



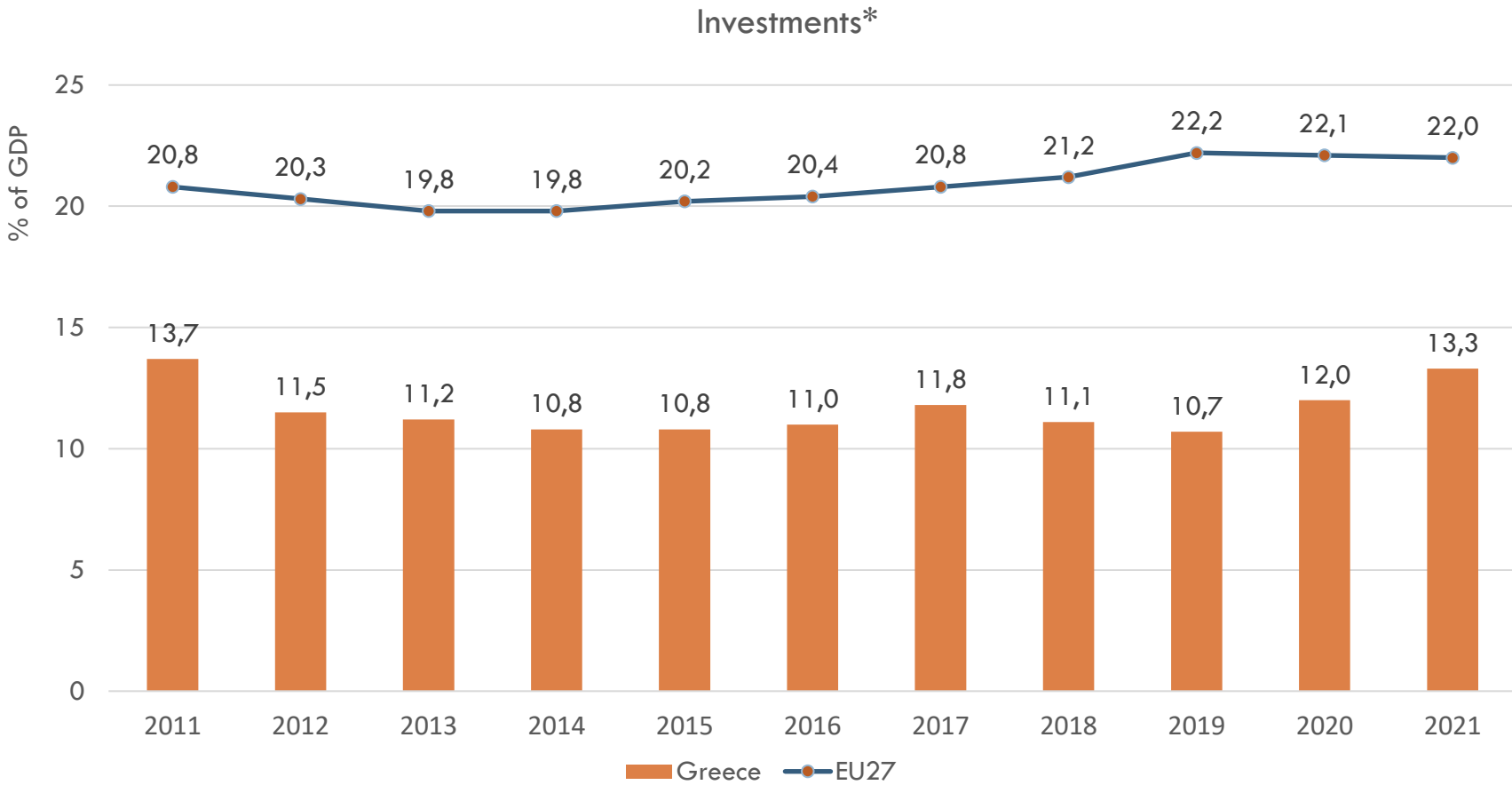
# The raw materials sector and the Greek economy

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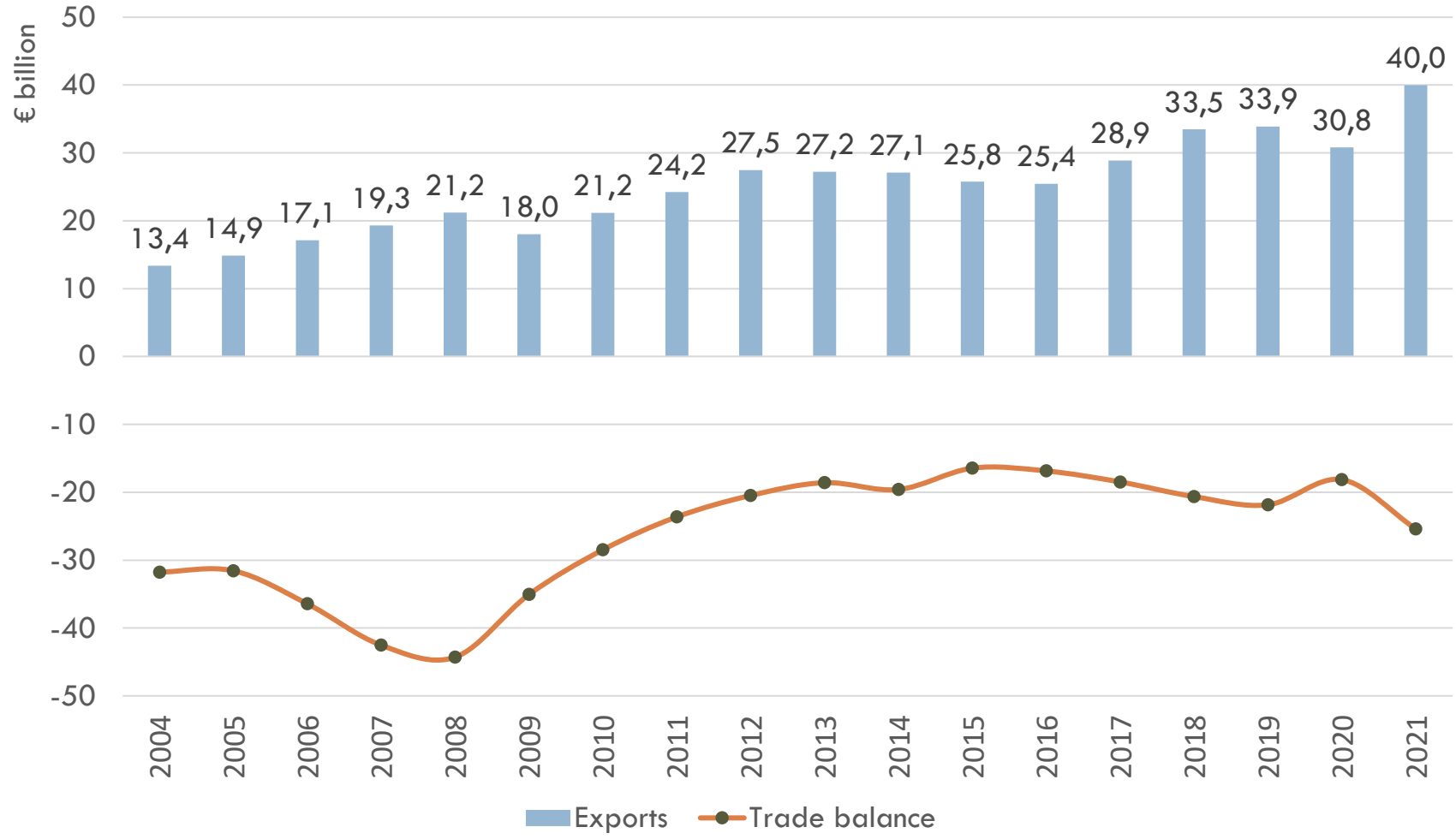
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# Increasing trend in investments during the last three years, but still significantly lower than in the rest of the EU



