

Quarterly Report on the Greek Economy

02/22

July 6, 2022



ΙΔΡΥΜΑ ΟΙΚΟΝΟΜΙΚΩΝ & ΒΙΟΜΗΧΑΝΙΚΩΝ ΕΡΕΥΝΩΝ

Overview of the report





Positive signs and significant risks

- This year, real growth rates are expected to be high despite the high inflation rates.
- In the medium term, the need to reverse the twin deficits, i.e., the fiscal and trade balance deficits, amid high energy prices and disruptions in the global economy is imperative.
- Despite high inflation, consumption increased due to the subsidies granted by the government. The first round of subsidies was granted to support low-income households during the pandemic while the second round was granted to deal with high energy prices.
- The rise in consumption is expected to slow down during the rest of the year, while a significant portion of consumption fuels increased imports. To maintain high growth rates, it is critical to systematically increase investment and exports.
- An increasing number of the country's manufacturing enterprises are now achieving good export performance. At the same time, a greater part of the tourism sector has turned to offering high-value services.
- The war in Ukraine was the spark that ignited high inflation, but it found fertile ground in the previous state of the global economy which was characterized by large imbalances.
- High inflation is intensifying the tendencies to reverse monetary policy. Geopolitical tensions, following the Russian invasion of Ukraine, are keeping energy costs and uncertainty very high. There is high pressure on supply chains, investment plans, and household and state budgets.



Positive signs and significant risks

- All economies have been affected, but Greece is at a critical point: It is emerging from enhanced surveillance, with investment-grade recovery as a key intermediate goal. It is awaiting changes in monetary and fiscal policy in Europe, while trying to place itself on a path of systematic growth .
- There are many challenges. Rising inflation is putting pressure on consumption and, more generally, households. More expensive money and higher uncertainty make investors more cautious. The sharp rise in interest rates threatens those with high debts. The general slowdown of economies makes it difficult to increase exports.
- Economies with chronic structural lags, such as Greece's, cannot deal with inflation through subsidy policies. While measures to support vulnerable households and regulations in key markets are necessary, there is an urgent need to support production by simplifying procedures and increasing competition in product markets.
- The large increase in the cost of financing the country is of critical importance and so is the difference from the Eurozone average. The situation is not the same as in 2010. The government debt regulation has shifted most of its burden to the future. Policies in Europe signal that there is no intention of leaving weak economies to face the risks alone. However, the risks to our economy is high.
- The window of opportunity in the next 2-3 years can be used for the necessary modernization of both businesses and the government. If it successful, securing funding will not be a problem and growth will be high.



Global environment: growth slowdown in Q1/2022, the energy crisis is intensifying & inflation is increasing

- **Growth in the first quarter** at a slightly slower pace than in most countries, under the influence of **energy costs**. Acceleration of Growth accelerated in the Eurozone and China but slowed down in the US.
 - OECD countries (first quarter): 4.4% annual growth rate, following a 4.9% rate in the previous quarter and -0.2% rate in the first quarter of 2021.
- **Inflation** reached a 34-year high in May (8.6%)
- The **war in Ukraine** has had a big impact on the world economy
 - Pressure on energy products, raw materials, and food markets
 - Secondary effects from uncertainty about the duration and effects of the war, spillover effects through the supply chains
- OECD predicts a **3% growth rate for the world economy in 2022** (-1.5 p.p. lower than in the December 2021 forecast) and a 2.8% rate in 2023

Global & European challenges in the medium-term

Global challenges

- Effects of the war in Ukraine on energy efficiency and the operation of supply chains. There is the possibility of a **food crisis** arising in poorer countries.
- Preventing **new strong inflationary pressures**
 - Restrain inflation by gradually **tightening monetary policy (FED, ECB)** → increase in interest rates, with consequences on investment
- Address **new outbreaks** of the pandemic in China and SE Asia

European challenges

- Diversification of **energy sources** and **energy security**
- Effects of **restraining** the ECB's **expansionary monetary policy**
 - Faster Completion of Net Asset Purchases – APP (June)
 - Gradual increase in key interest rates as of July
- Implementation of the **European Recovery Fund**



Greece: Recovery slowed down in the first quarter of 2022

GDP in the first quarter of 2022: +7.0%, following an 8.1% increase in the fourth quarter of 2021 and a 2.8% decline in the first quarter of 2021. The 7th strongest recovery in the Eurozone (average: +5.4%)

Major changes in GDP components (Q1):

- Large increase in household consumption, by 11.6%, following an 11.9% increase in the fourth quarter of 2021 and a 4.9% decrease a year ago
 - Government consumption increased by 1.8%, down from a 5.1% increase one year ago
- Exports increased by +9.6%, following a 2.0% decline in Q1/2021
 - Mostly due to the increase in services exports (+23.0%, up from a 15.4% decline a year ago). The growth of goods exports slowed down for the 4th consecutive quarter (+2.5%).
 - Deterioration of the **external balance**, due to a sharper **increase in imports** (+17.5%), mainly imports of products (+17.8%)
- 9.6% increase in investment, up from +34.3% in Q4/2021 and +3.5% a year ago
 - Exclusively from increased fixed capital formation (+12.7%)



2022 State Budget : above target during the first four months

- **General government balance Jan.-Apr. 2022: €3.3 billion deficit; the target was a €5.0 billion deficit.**
- **General government primary balance: €799 million surplus; The target was a €2,45 billion deficit.**
- **Above target on the expenditure side (€958 million less):**
 - Less expenditure on fixed assets by €458 million, due to the deferral of payments for equipment programs
 - Deficit in current transfers to EU organizations and states by €149 million and in guaranteed forfeitures by €203 million.
- **Revenue exceeded the target by €699 million:**
 - Higher tax revenue, by €1.75 billion, mainly from VAT on other income and services (+€644 million) and other current taxes (+€366 million)



Trends in short-run activity indices

Industry

- Industrial production increased by 1.9% in the first quarter of 2022, down from an 8.8% increase in the first quarter of 2021
- 0,5% decline in the Eurozone; down from an 11.8% increase in the first quarter of 2021

Construction

- Construction output rose by 12.0% in the first quarter, up from a 9.3% decline in the same period last year
- Construction projects increased by 20.8%; up from a 16.5% decline a year ago

Tourism

- Sharp 134.8% increase in turnover in the first quarter of 2022, following a +39.9% increase in 2021, due to the lockdown in the first quarter of 2021

