



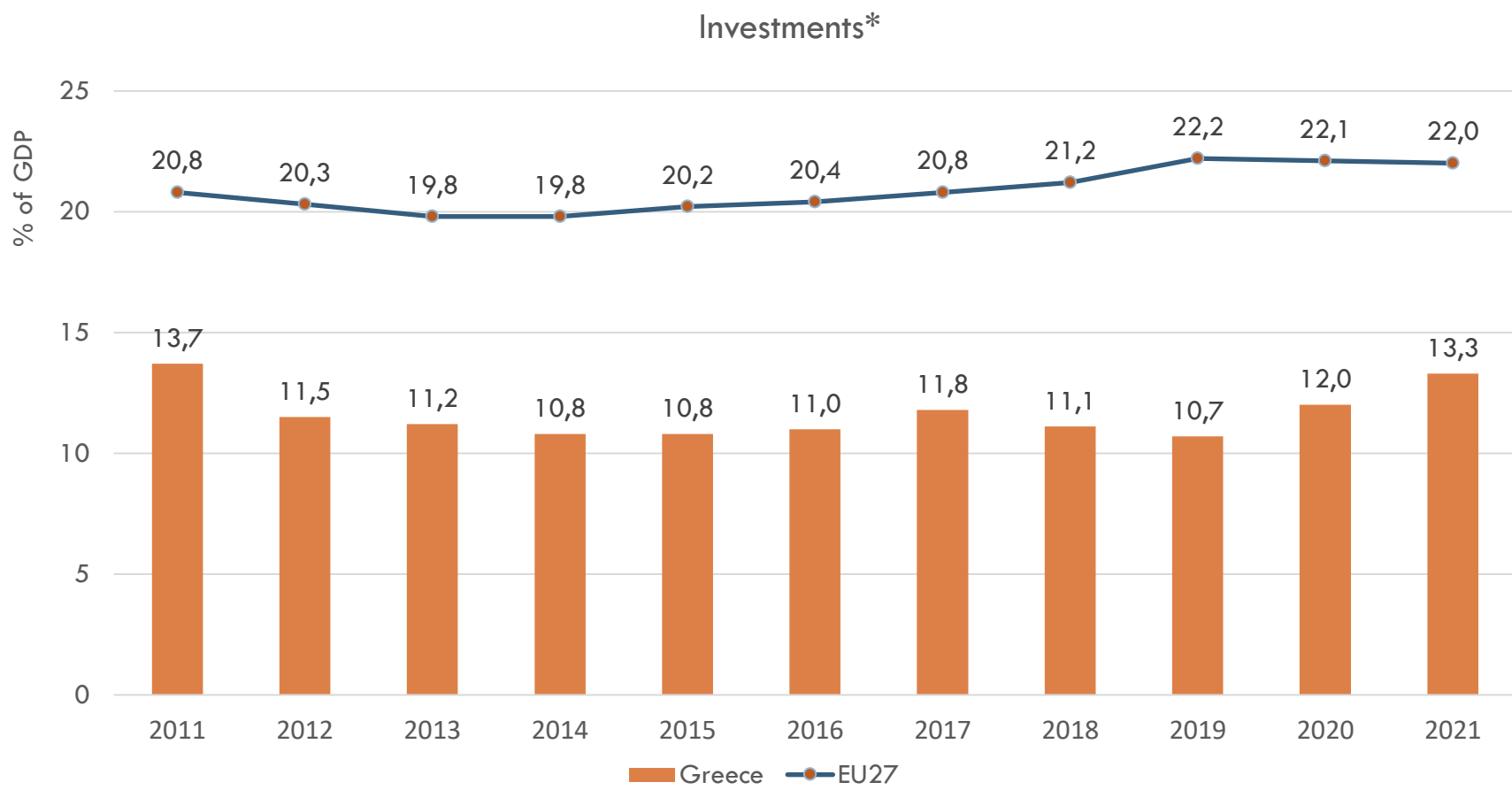
The raw materials sector and the Greek economy

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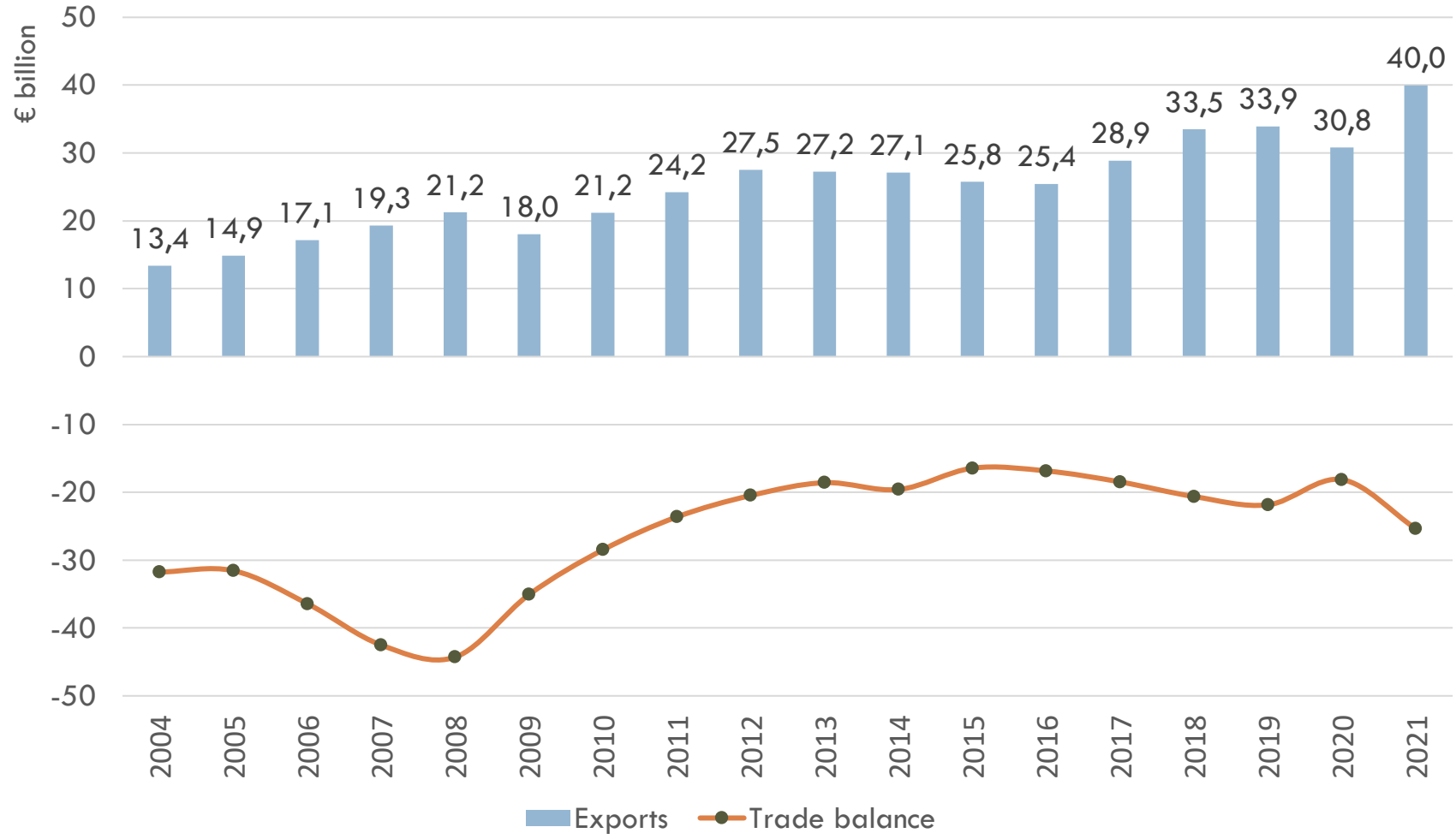
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Increasing trend in investments during the last three years, but still significantly lower than in the rest of the EU