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
<b>Total exports</b>	<b>37.2</b>	<b>65.5</b>
<b>Agricultural products, food and raw materials</b>	4.4	6.4
<b>Petroleum products</b>	6.3	3.0
<b>Industrial products</b>	9.2	38.2
<b>Transportation (mainly sea transport)</b>	7.5	4.5
<b>Tourism</b>	7.8	4.0
<b>Other services (health, education, IT etc.)</b>	2.0	9.3

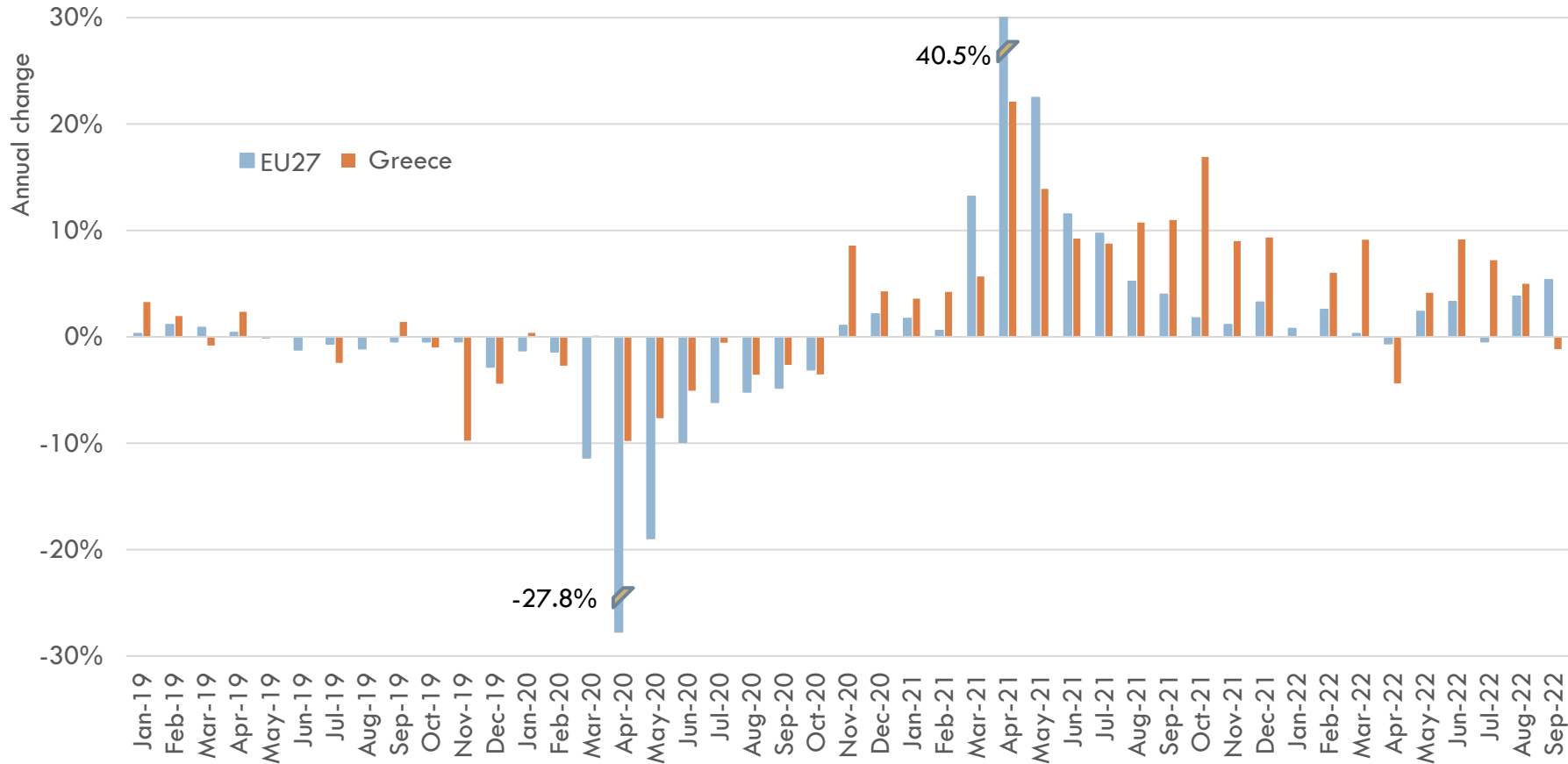
\*EU-9: EU countries comparable in terms of population to Greece: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Hungary, Netherlands, Sweden.

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

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

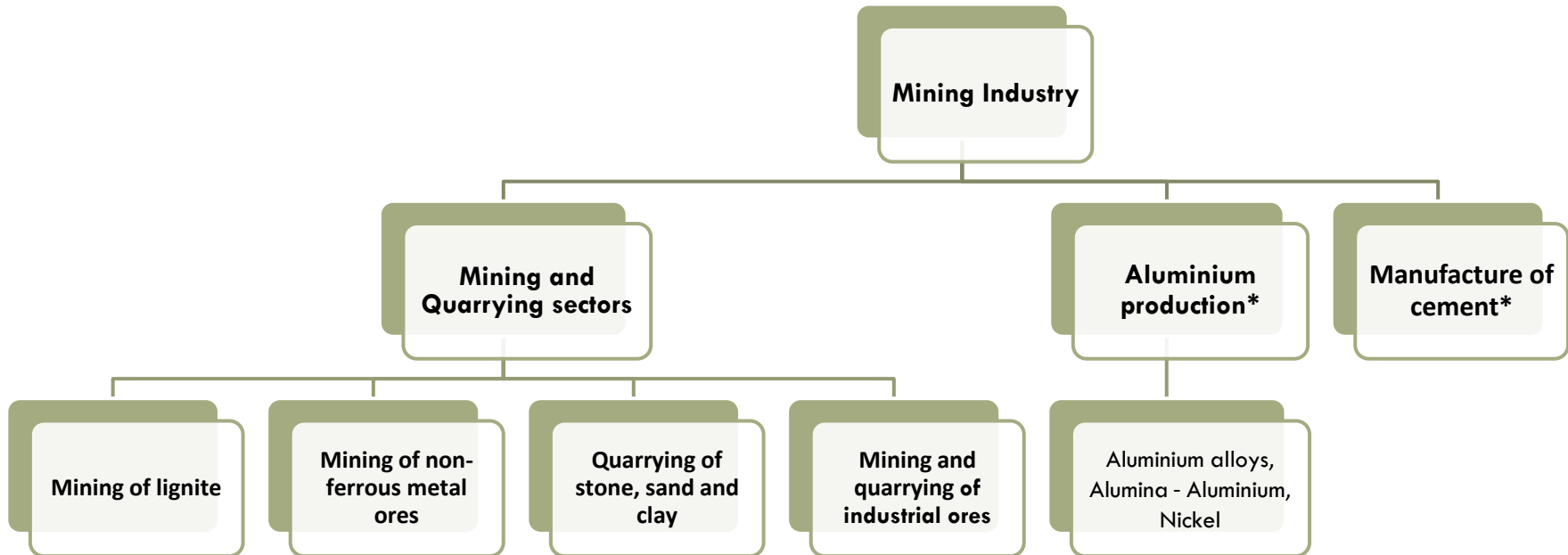
Deep drop in Industrial production during the Covid-19 crisis, then sharp increase, followed by fluctuations during the energy crisis.