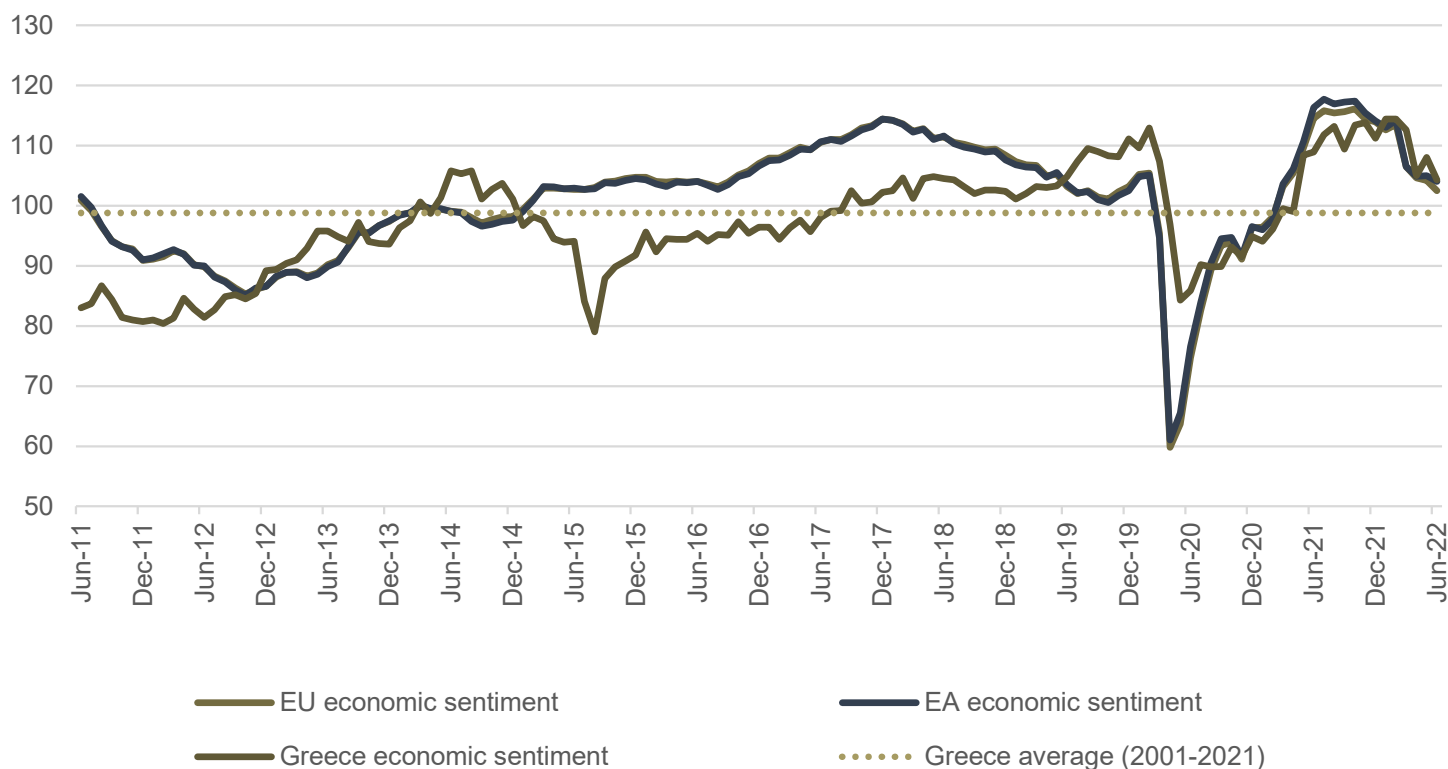
Retail

- 10.2% increase in Retail Trade volume in the first quarter of 2022, up from a 4.1% rise in 2021.



Economic Sentiment was lower in the second quarter of 2022 compared to the first one; it was slightly higher than last year

Economic Sentiment Indicator

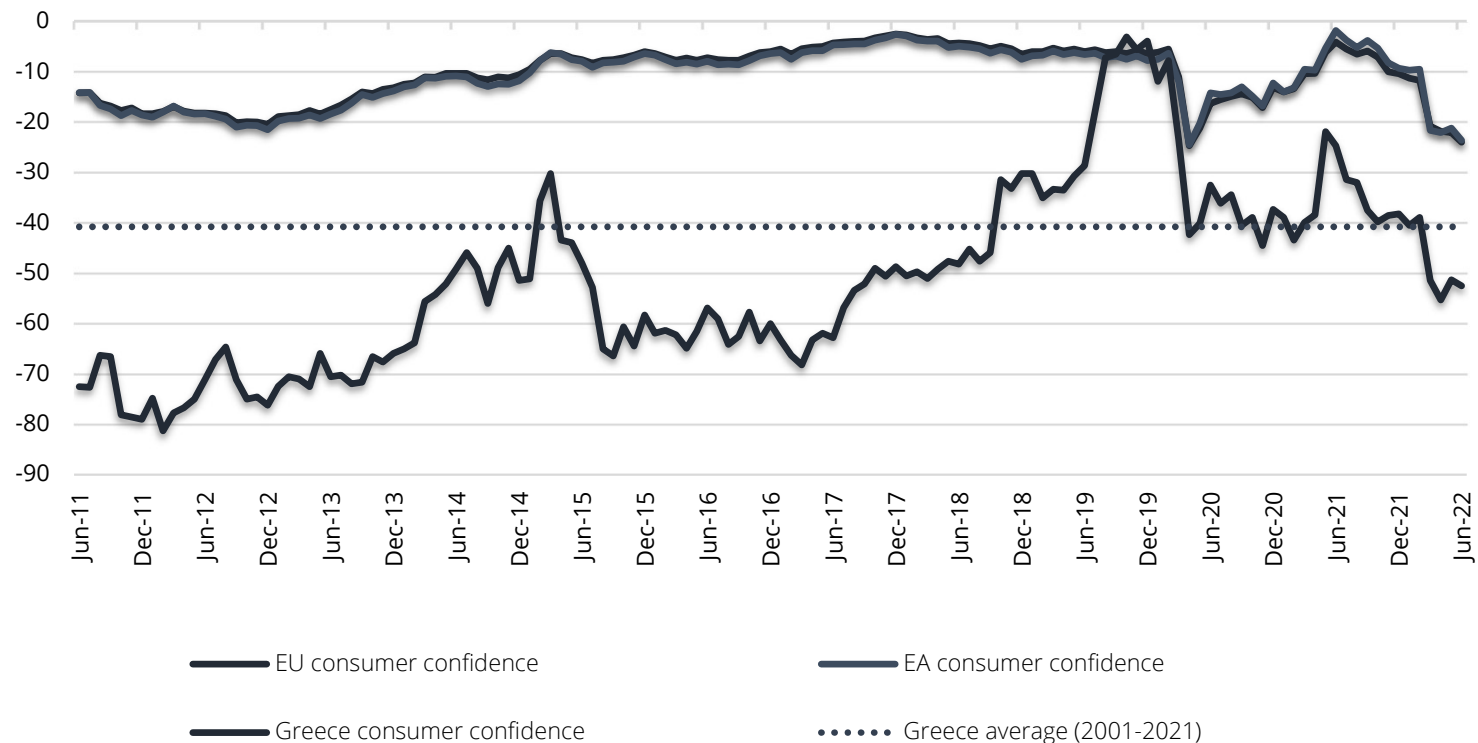


Sources: IOBE, European Commission



Consumer Confidence was lower in the second quarter of 2022 compared to both the first quarter of 2022 and the second quarter of 2021

Consumer confidence Index

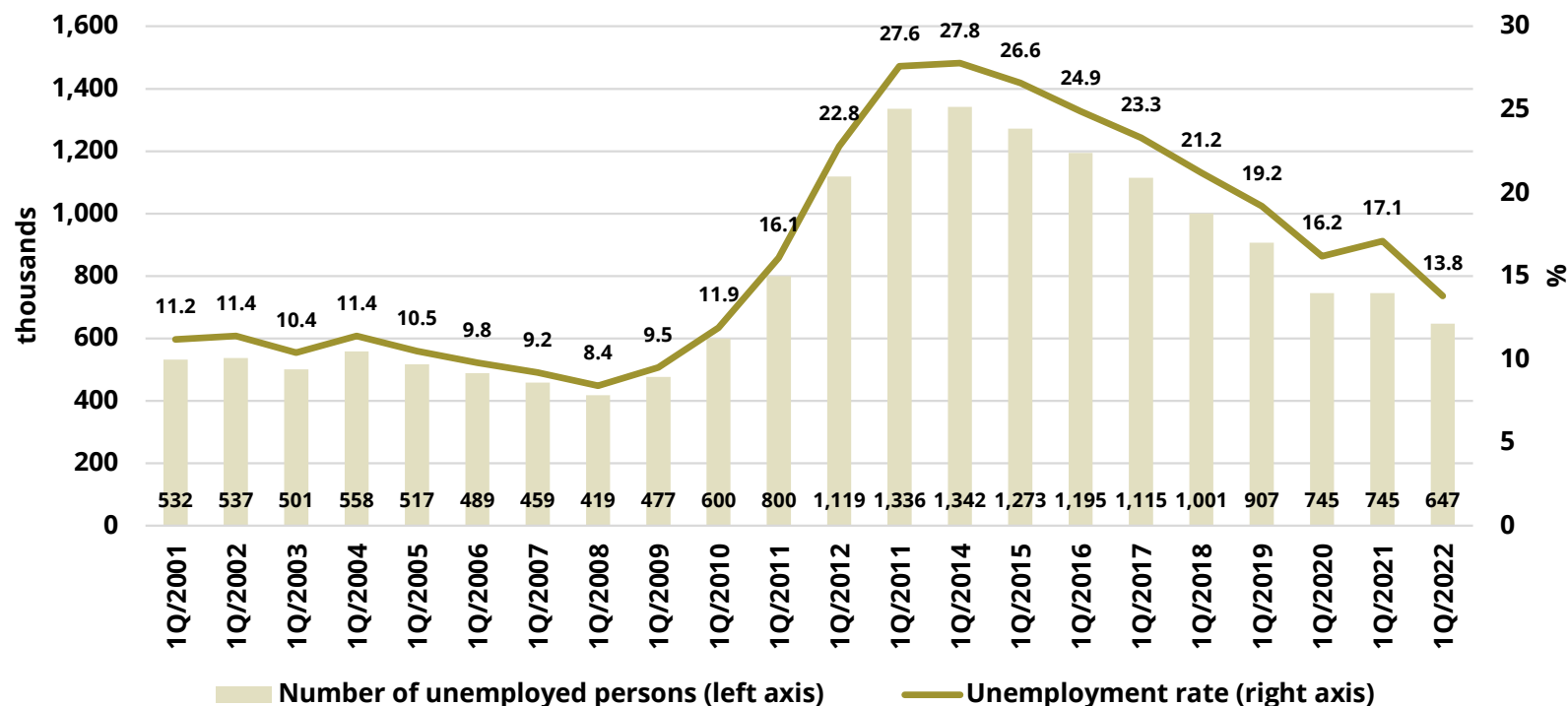


Sources: IOBE, European Commission



The unemployment rate further decreased in the first quarter, reaching its lowest (first-quarter) level since 2011.