Source: Eurostat, National Accounts
 * Gross fixed capital formation

Export of goods are increasing



Source: Eurostat

	Exports as a % of GDP, Greece, 2019	Exports as a % of GDP, EU-9*, 2019
Total exports	37.2	65.5
Agricultural products, food and raw materials	4.4	6.4
Petroleum products	6.3	3.0
Industrial products	9.2	38.2
Transportation (mainly sea transport)	7.5	4.5
Tourism	7.8	4.0
Other services (health, education, IT etc.)	2.0	9.3

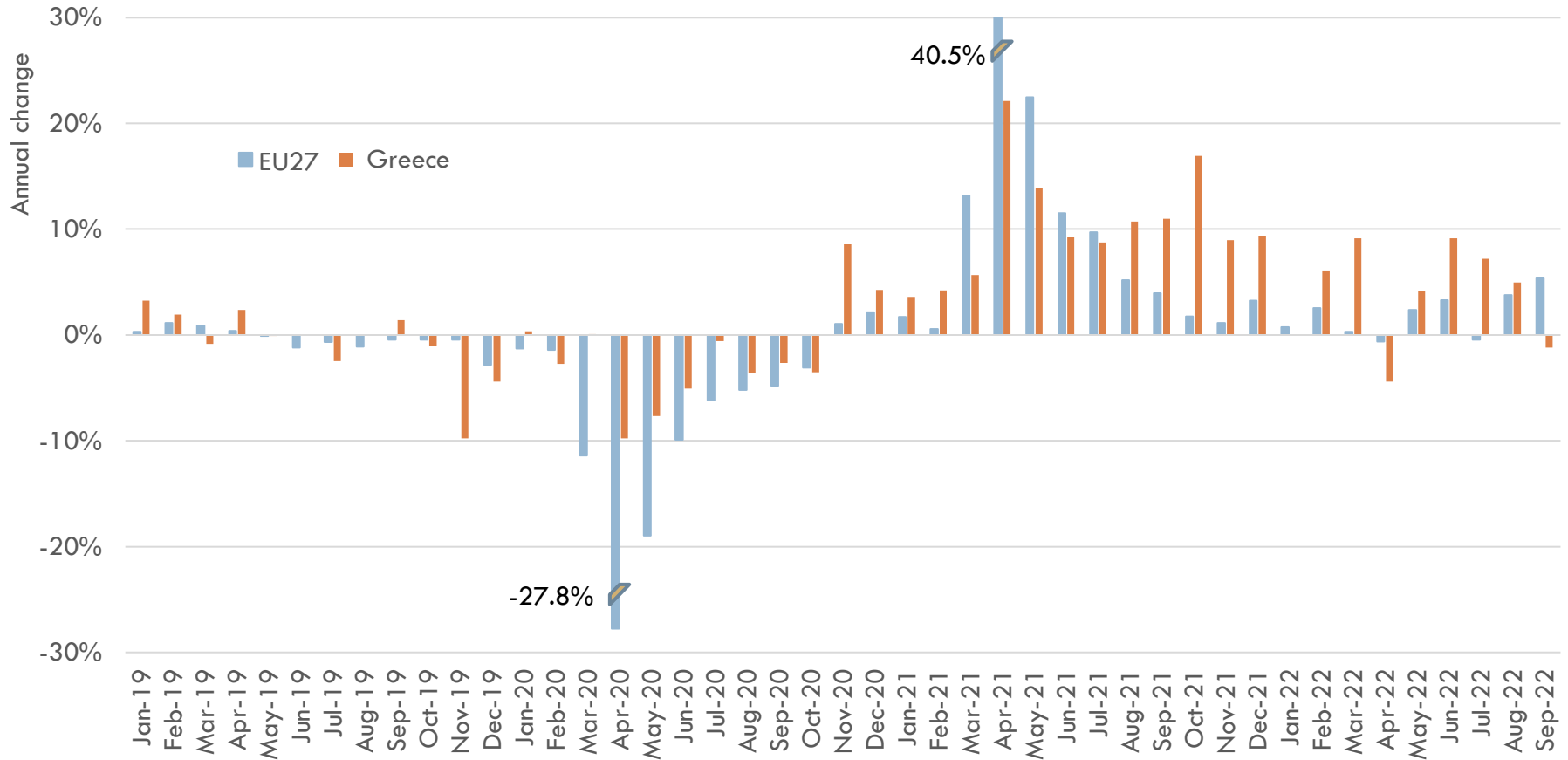
*EU-9: EU countries comparable in terms of population to Greece: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Hungary, Netherlands, Sweden.

Source: Pissarides et al. (2020), A Growth Plan for the Greek Economy

Significant lag in exports, particularly in exports of industrial products.

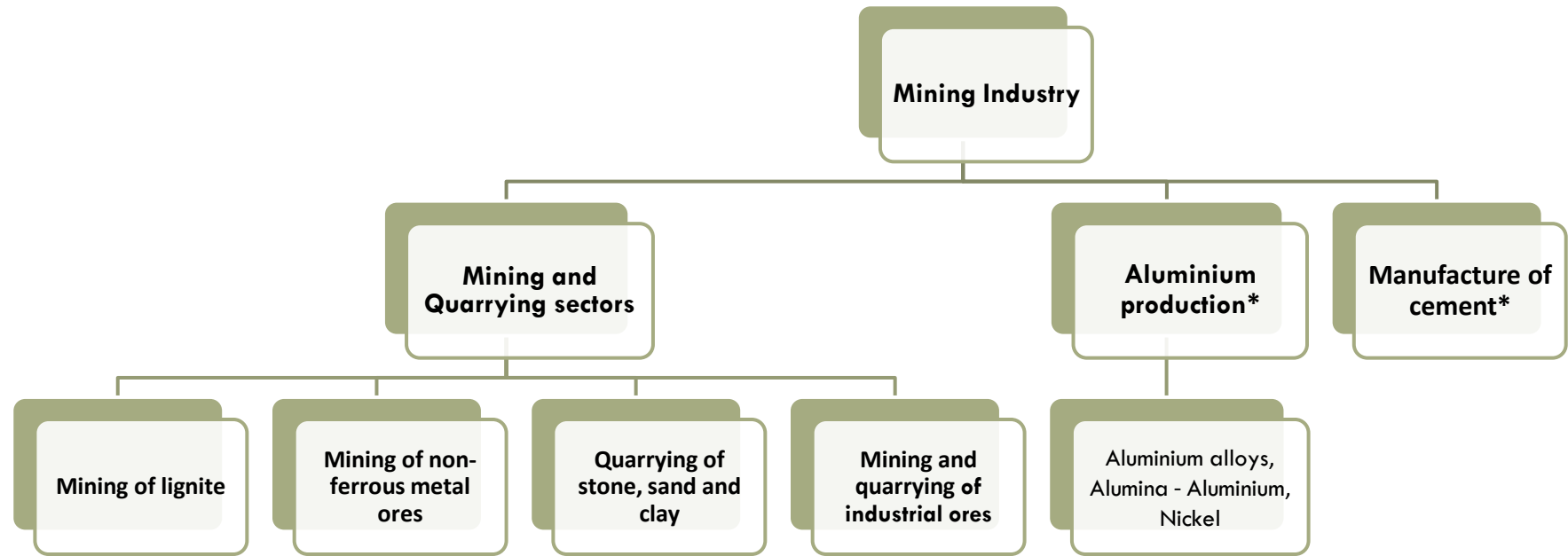
Deep drop in Industrial production during the Covid-19 crisis, then sharp increase, followed by fluctuations during the energy crisis.