Industrial Production Index



Source: Eurostat

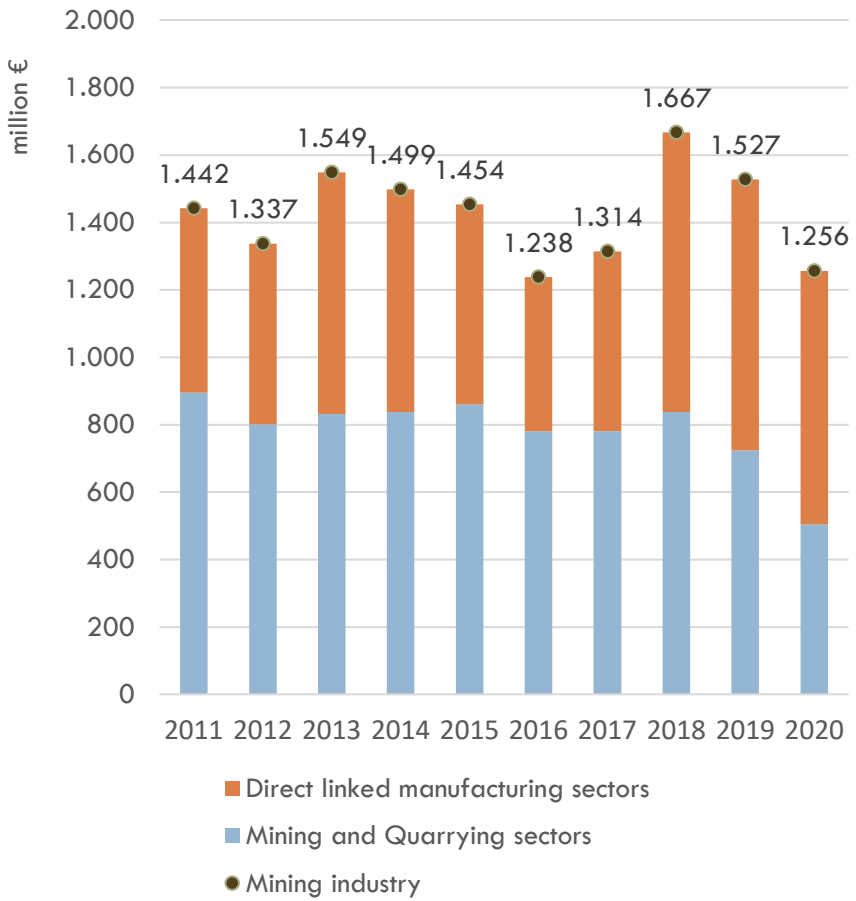
# The Mining Industry includes Mining and Quarrying sectors and the vertically-linked manufacturing activities



*\*Vertical integration of the mining industry*

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

## Value added

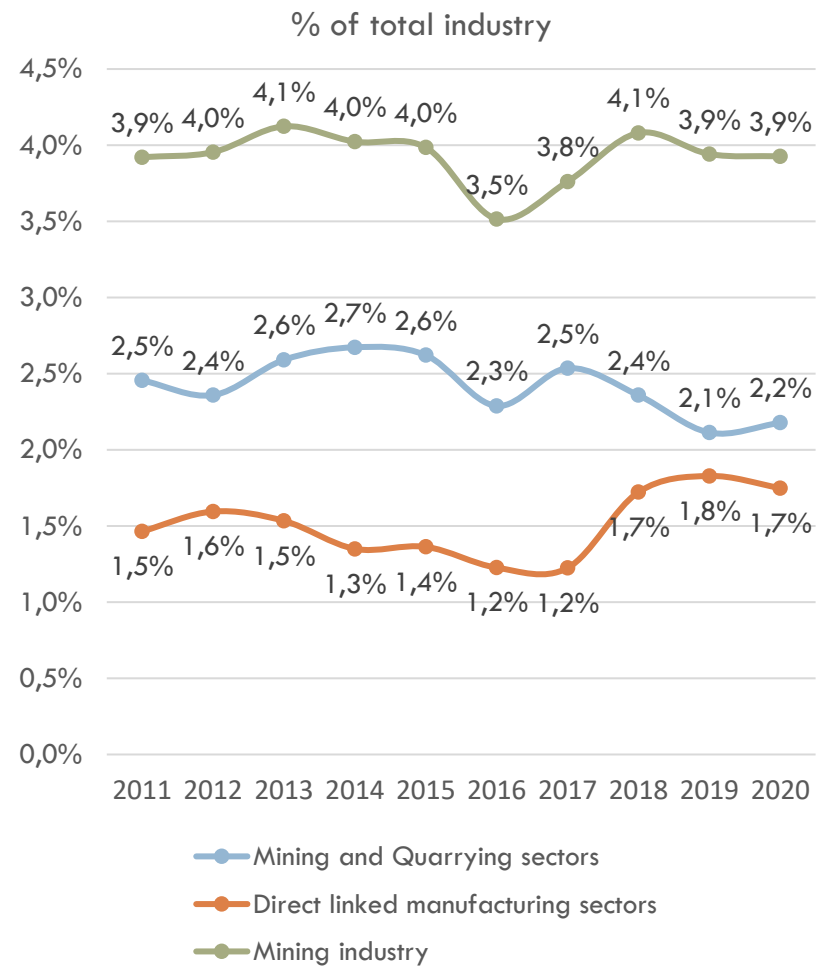
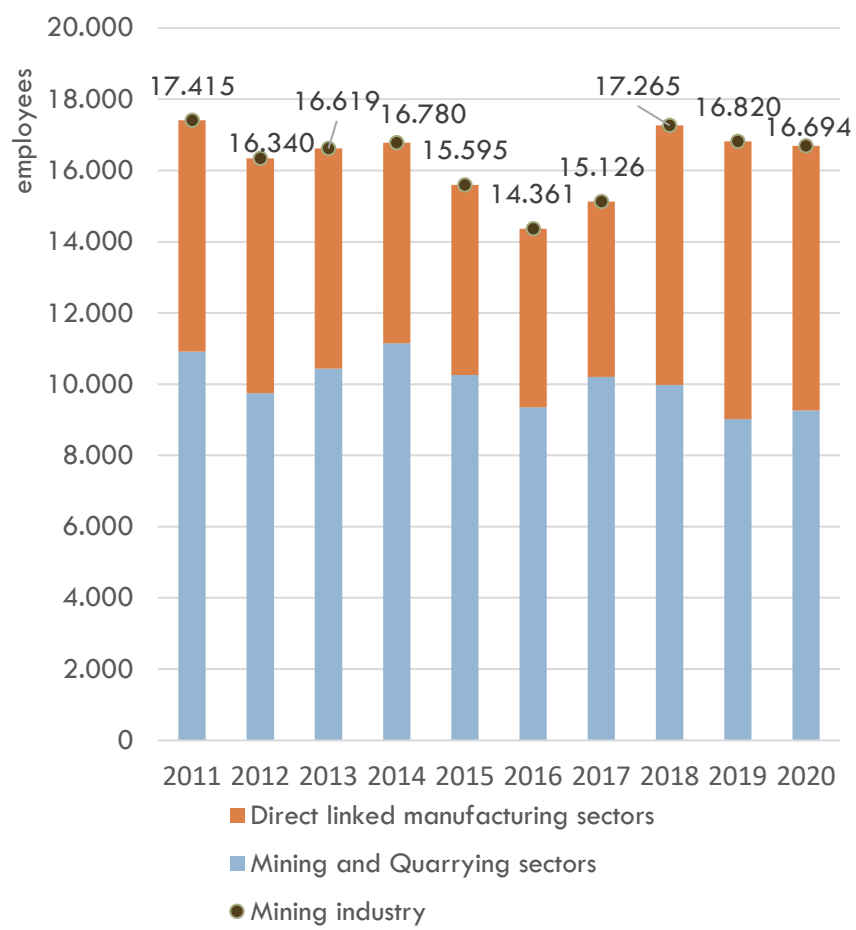