Number of unemployed persons and unemployment rate in Greece



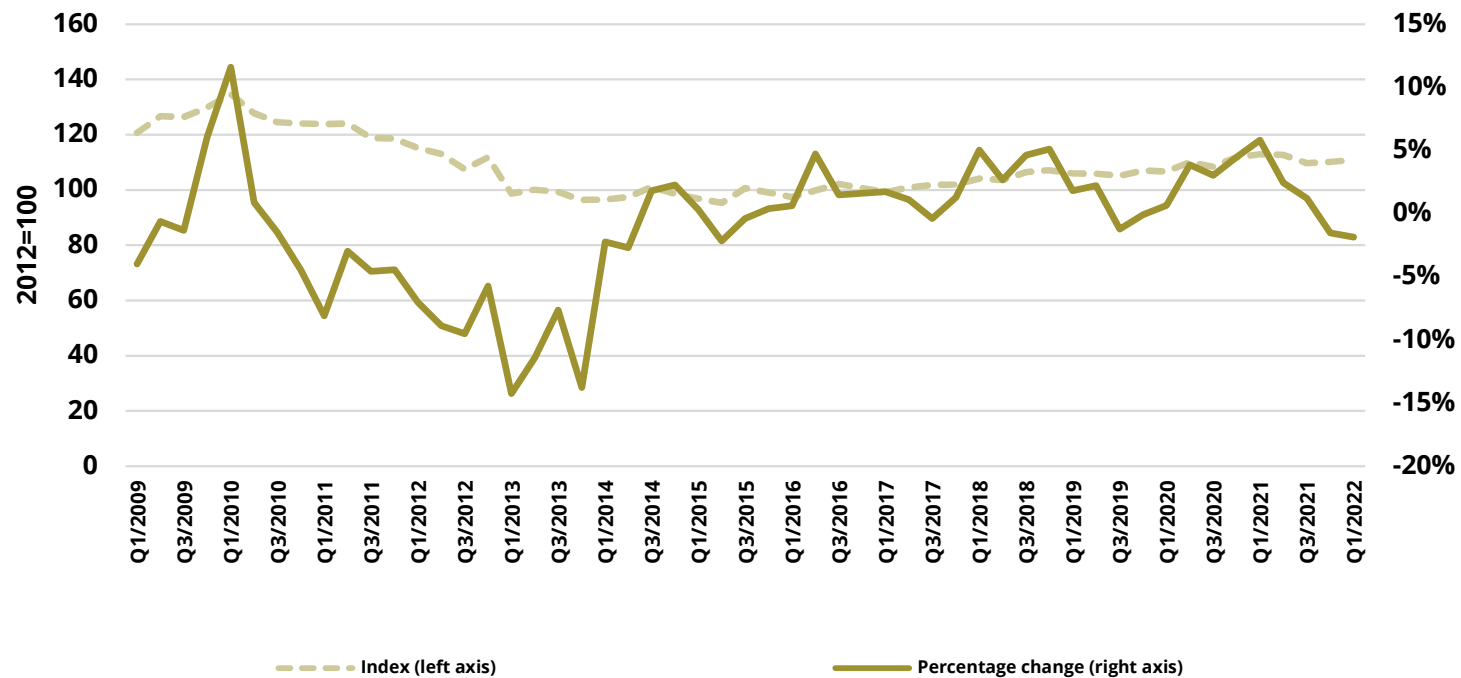
Source: ELSTAT

- The unemployment rate reached 13.8% in the first quarter of 2022, down from 17.1% in the first quarter of 2021 and 13.2% in the fourth quarter of 2021.
- Employment increased in 19 industries. Indicatively: Tourism (+129.9 thousand), Wholesale-Retail (+84.9 thousand), Manufacturing (+41.1 thousand), Education (+28.8 thousand).
- Employment decreased in 2 sectors: Electricity supply-Natural gas supply-Steam supply-Air conditioning (-3.8 thousand), Financial-Insurance activities (-3.8 thousand)



The seasonally adjusted labor cost index declined for the second consecutive quarter

Evolution of seasonally adjusted labor cost index



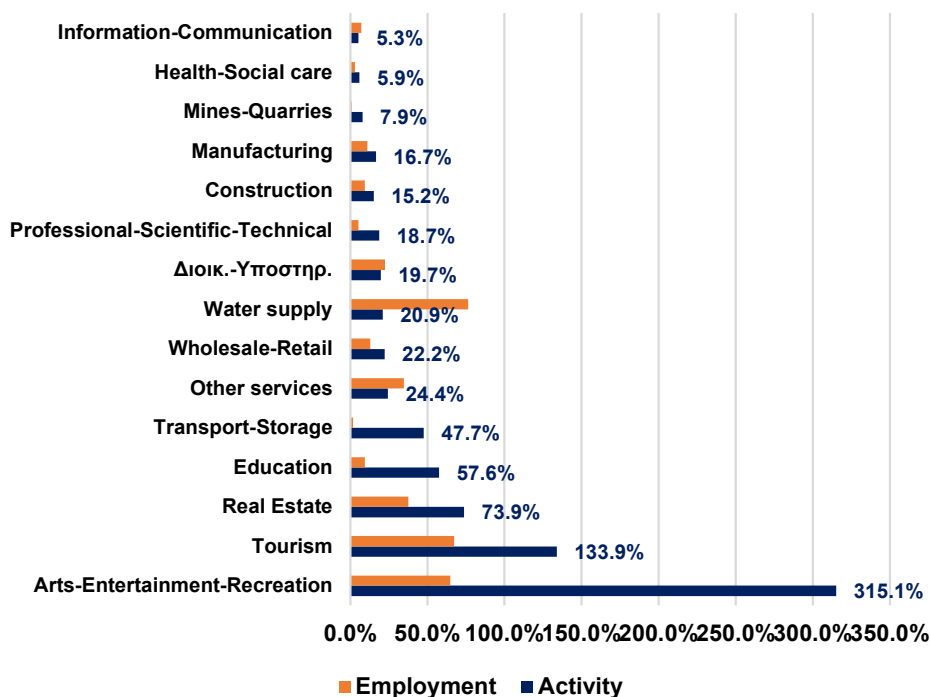
Source: ELSTAT

- It decreased by 1.9% in the first quarter of 2022, following a decrease of 1.5% in the fourth quarter of 2021

