 2.1, 2.2, 2.3 and 2.4, only extra-regional trade flows are taken into account for regional trade blocs. For example, data on the EU-28 aggregate only account for extra EU-28 exports.

For calculating net exports in Figure 1, imports were subtracted from exports for each year.