Source: Eurostat, National accounts and SBS

\*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

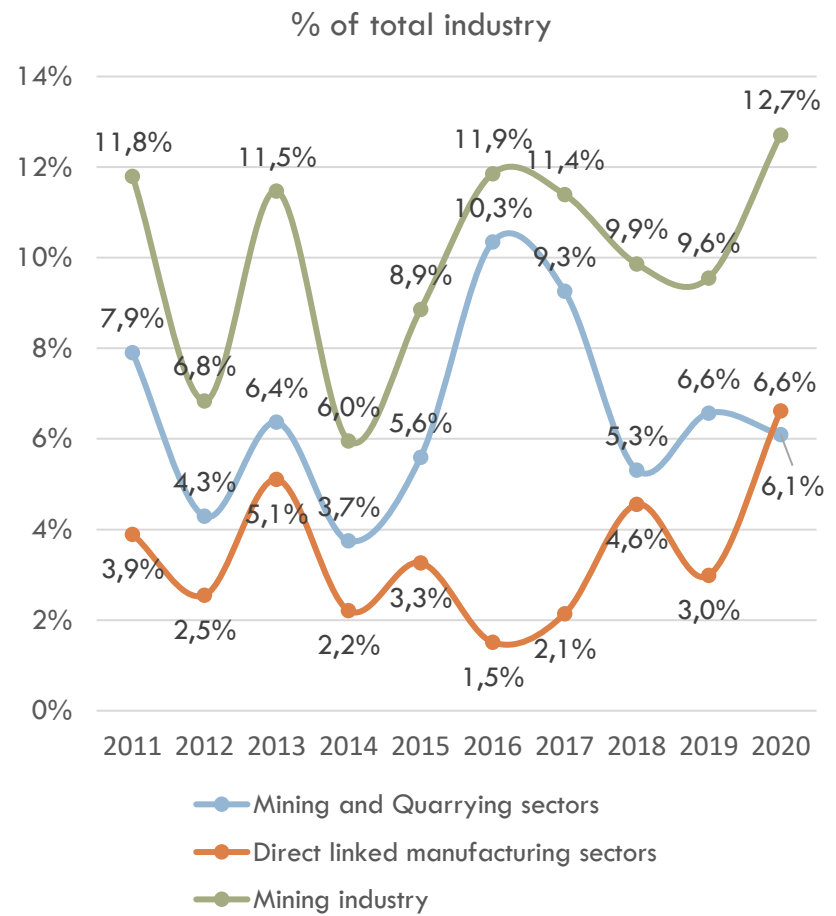
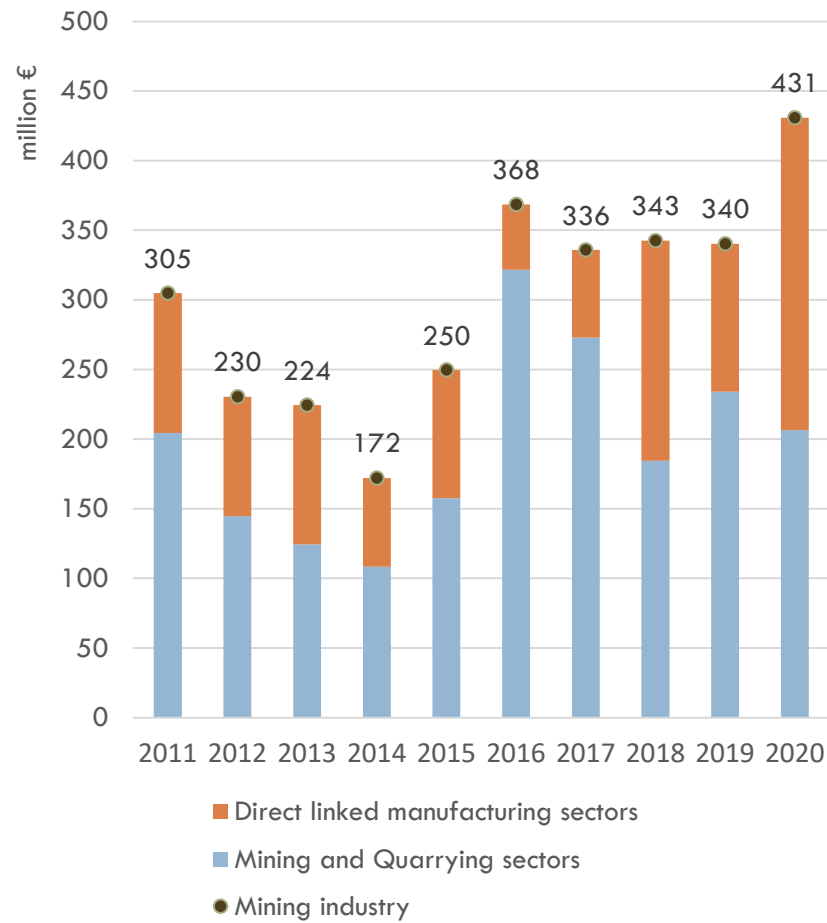