Industrial Production Index



Source: Eurostat

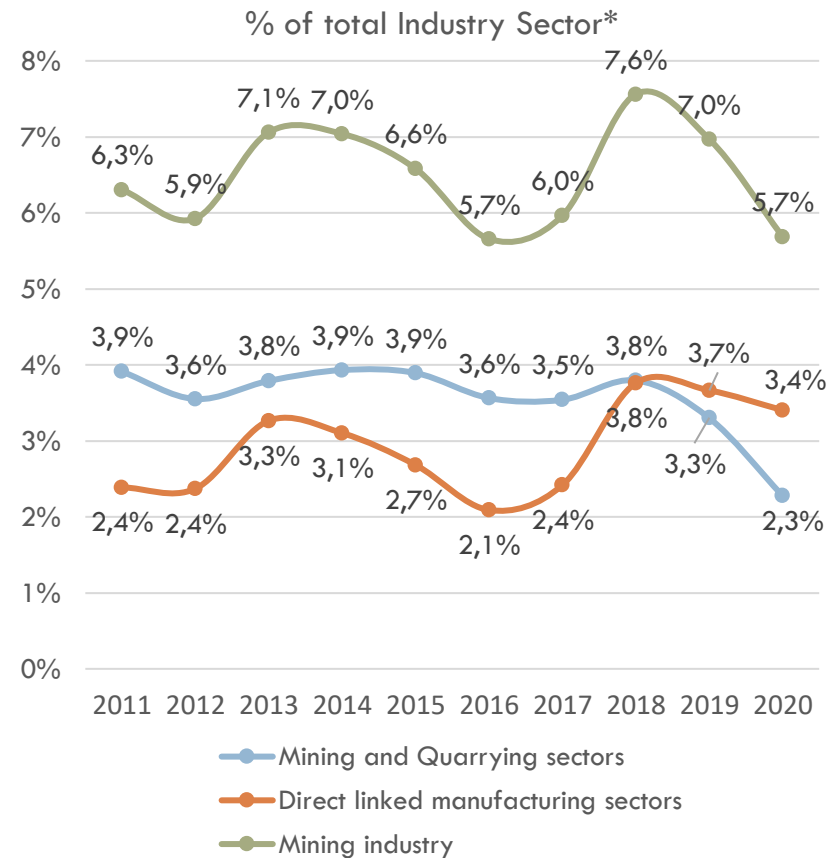
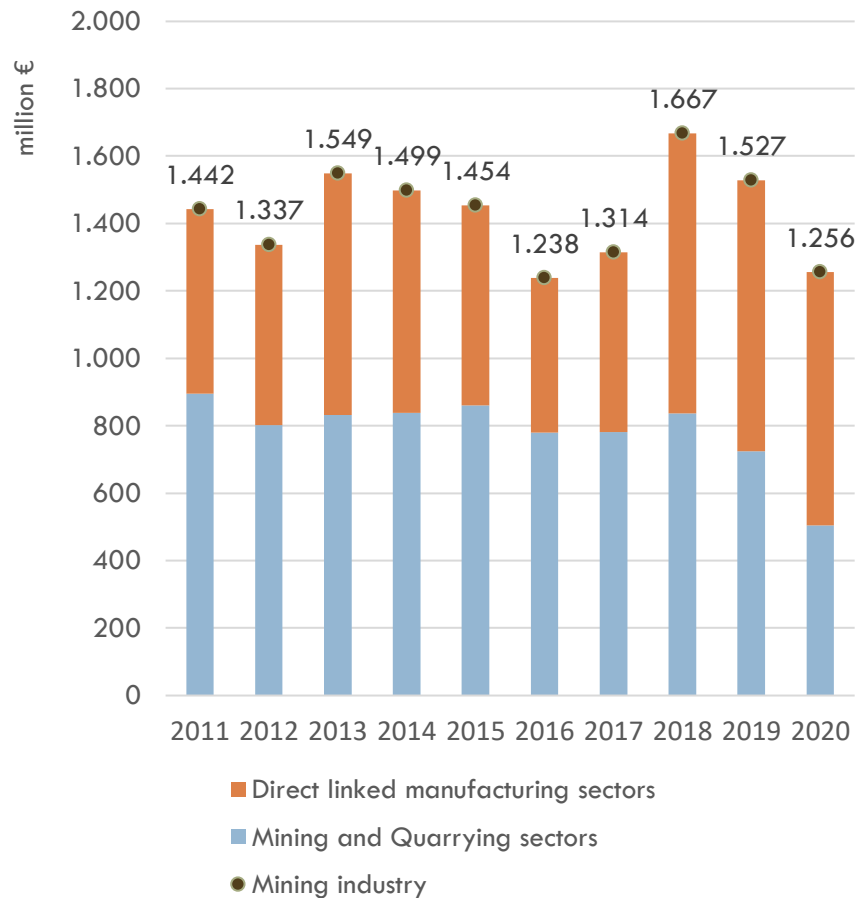
The Mining Industry includes Mining and Quarrying sectors and the vertically-linked manufacturing activities



**Vertical integration of the mining industry*

Decline in Value-added of the Mining industry, following a significant increase in 2018

Value added

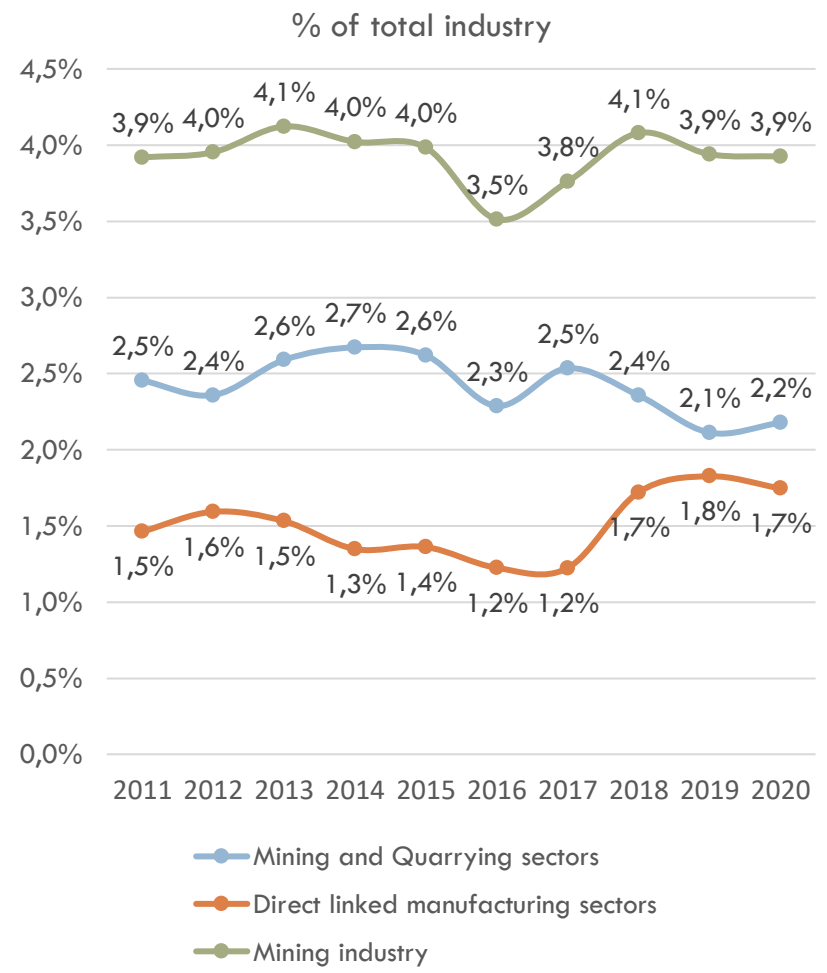
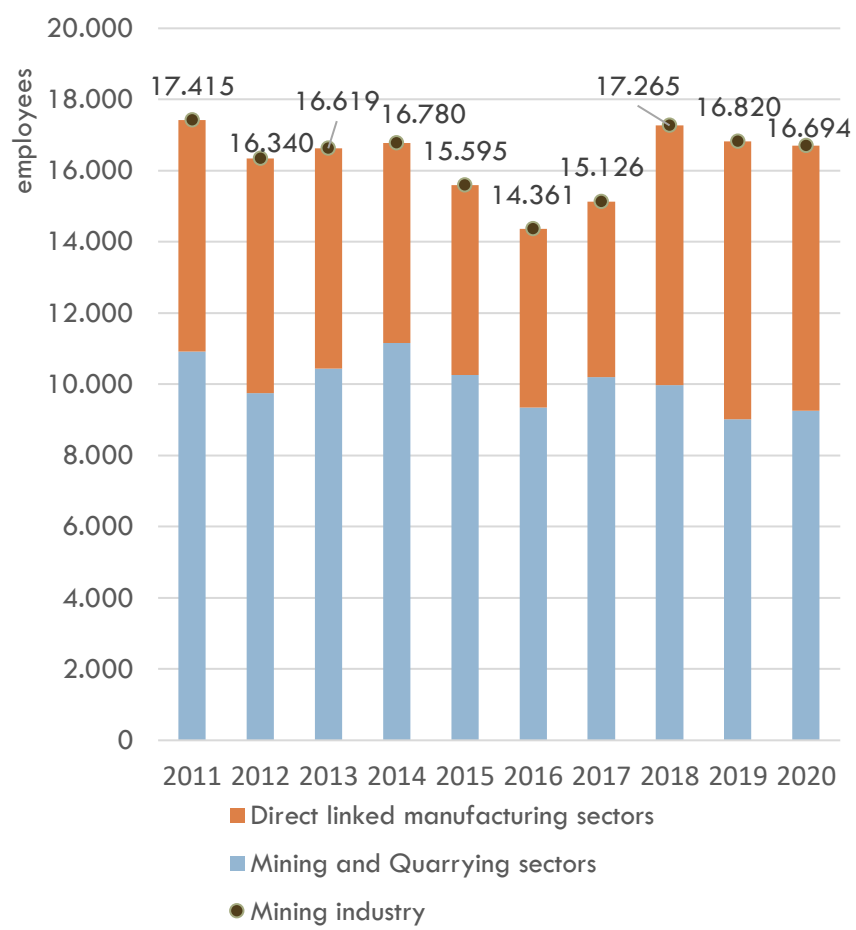