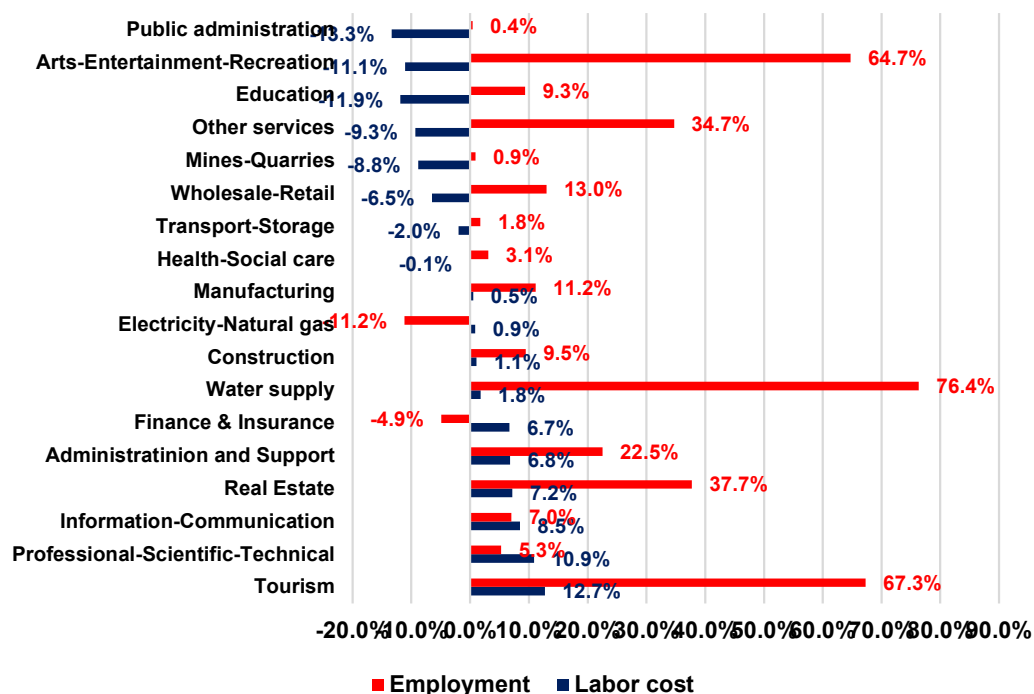


Positive correlation of turnover and employment in the first quarter of 2022; there was no correlation between employment and labor costs

% change in employment-activity Q1/2021-Q1/2022



% change in labor cost-employment 1Q/2021-1Q/2022

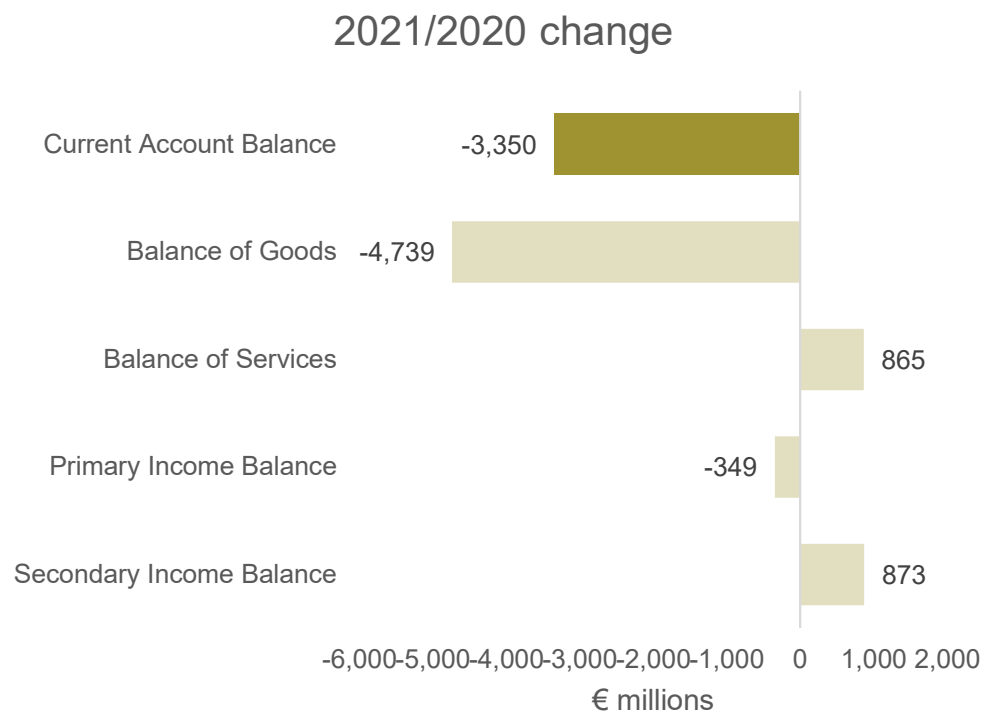
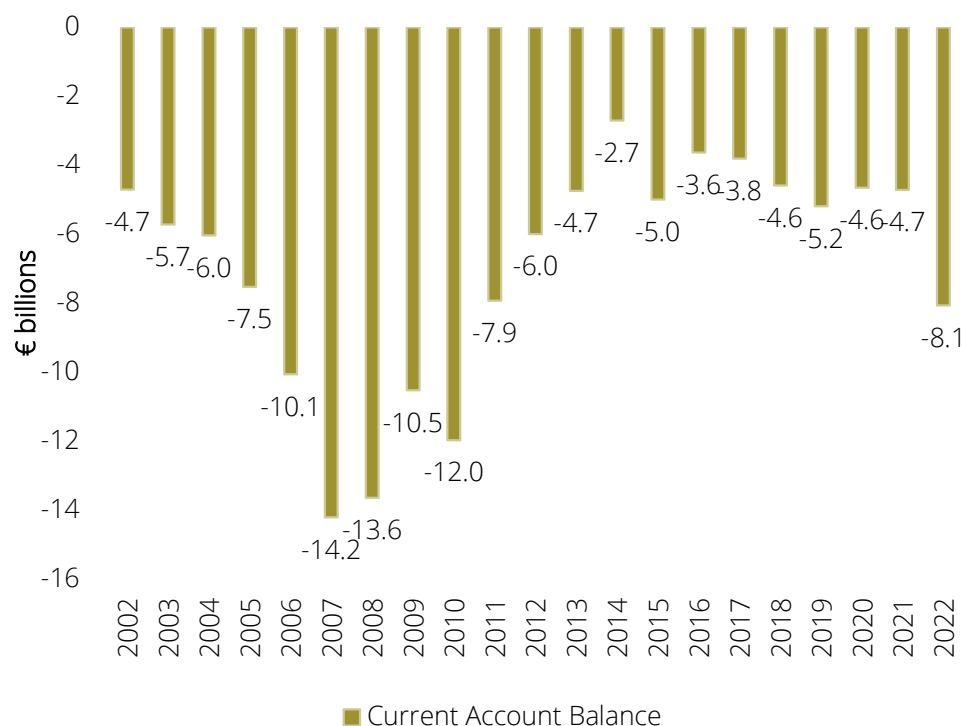


Source: ELSTAT, Eurostat Data processing: IOBE

- Positive correlation between turnover and employment across all sectors of the Greek economy in the first quarter of 2022 (correlation coefficient 0.59, statistical significance level 98.2%)
- Indicatively: Arts-Entertainment-Recreation (turnover +315.1%, employment +64.7%), Tourism (+133.9%, +67.3%, respectively), Real Estate (+73.9 %, +37.7%)
- There is no correlation between labor costs and employment trends (correlation coefficient 0.10, statistically insignificant): in 8 industries both increased, in 8 other industries labor costs decreased but employment increased, in 2 industries labor costs increased but employment decreased.



The Current Account deficit reached €8.1 billion in the first four months of 2022, almost twice as large as it was during the same period in 2021