Source: Eurostat, National accounts and SBS



# Significant increase in investments, exclusively due to manufacturing

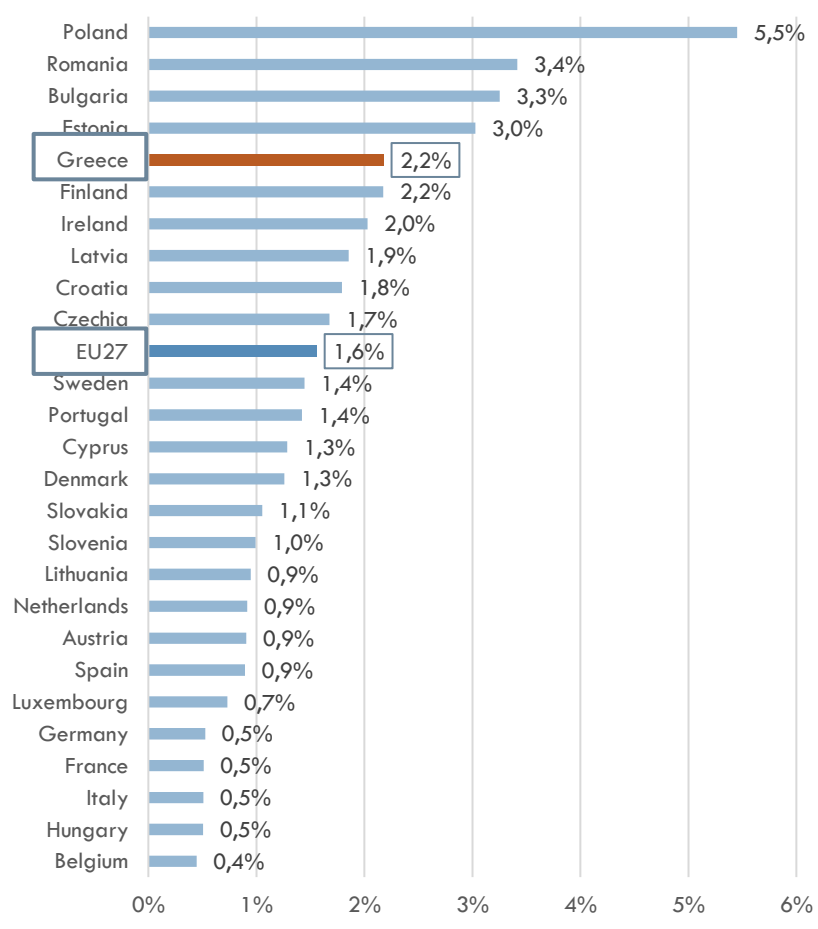
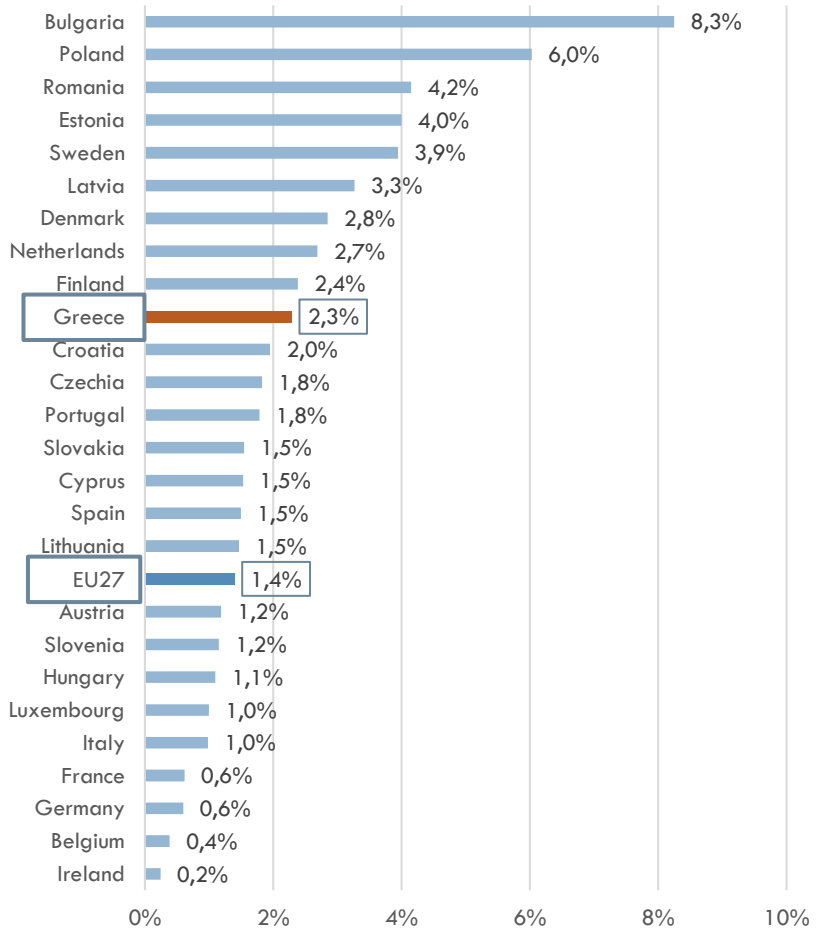
## Investments\*