Source: Eurostat, National accounts and SBS

*includes Mining – Quarrying (B), Manufacturing (C), Electricity, gas, etc. (D), Water supply, waste management etc. (E)

Small decrease of employment, but with slight increase in the Mining and quarrying sectors

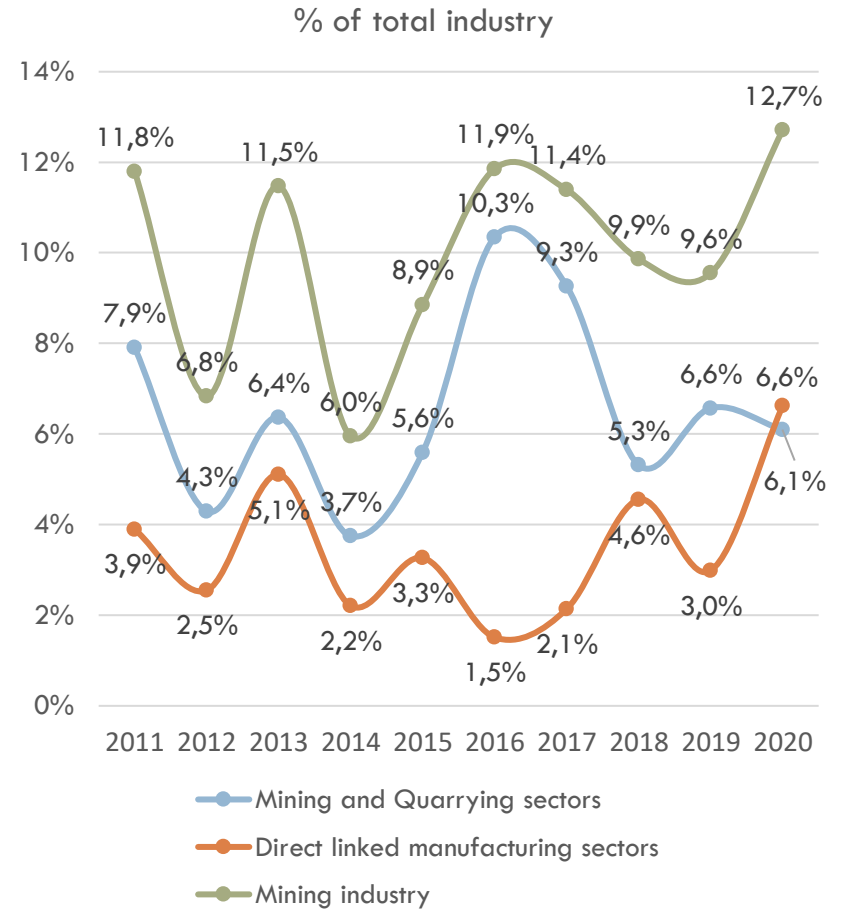
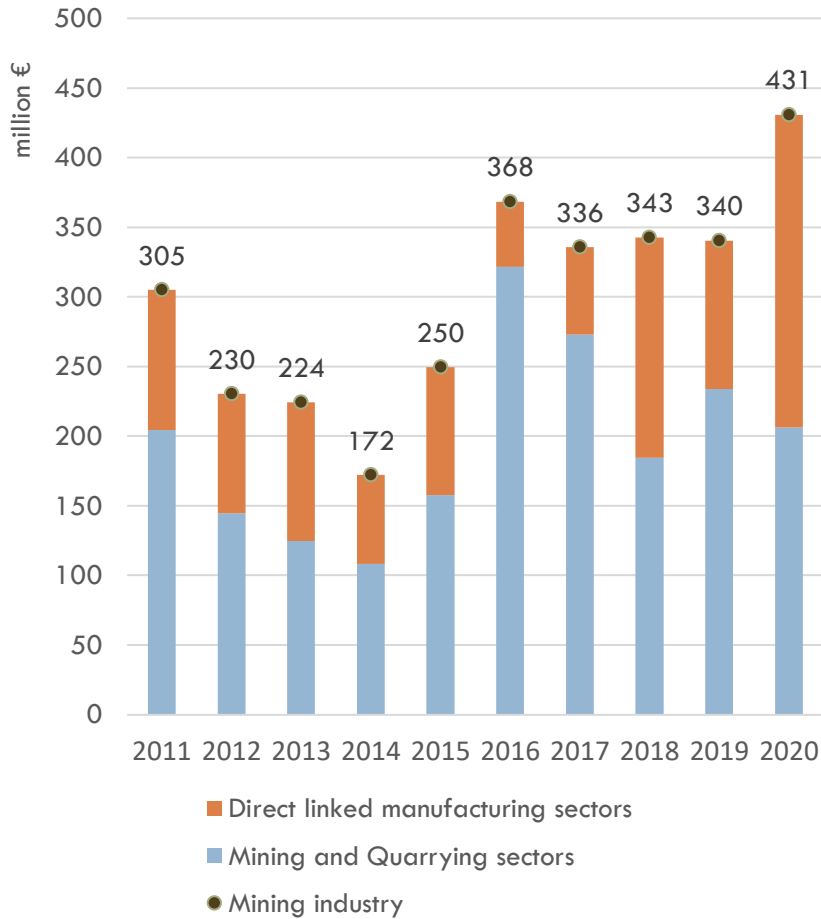
Employment