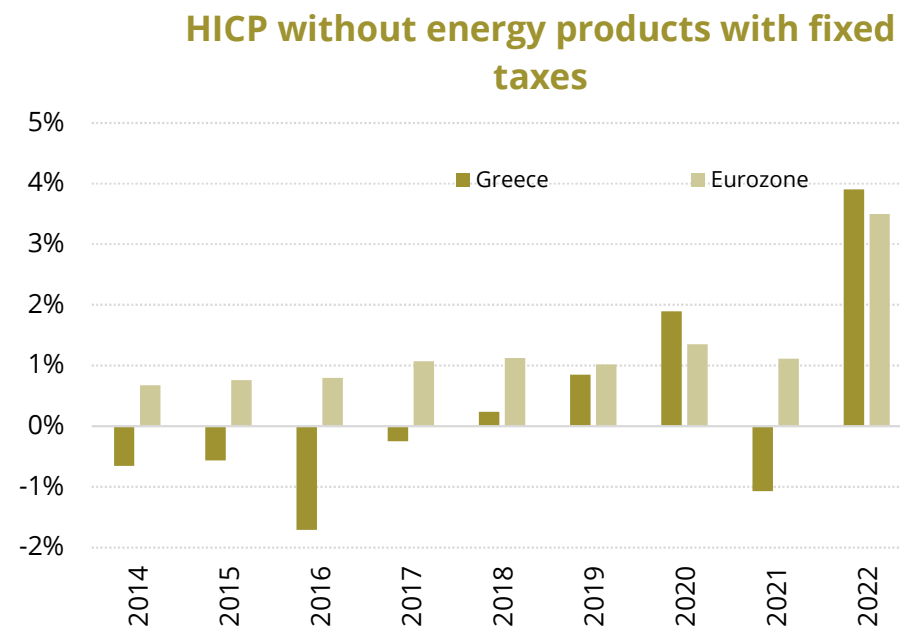
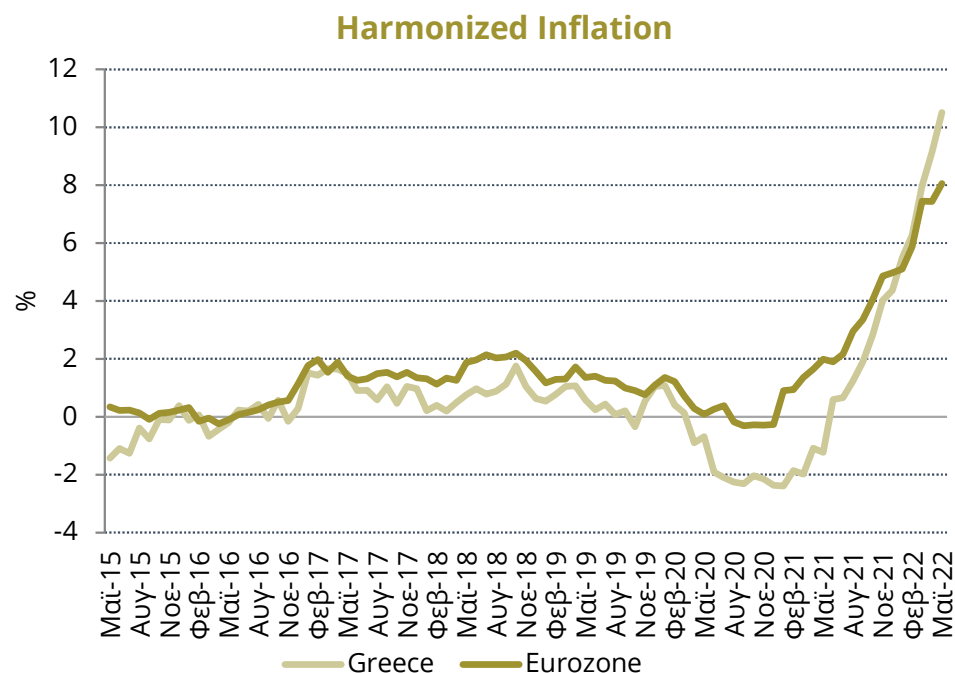


Source: Bank of Greece

- Major deterioration in the balance of goods (the deficit increased by €4.7 billion), and a decrease in the surplus of the Primary Income balance. They were only partially offset by the improvements in the balance of Services and the Secondary Income balance.
- 45% of increased imports and exports of goods are due to fuel
- Tourism revenue reached 87% of its 2019 level
- Significant increase in transport revenue (€7.1 billion in 4 months); its highest level since 2002, with a large increase in payments as well.



Inflation reached a 27-year high in the first five months of 2022 due to the rise in energy prices



Sources: ELSTAT, Eurostat

Eurozone: High inflation in the first five months of 2022, 6.8%, up from 1.4% a year ago; it reached a 25-year high.

Greece: The Domestic Price Index increased by 11.3% in May and 10.2% in April this year, the largest increases of the last 27 years; mostly due to the sharp increases in energy goods prices.

HICP rate of change (Jan.-May 2022): +7.9%, up from -1.7% in the corresponding period in 2021

- Strong positive effect from energy goods (3.9%). Marginally negative effect from indirect taxes (-0.1%).
- For June, a 12% rate of change in HICP is forecasted

Producer Price Index (Jan. – Apr. 2022): 40.1% increase, following a 4.1% decline a year ago; mainly due to the increase in the prices of energy goods



Tighter monetary policy affects the operating conditions of the financial system

Positive developments

- NPLs continued to decline in the first quarter, albeit at a much slower rate
- Expansion of credit to businesses
- Increase in private deposits

Challenges

- Increase in public and private sector borrowing costs and divergence from the Eurozone core
- More expensive and more difficult access to capital markets
- Contraction of credit to households

Priorities

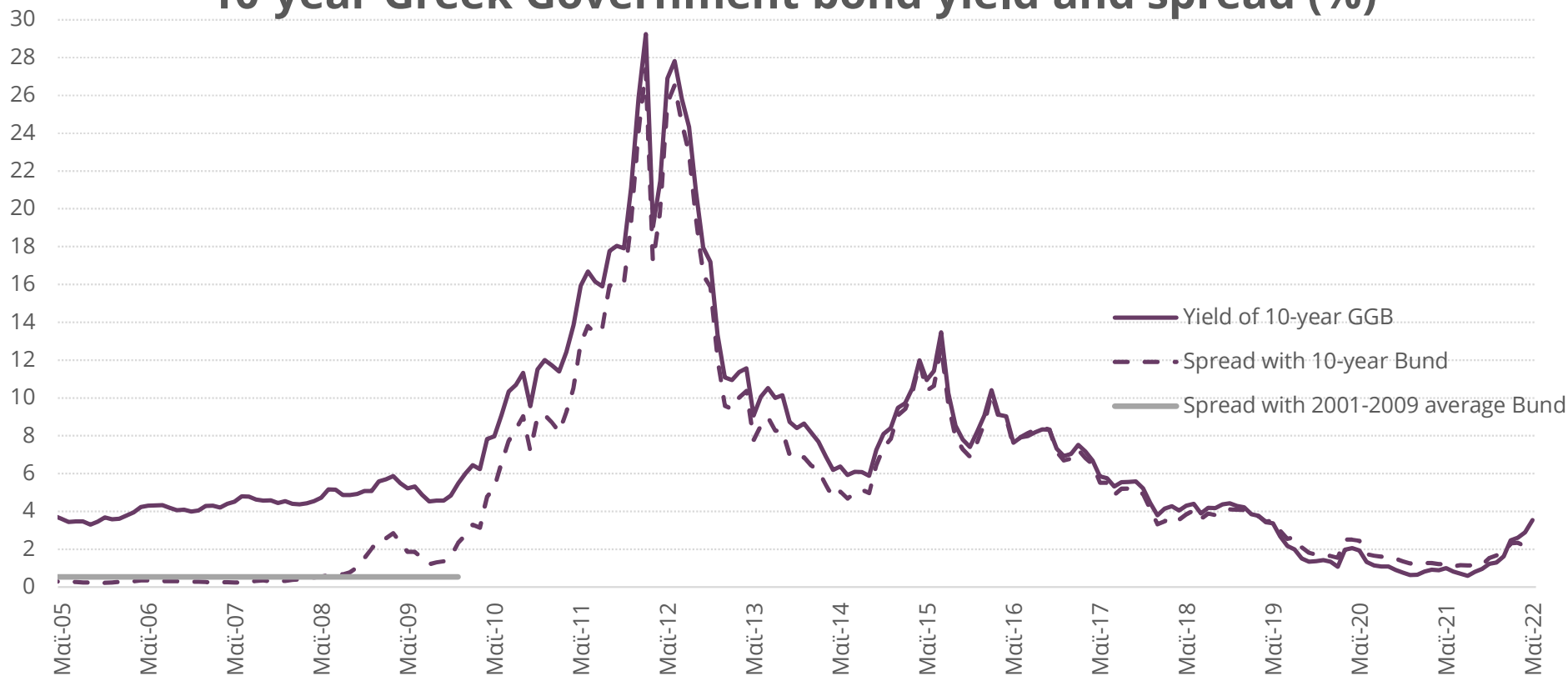
- Acceleration in the utilization of the loan part of the Recovery Fund
- Continuation of the reduction of NPLs, effective implementation of the bankruptcy code and the out-of-court debt settlement mechanism

Uncertainty and risks to the real economy affect banks' asset quality and profitability prospects



The cost of new government borrowing is on the rise; the increase is higher than in other countries, such as Germany...