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

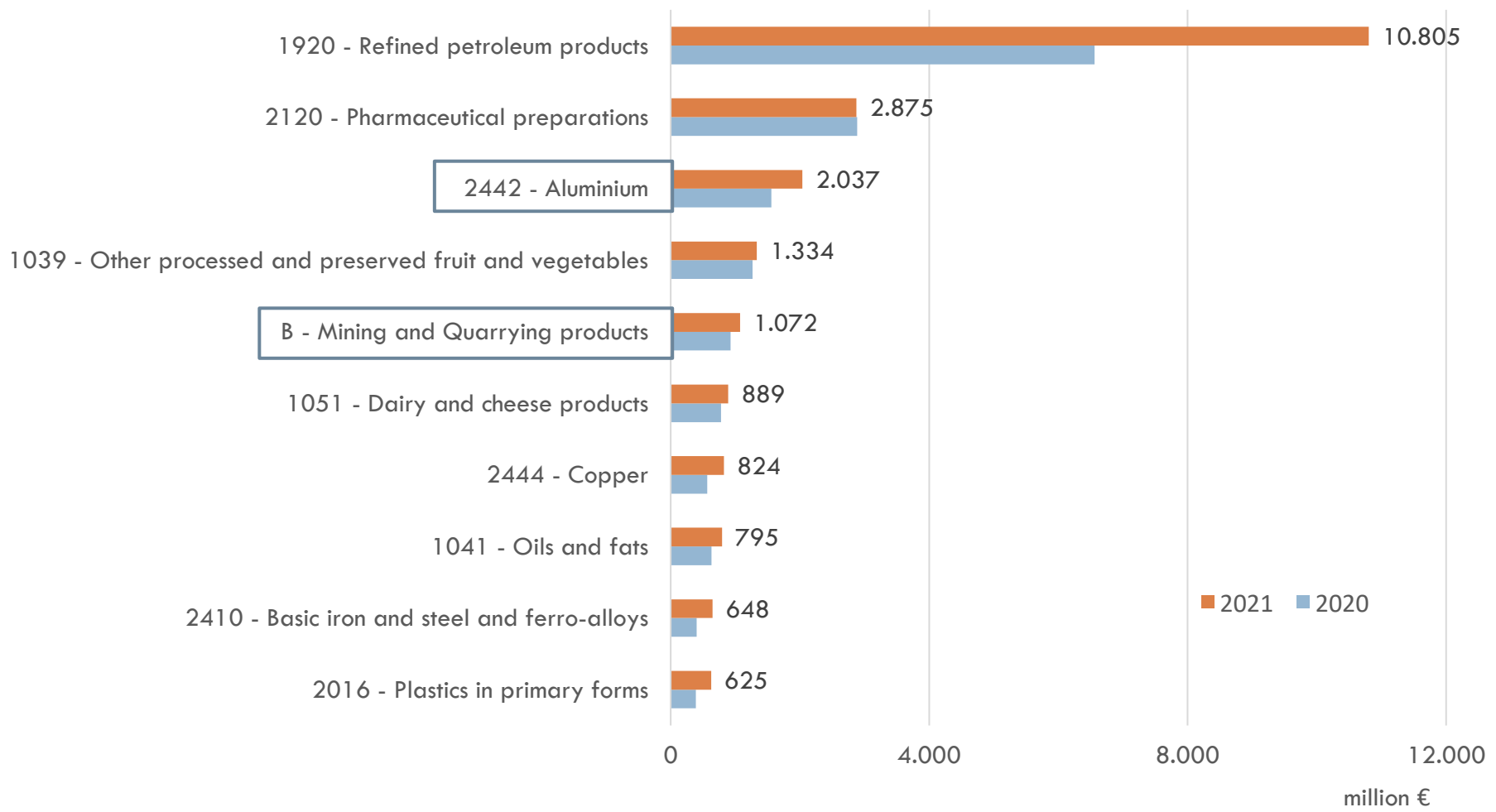
**Value added of mining and quarrying sectors per country** **Employment of mining and quarrying sectors per country**  
**as % of total industry, 2020** **as % of total industry, 2020**



Source: Eurostat, National accounts and SBS

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

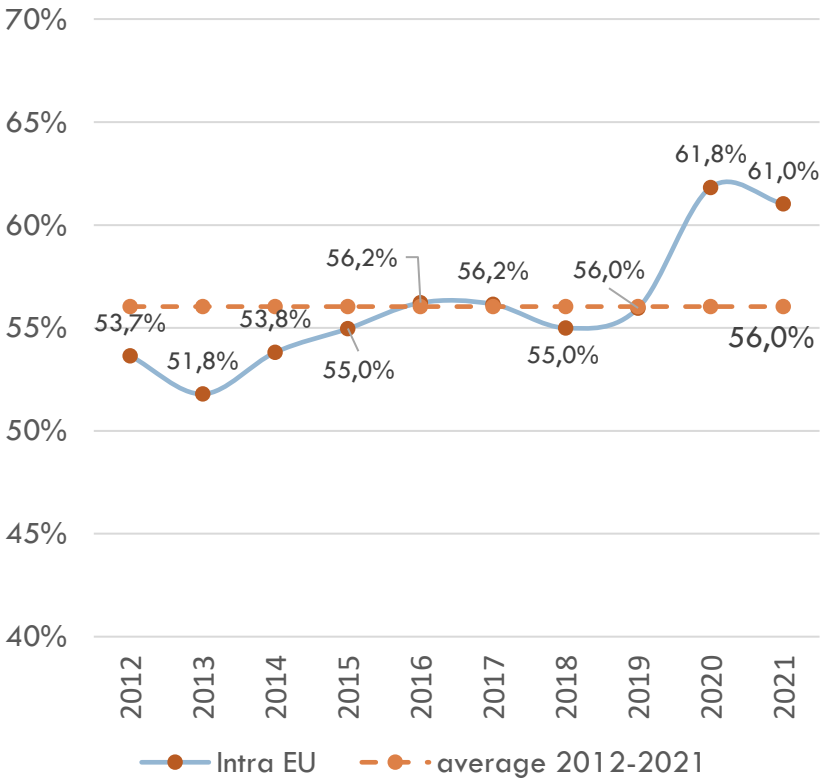
## Top export industrial goods



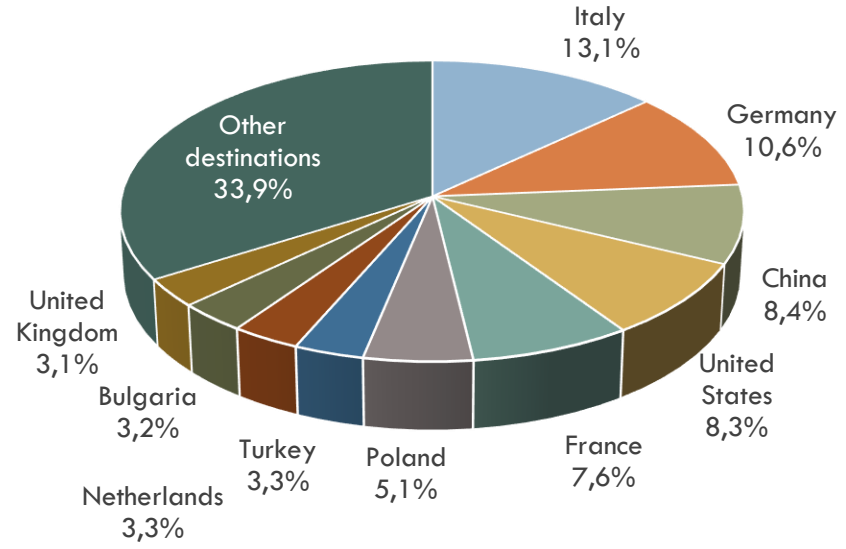
Source: EUROSTAT, International Trade

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

Intra EU27 exports



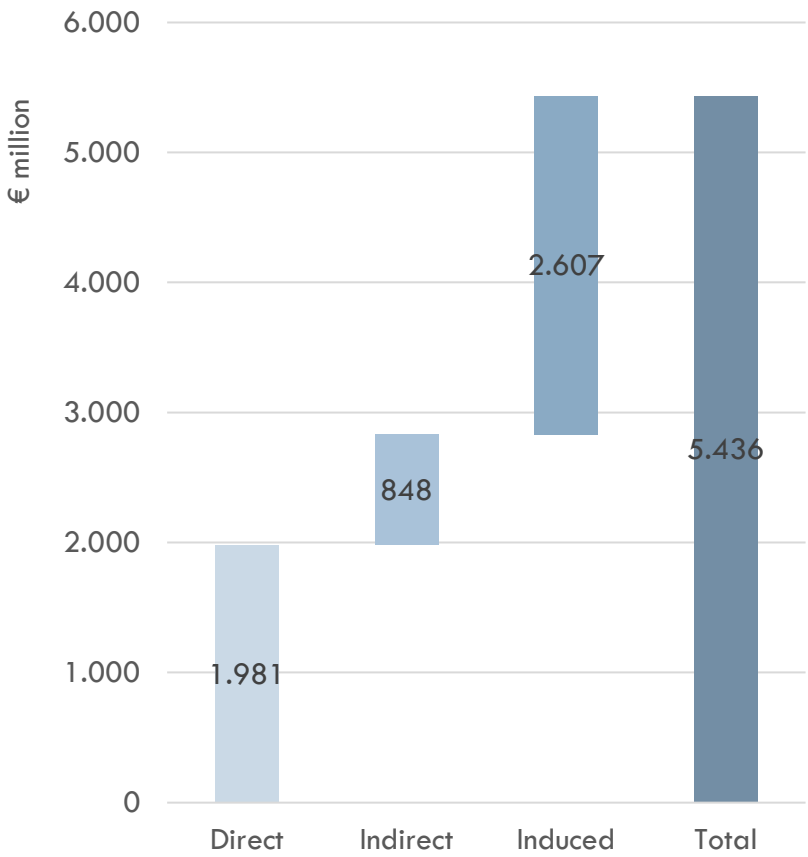
Exports by destination, % share in terms of value, 2021