Source: Eurostat, National accounts and SBS

Significant increase in investments, exclusively due to manufacturing

Investments*

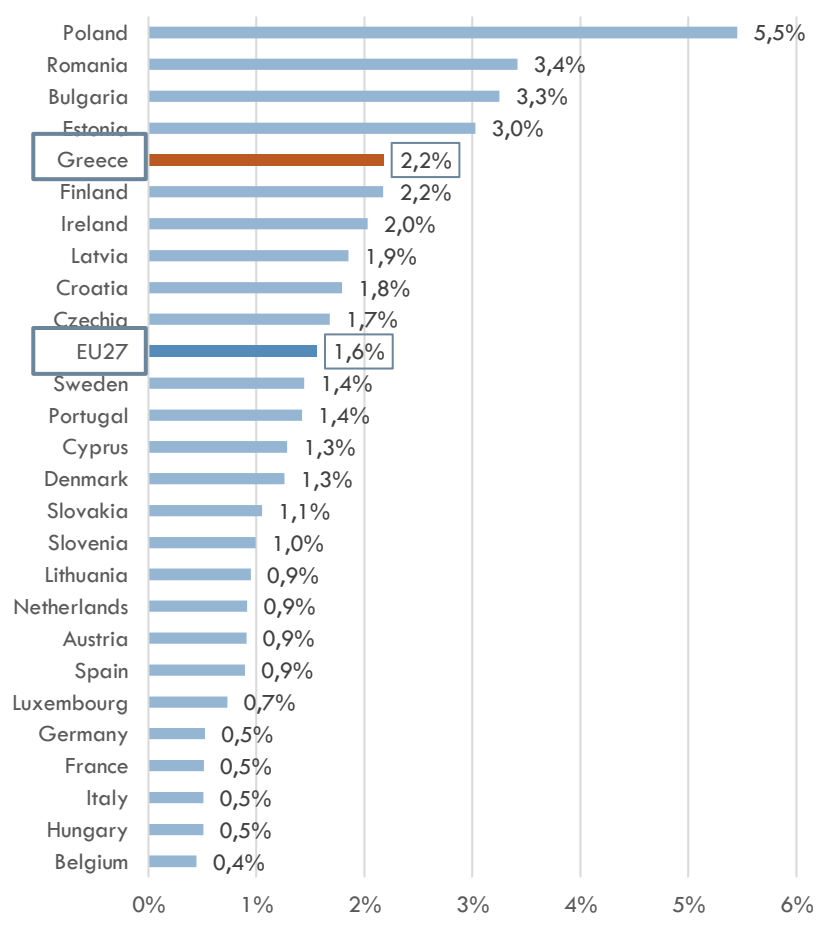
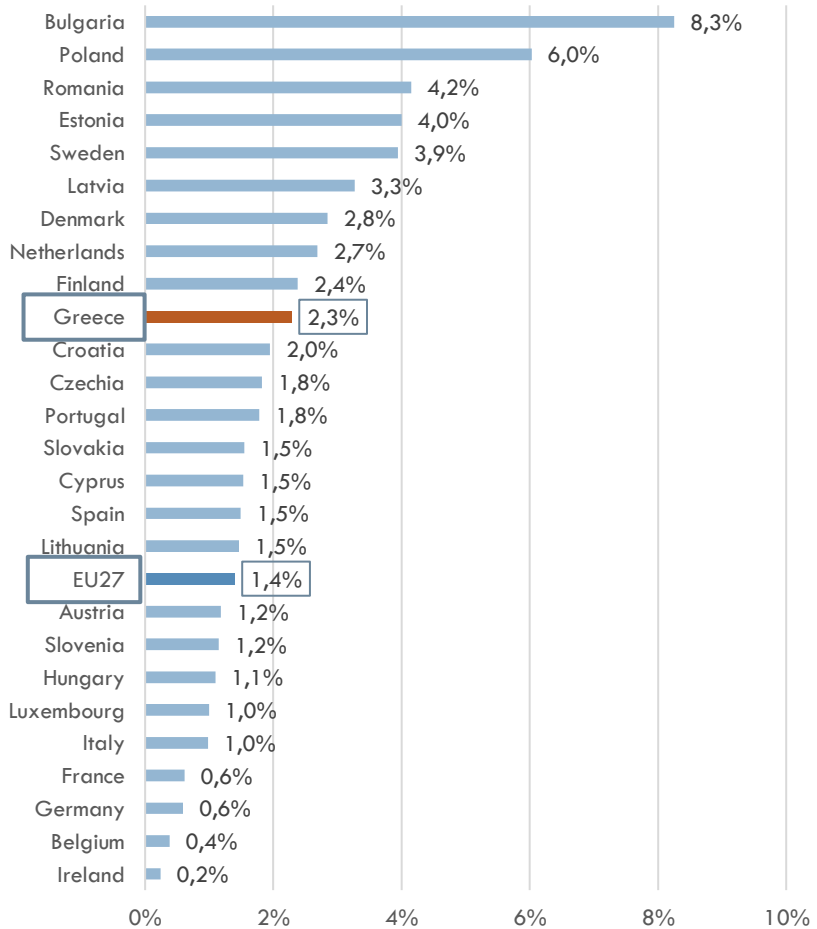


Source: Eurostat, National accounts and SBS

* Gross fixed capital formation

Greece ranks high within the EU in terms of the share of Value added and employment

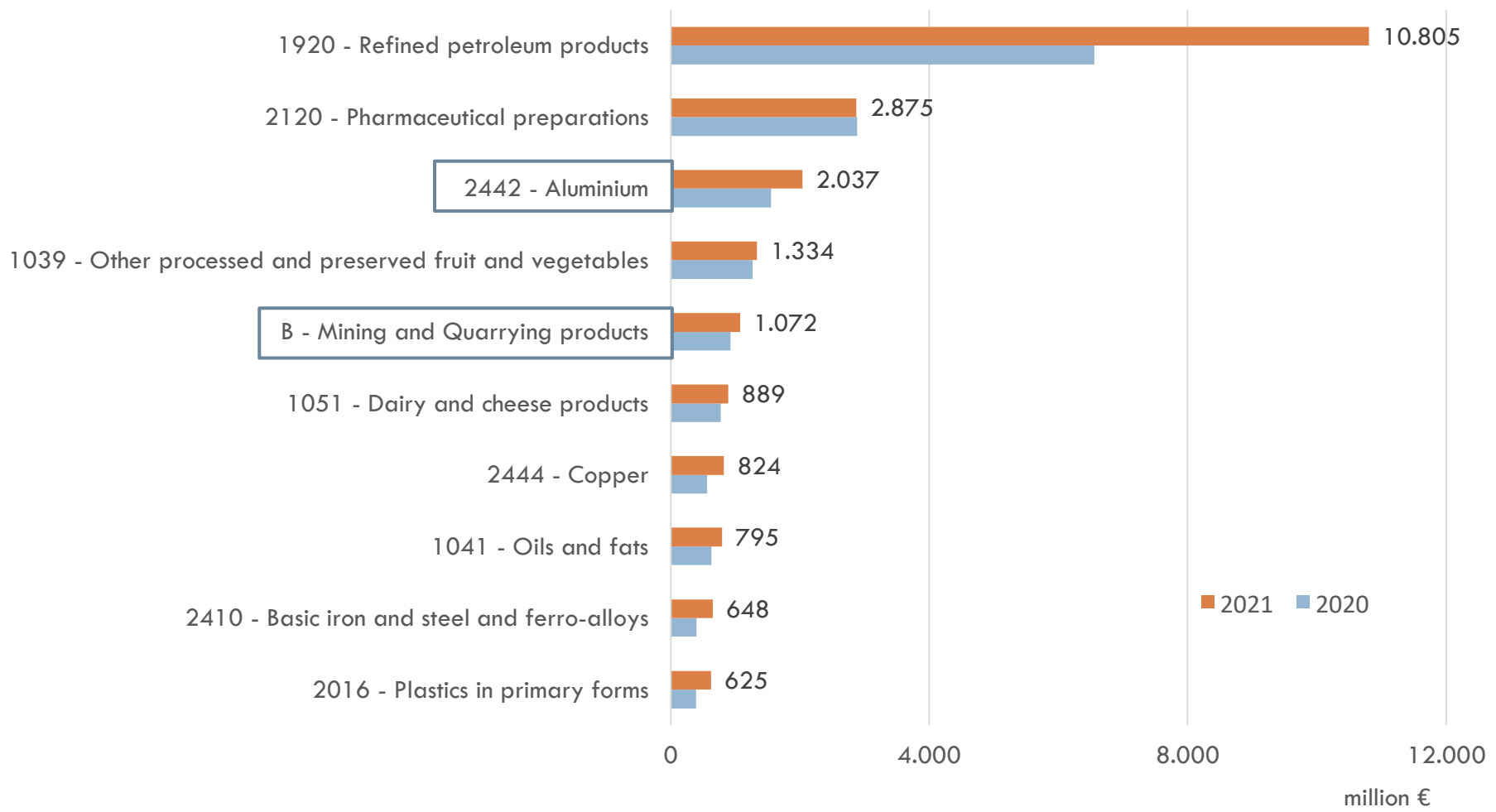
Value added of mining and quarrying sectors per country as % of total industry, 2020 **Employment of mining and quarrying sectors per country as % of total industry, 2020**