10-year Greek Government bond yield and spread (%)



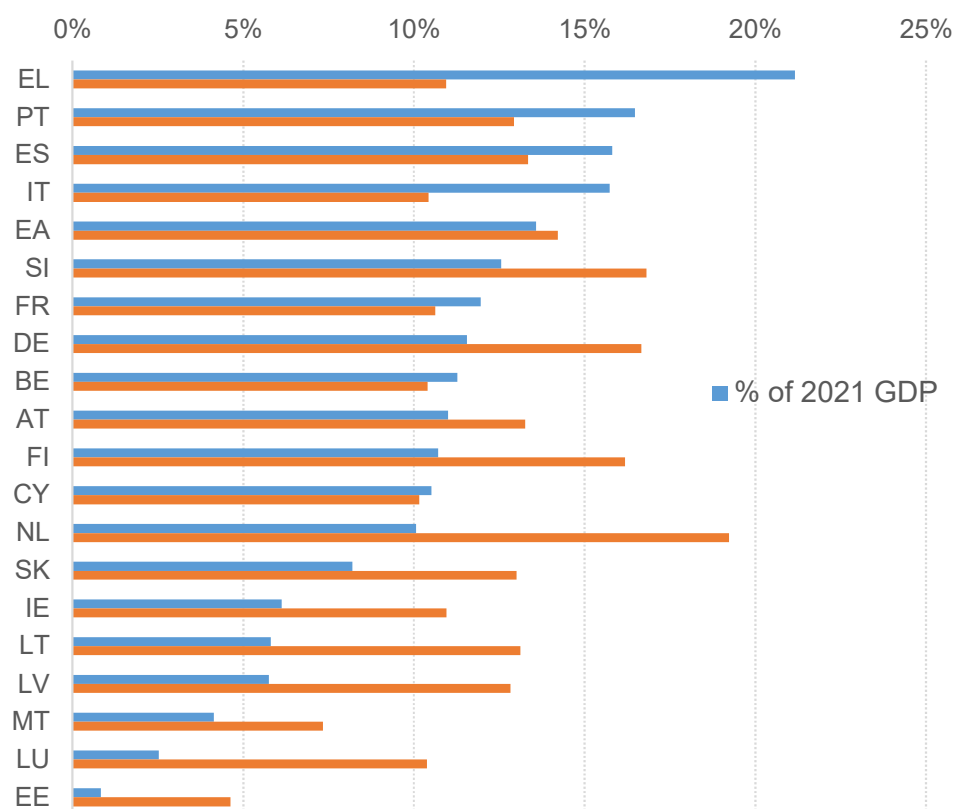
Source: ECB

... while the spread remains significantly wider than in the period before the Greek debt crisis

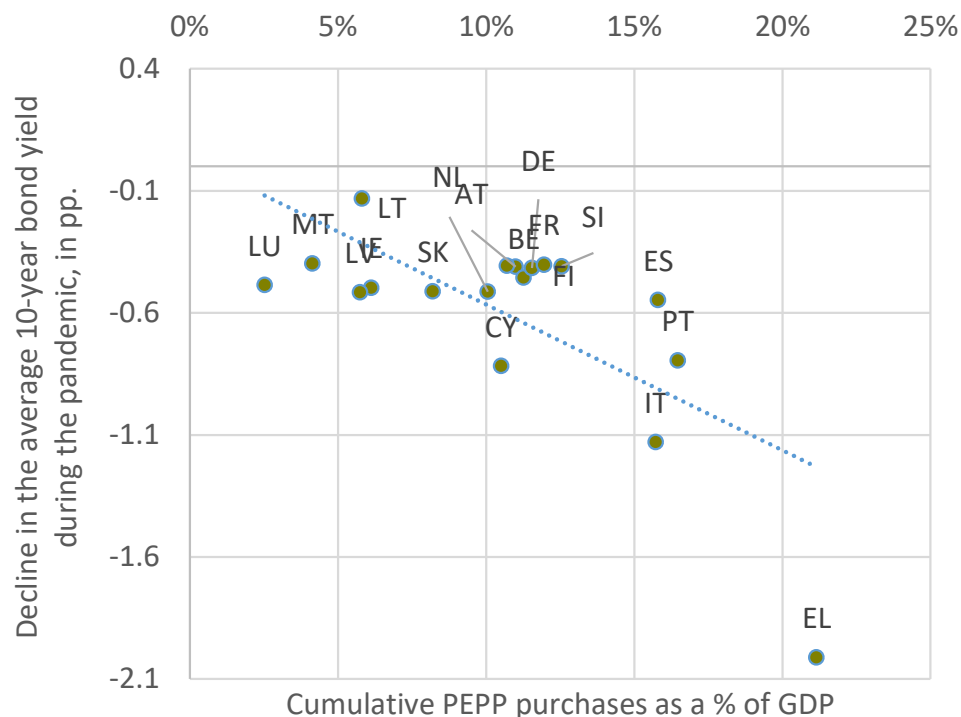


Under the PEPP, the ECB bought more Greek government bonds than any other country, as a % of GDP

Cumulative PEPP purchases, March 2020 - March 2022



Correlation of PEPP program size with change in government bond yield, by country



Sources: ECB, Eurostat. **Note:** The average change in the yield of government bonds equals the average rate from March 2020 – March 2022 minus the average rate from 2018-2019.

Countries with proportionally larger PEPP sizes recorded a larger decline in their government bond yields during the pandemic.



The challenges created by the war in Ukraine persist, while there is new volatility in the pandemic

Negative effects of the war on energy-raw materials supply. Need for immediate diversification of energy supply.

- The energy crisis is escalating, especially in the EU. It is possible that prices will escalate further due to the 6th round of EU sanctions (crude oil import ban until the end of 2021).
- There is an urgent need to save energy - produce clean energy - diversify our energy supply (REPowerEU Plan)

New extraordinary public spending, with an impact on the deficit... but also a reduction in debt, as a % of GDP, due to inflation

- Further escalation of support measures in May & June. Continuation – scaling up, will depend on the evolution of prices.
- In conditions of high uncertainty & rising government bond yields, especially for countries in the "periphery".
- Gradual increase in basic interest rates, with effects on private - public lending, investment

The importance of the Recovery Fund is enhanced

- Following the disbursement of the first tranche (€3.56 billion), an acceleration of procedures is needed for the 230 activated Recovery Plan projects. Jan.-May: only €35 million in subsidies
- Emphasis should be put on reforms to increase confidence in the economy's prospects during this crisis

Positive news from Tourism

- High traffic in domestic airports in April & May. 3.2% more arrivals in May compared to 2019.



2022 macroeconomic forecasts

2022 scenario

- The war will continue for the greatest part of the second semester; it is possible that it will not end this year. Average y-o-y oil price rise of 50-55%. Inflation will reach a multi-decade high.
- Extensive support measures for households and businesses. They will largely make up for the absence of measures last year.
- It is possible that there will be a new outbreak of the pandemic as of the end of the summer-beginning of autumn but generalized restrictive measures will not be imposed.
- Higher growth in tourism compared to what was expected at the start of the war: revenue is expected to reach 90% of its 2019 level, accounting for the increase due to inflation.
- Gradual increase in interest rates, after two years of fluctuating at historical lows.
- Eurozone recovery: 1.0-1.5 percentage points lower than what was expected before the war (2.5-3.0%).
- The Recovery Fund will reach its targets: €3.2 billion in aid and €586 million in loans, however it will be behind schedule

2022 predictions

- Public consumption: -1,0% to -2,0%
- Private consumption: +3,0% to +4,0%
- Investment: +13% to +15%
- Exports: +12% to +14%
- Imports: +11% to +13%
- **Growth: \approx 3,5 to 4,0%**
- Unemployment: \approx 12,0 to 12,4%
- Inflation: \approx 9,0 to 9,6%