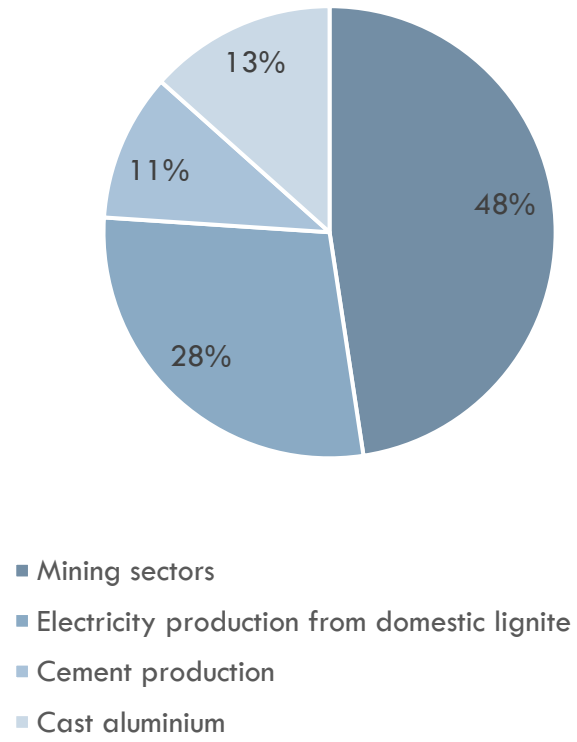
Source: EUROSTAT, International Trade

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

Impact on GDP



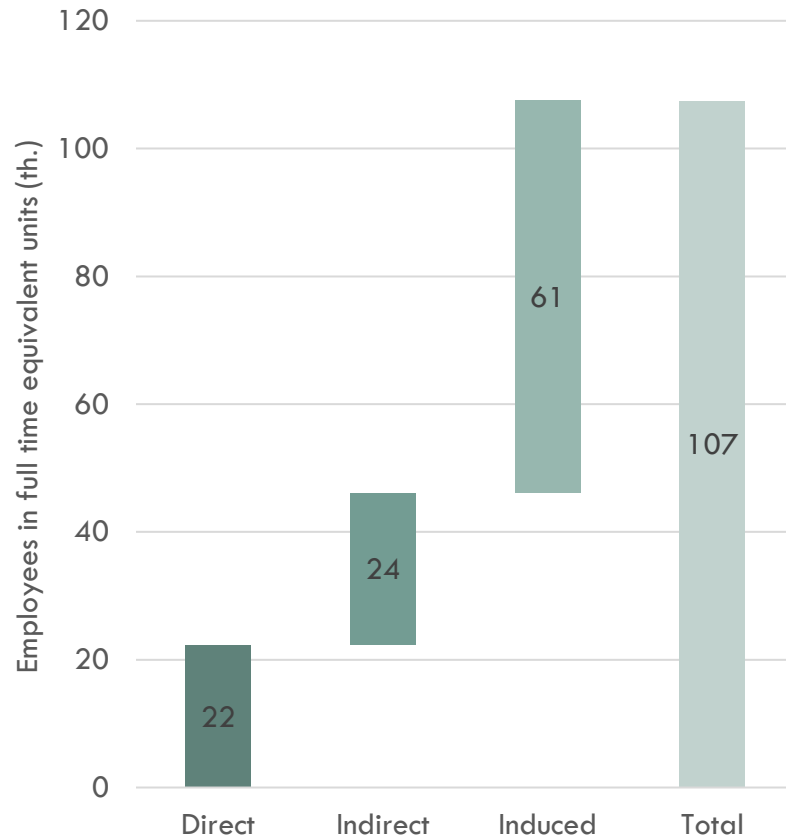
Distribution of total impact per sector



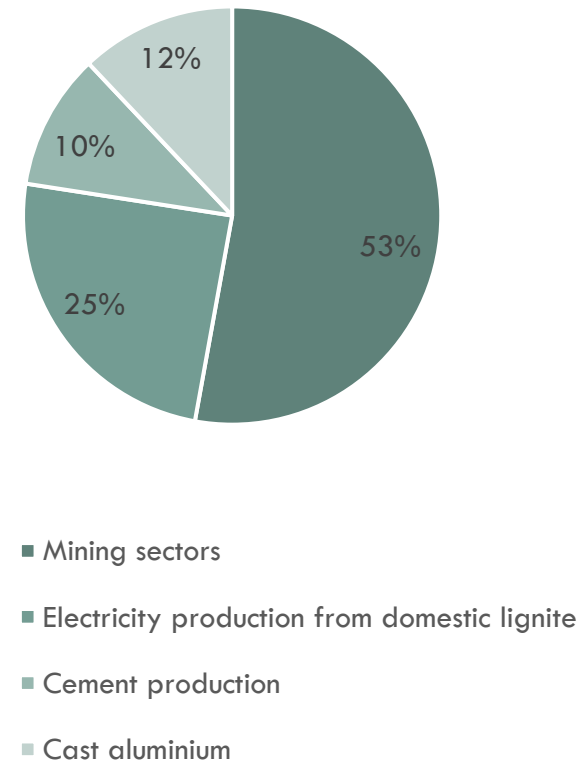
Source: Estimates from the study “The contribution of the mining industry to the Greek economy: 2018 update” (IOBE, 2018)

# 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



# 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 CO<sub>2</sub> cost compensation mechanism, fully implementing the relevant EU guidelines