Source: Eurostat, National accounts and SBS

Mining-Quarrying products and Aluminium in the 10-top export goods

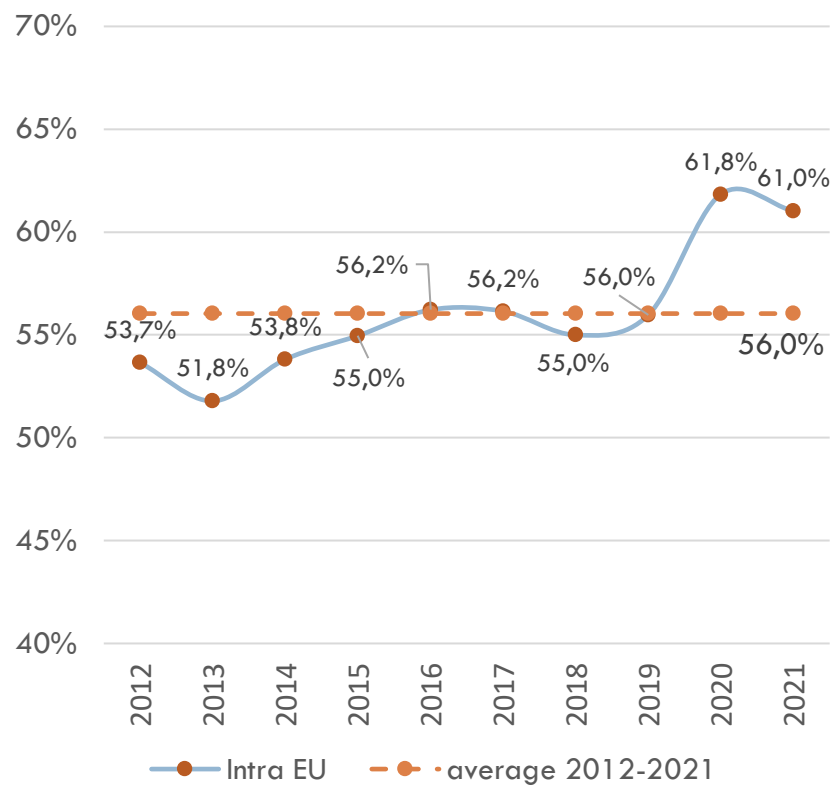
Top export industrial goods



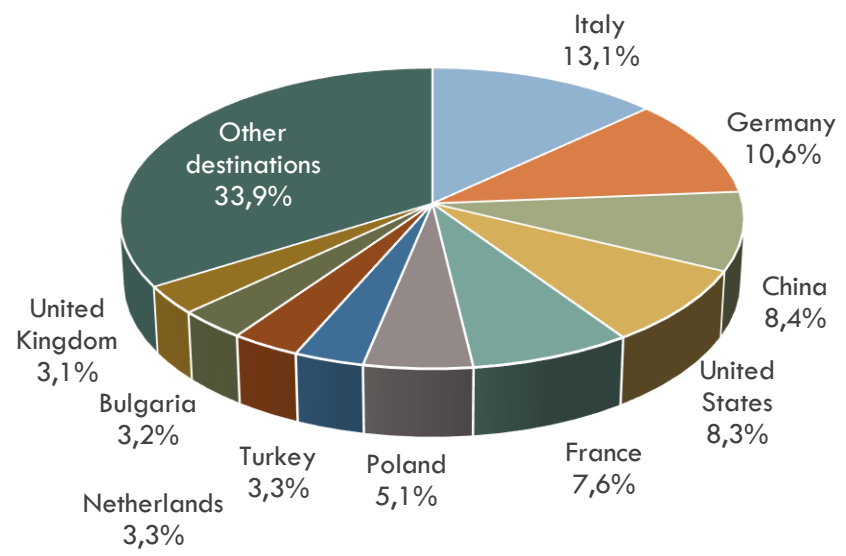
Source: EUROSTAT, International Trade

High number of export destinations for the Mining industry – Italy (13.1%) and Germany (10.6%) with the top shares

Intra EU27 exports



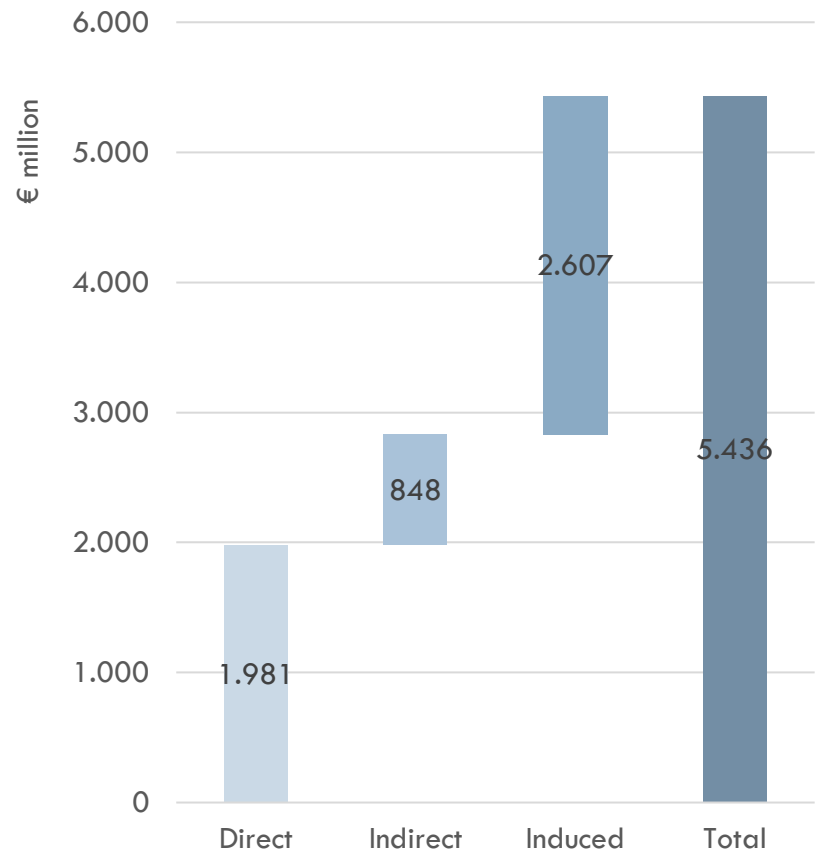
Exports by destination, % share in terms of value, 2021