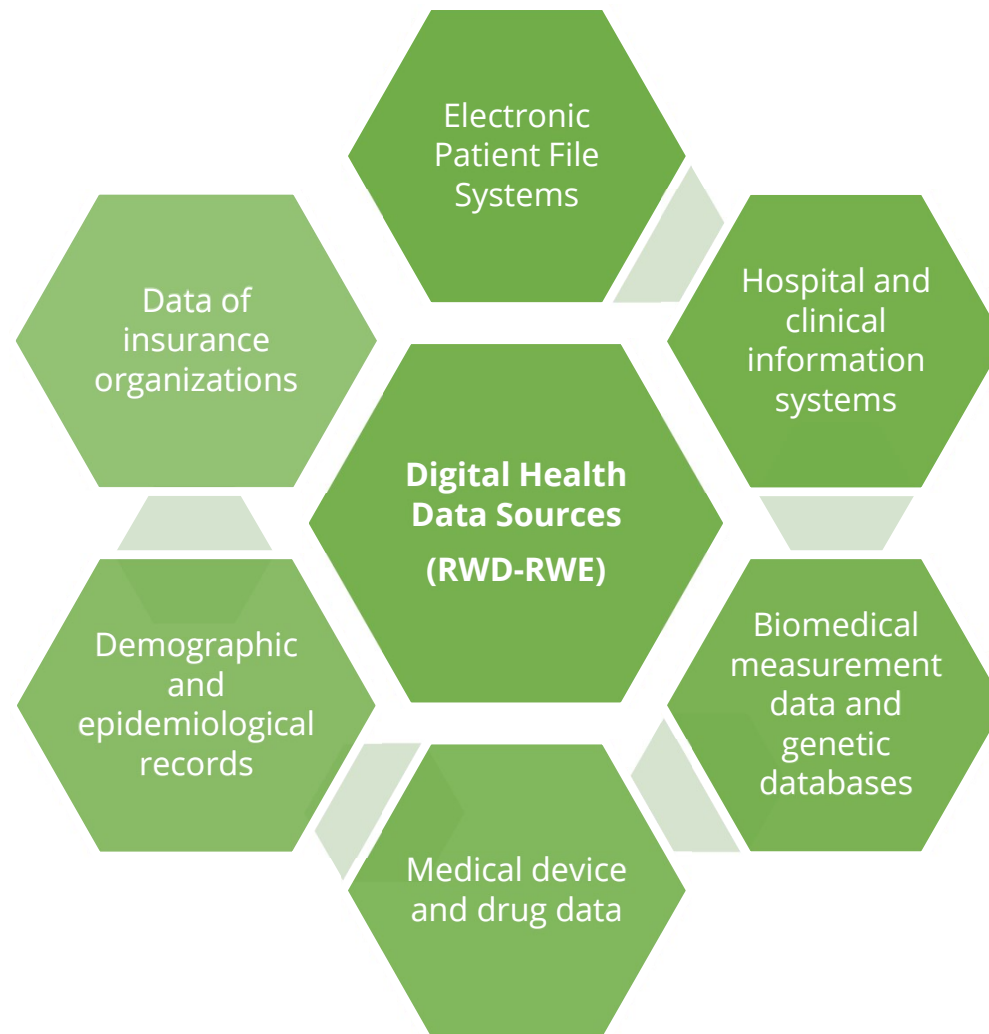
Special study

Digital health and Real Health World Data in Greece: The transformation in the health ecosystem and the impact on the economy

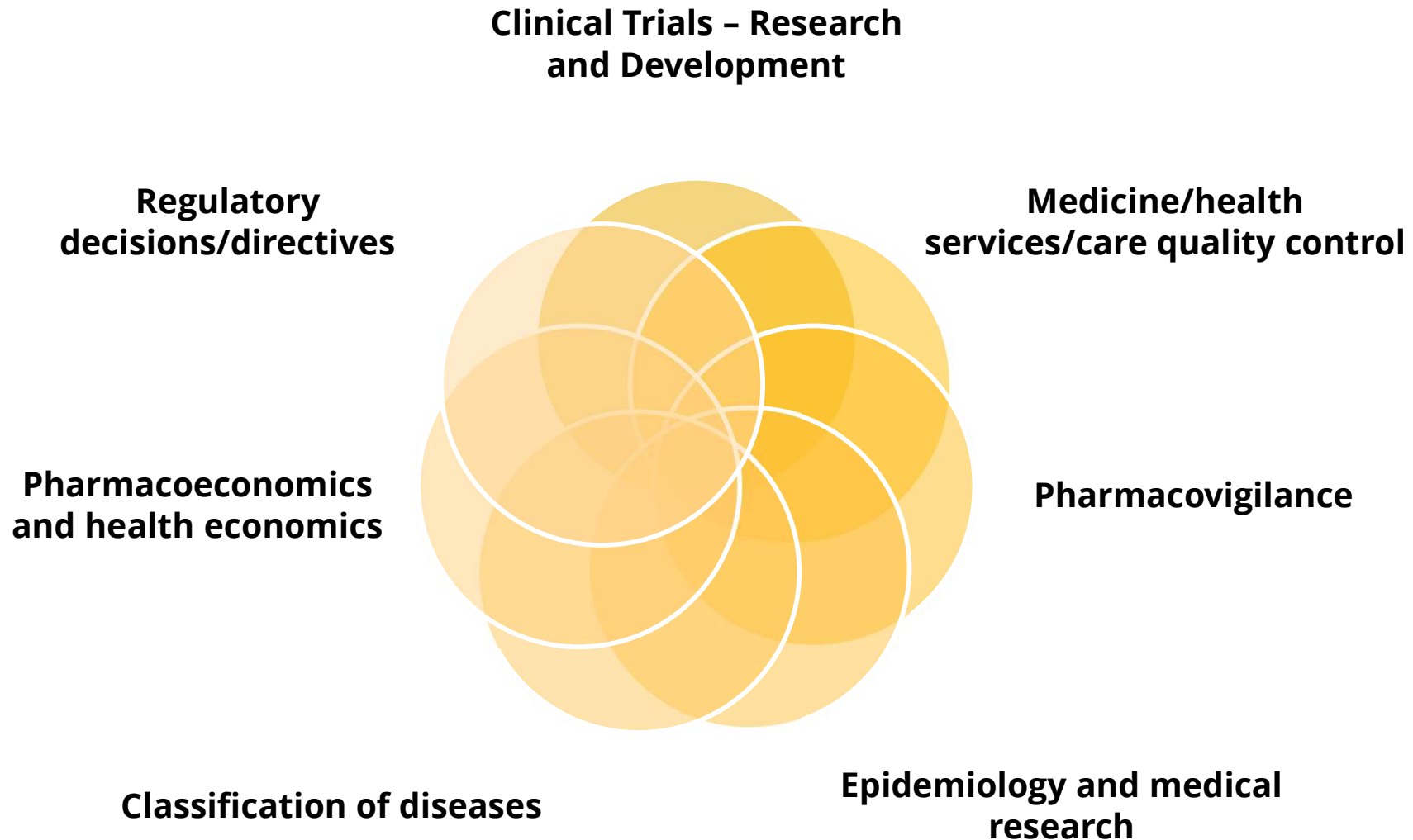
What is Real World Data;

- ▶ **Real World Data** (RWD) is a general term for different types of healthcare data that are not collected in conventional Randomized Clinical Trials (RCTs).
- ▶ Functional and conceptual **differentiation** from Big Data:
 - ▶ These are **structured information sets** with consistent encoding (as opposed to the complex and unstructured sets of "big data")
- ▶ However, Big Data applications in the health sector are often identified with the use of Real World Data (RWD).