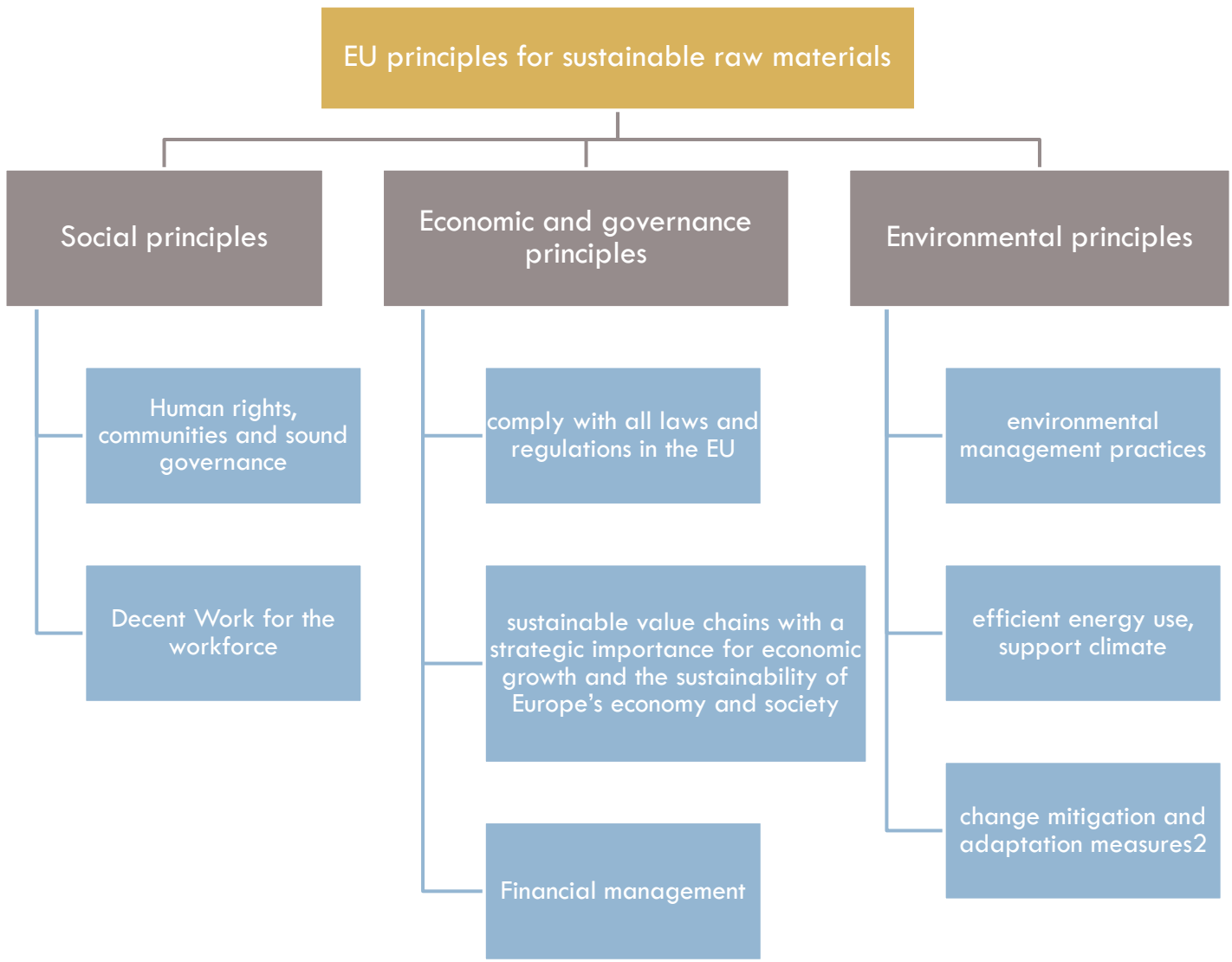
# New challenges

## 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.
- 
- **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.



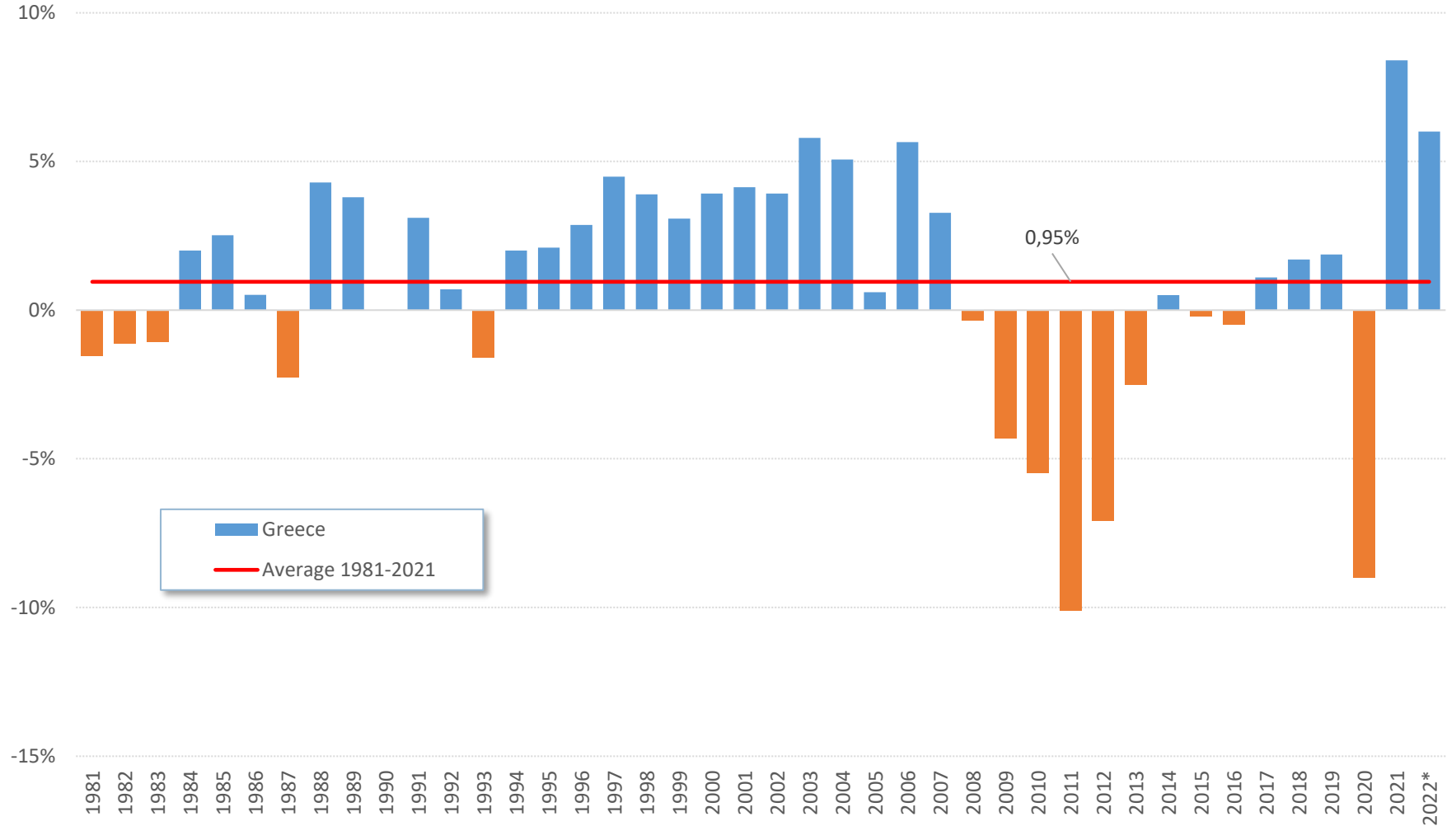
# Sustainable supply of raw materials from EU sources



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