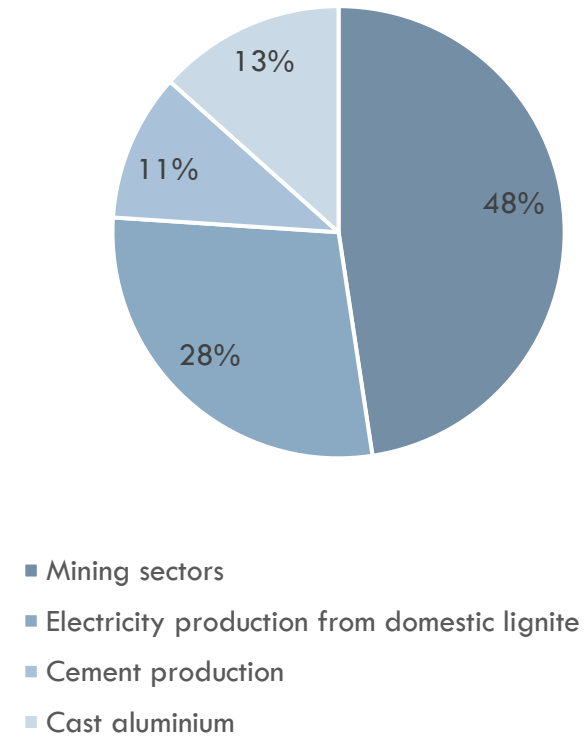
Source: EUROSTAT, International Trade

Total impact of Mining industry on GDP accounted for €5.4 billion (or 3.1% of GDP - based on 2016 data)

Impact on GDP



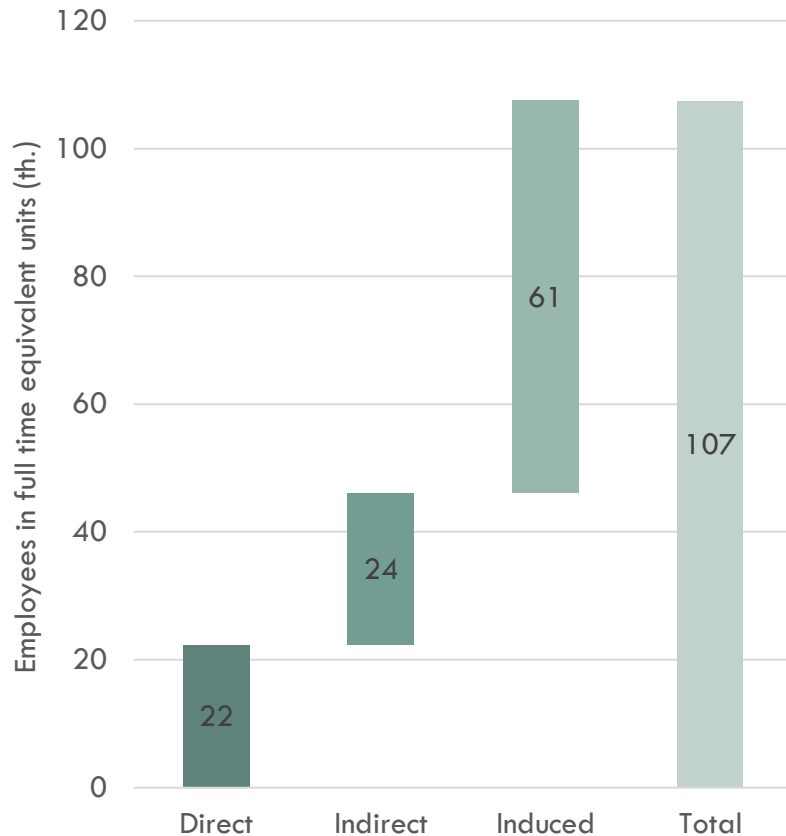
Distribution of total impact per sector



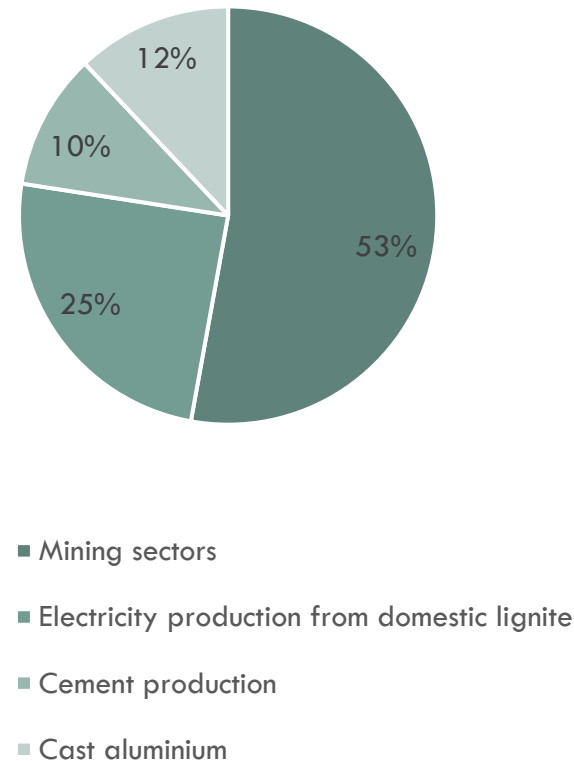
Source: Estimates from the study “The contribution of the mining industry to the Greek economy: 2018 update” (IOBE, 2018)

Total impact of Mining industry on employment estimated to 107 thousand jobs (or 2.7% of employment - 2016 data)

Impact on Employment



Distribution of total impact per sector



Source: Estimates from the study “The contribution of the mining industry to the Greek economy: 2018 update” (IOBE, 2018)

Strong prospects for the Greek Mining industry

Mining Industry: strong export orientation and a clear competitive advantage in specific market segments.

Greece has significant reserves of mineral raw materials, such as marble, perlite, bentonite, bauxite, and other ores. But, it remains a challenge to:

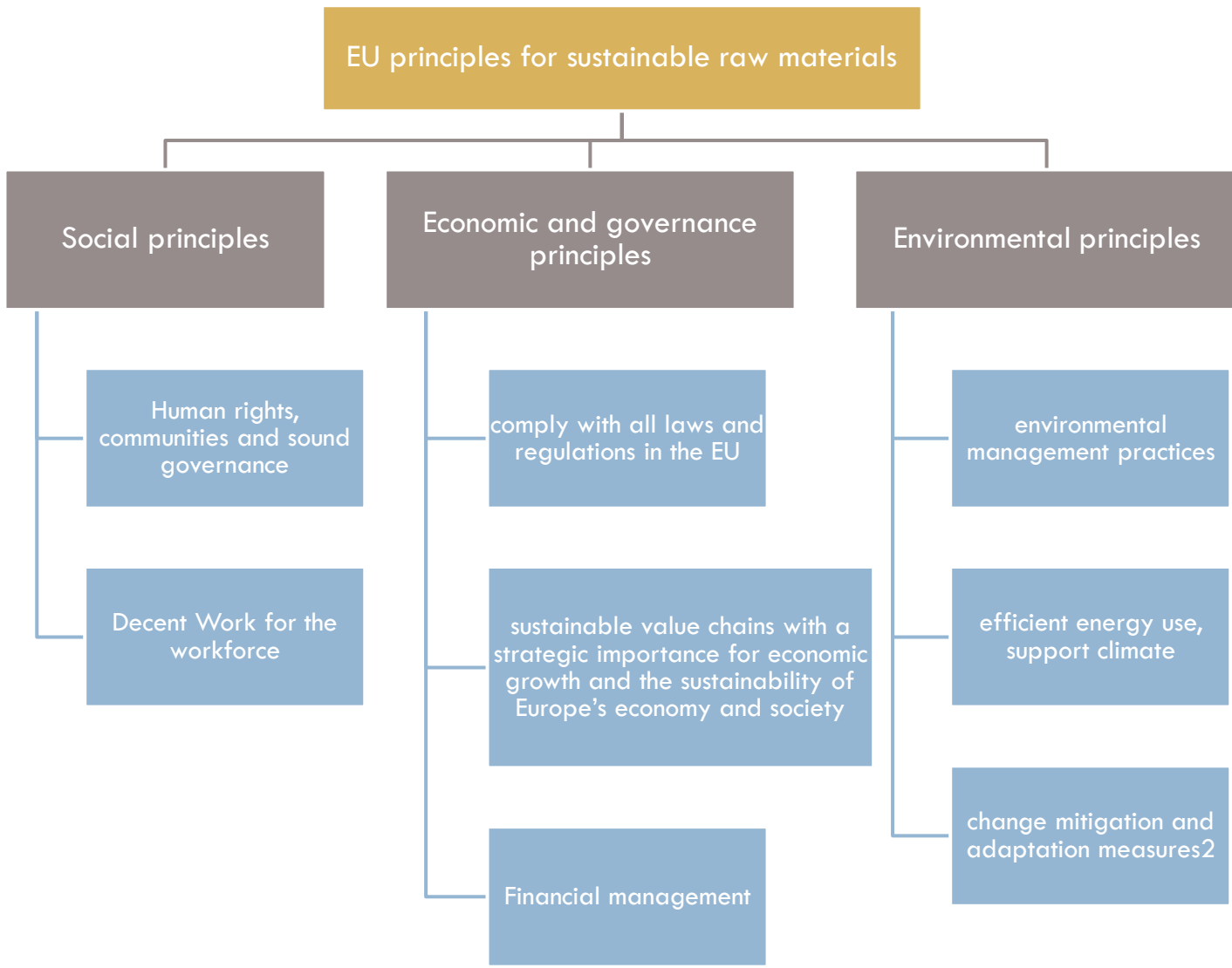
- achieve greater vertical integration and specialisation of the production processes that utilise domestic raw materials, to maximise the added value produced domestically through this economic activity.
- develop cooperative relationships with the participation of domestic industrial firms in global value chains
 - acquisition of specialised knowledge and know-how,
 - enhancing the potential of innovation, especially for smaller firms,
 - have a key role for investment in cross-border high added value projects for the country.
- **Licensing and spatial planning:**
 - Upgrade the infrastructure of all organised receptors.
 - Complete the Local Urban Plans (which among other things set the planning of industrial areas).
 - Ensure the adequacy of industrial land for new investments (Special Spatial Planning Framework for Industry).
 - Improve licensing procedures. The new environmental law envisages the simplification of environmental permits.
- **Energy cost:**
 - Strengthening of interconnections with neighbouring countries
 - Review of all regulated charges, introducing EU-accepted tools to reduce/offset them for industry
 - Establish an effective CO₂ cost compensation mechanism, fully implementing the relevant EU guidelines

New challenges

The significance of raw materials:

- **Link to industry** - non-energy raw materials are linked to all industries across all supply chain stages
 - **Modern technology** - technological progress rely on access to a growing number of raw materials.
 - **Environment** – raw materials are closely linked to clean technologies. They are irreplaceable in solar panels, wind turbines, electric vehicles, and energy-efficient lighting.
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- **Critical Raw Materials (CRMs):** Raw materials, such as metals and minerals, are crucial to Europe's economy, growth, and competitiveness....
 - ...with a strong industrial base, producing a broad range of goods and applications used in everyday life and modern technologies.
 - **Reliable and unhindered access to certain raw materials is a concern within the EU**
 - List of critical raw materials (CRMs) for the EU: raw materials of high importance to the EU economy and of high risk associated with their supply.
 - **European innovation partnership (EIP) on raw materials: a new approach to EU research and innovation** (research and development, addressing policy framework conditions, disseminating best practices, gathering knowledge, financing and fostering international cooperation)
 - **European Green Deal: Resource efficiency and recycling**
 - Producing goods using recycled materials is often much less energy intensive than manufacturing goods from virgin materials.
 - Reduce production costs and carbon emissions.
 - Recycling has a great potential to improve Europe's resource efficiency.

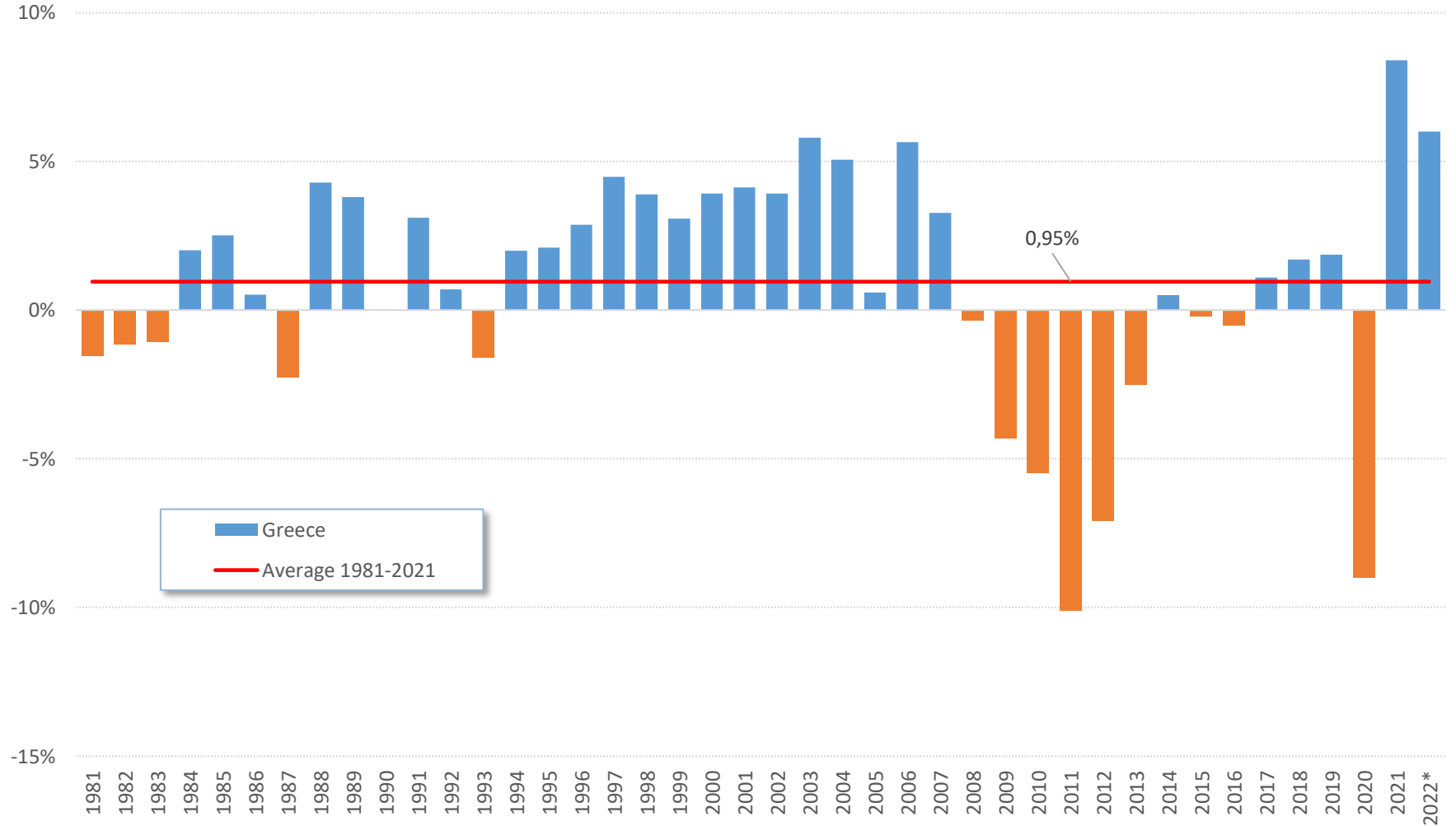
Sustainable supply of raw materials from EU sources



Source: "EU principles for sustainable raw materials", European Union, 2021

Greece: Long-term growth dynamics

Greece: Annual growth rate, real GDP



Source: Eurostat, IOBE projection for 2022