The main sources of digital health data that can deliver RWD and RWE



Potential applications of RWD/RWE



RWDs can offer significant benefits to the patient, science, and healthcare professionals

For the patient

- ✓ Improved treatment.
- ✓ Valid information/transparency/equality of access
- ✓ More efficient healthcare delivery
- ✓ Implementation of new useful services for the patient, such as:
 - ✓ Reminders for scheduled visits, for regular examinations, or for preventive examinations

For science

- ✓ Drawing conclusions through statistical analysis of health data and contributing to medical research
- ✓ Use of anonymized data for epidemiological studies
- ✓ Contribution to clinical research, improvement of methodologies, and acceleration of the development process of new drugs with a corresponding reduction in costs

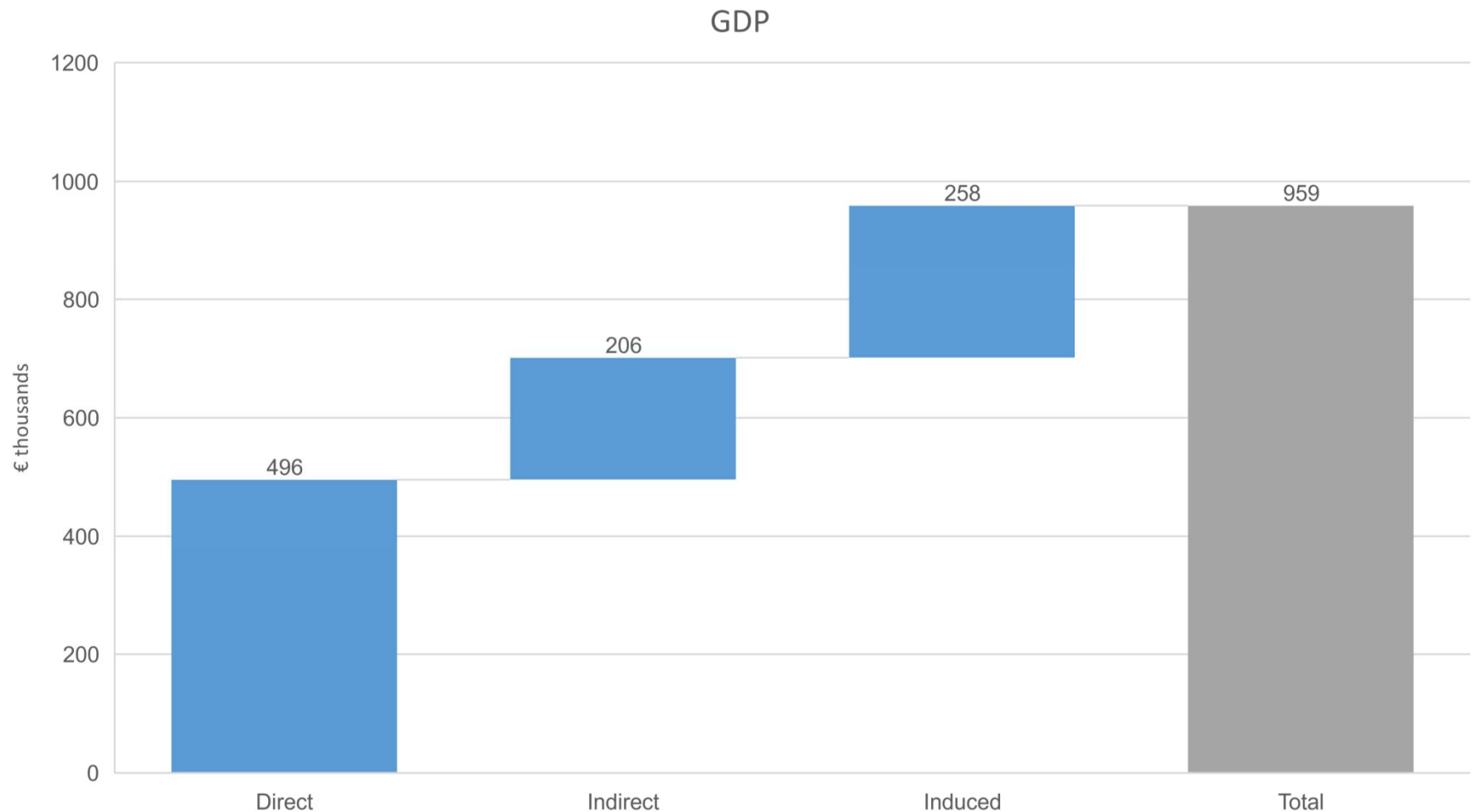
For healthcare professionals

- ✓ Long-term electronic recording of patient health information
- ✓ Evidence-based medicine
- ✓ Use of aggregated patient data, maintaining their anonymity, for clinical research and epidemiological studies.
- ✓ Improvement of clinical research methodologies and effectiveness of treatments
- ✓ Personalized medicine

Create **centers of excellence** to promote medical research and innovation through the **collection and utilization of RWD**. They can:

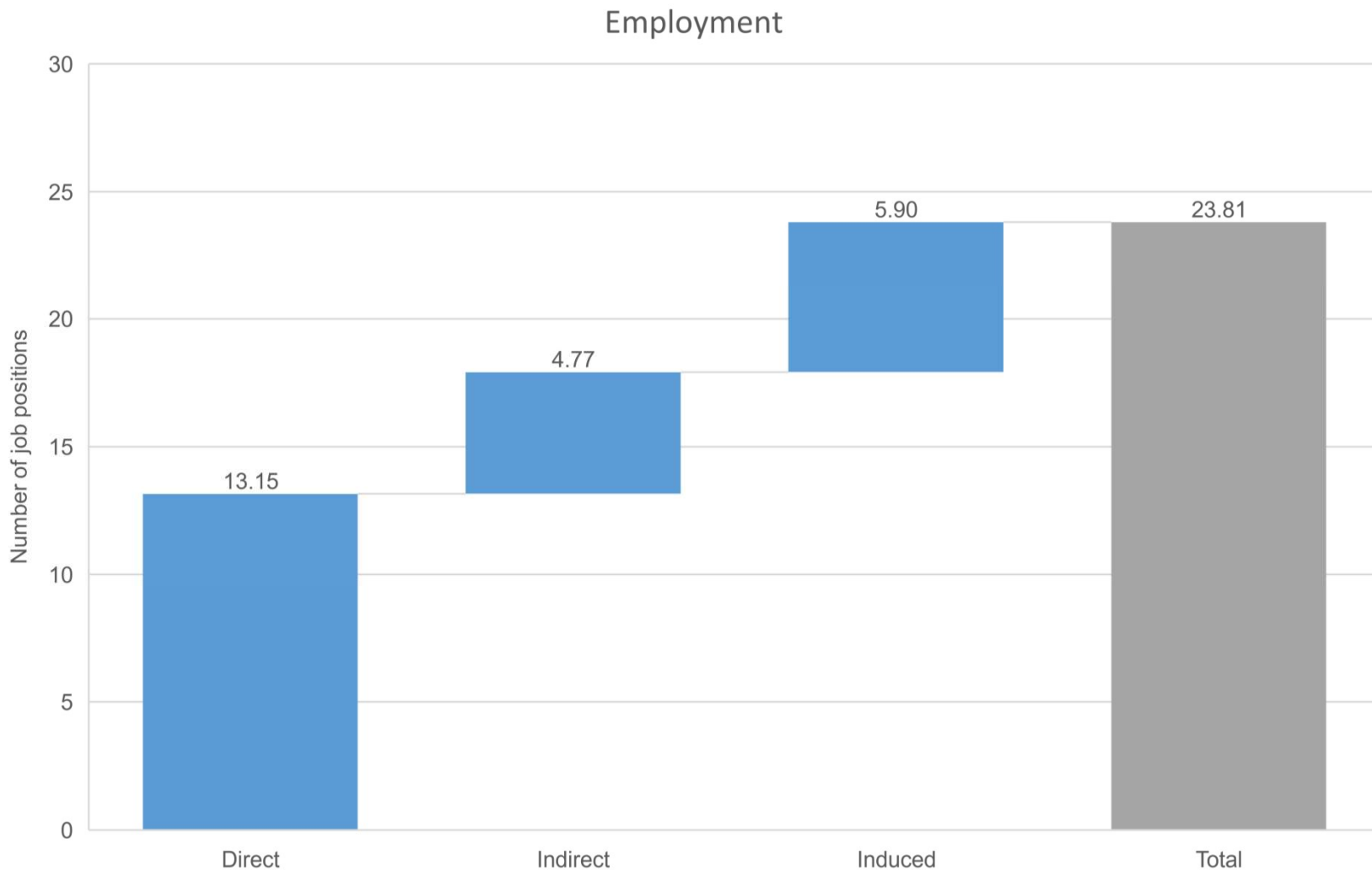
- Serve as a connecting link for the actors of the digital health data ecosystem
- Fill the functional gap in health data utilization
- Upgrade health services in the country
- Promote Research & Development in healthcare
- Create specialized jobs
- **Offer multiple benefits to the entire economy**
- Serve as a hub of scientific excellence and a pole of attraction for specialized scientific personnel from abroad

 For every €1 million investment in the composite sector, the country's GDP is boosted by €956 thousand.



Source: IOBE estimates

 Every €1 million investment in the sector creates 13 new job positions in the sector and 24 in the whole economy



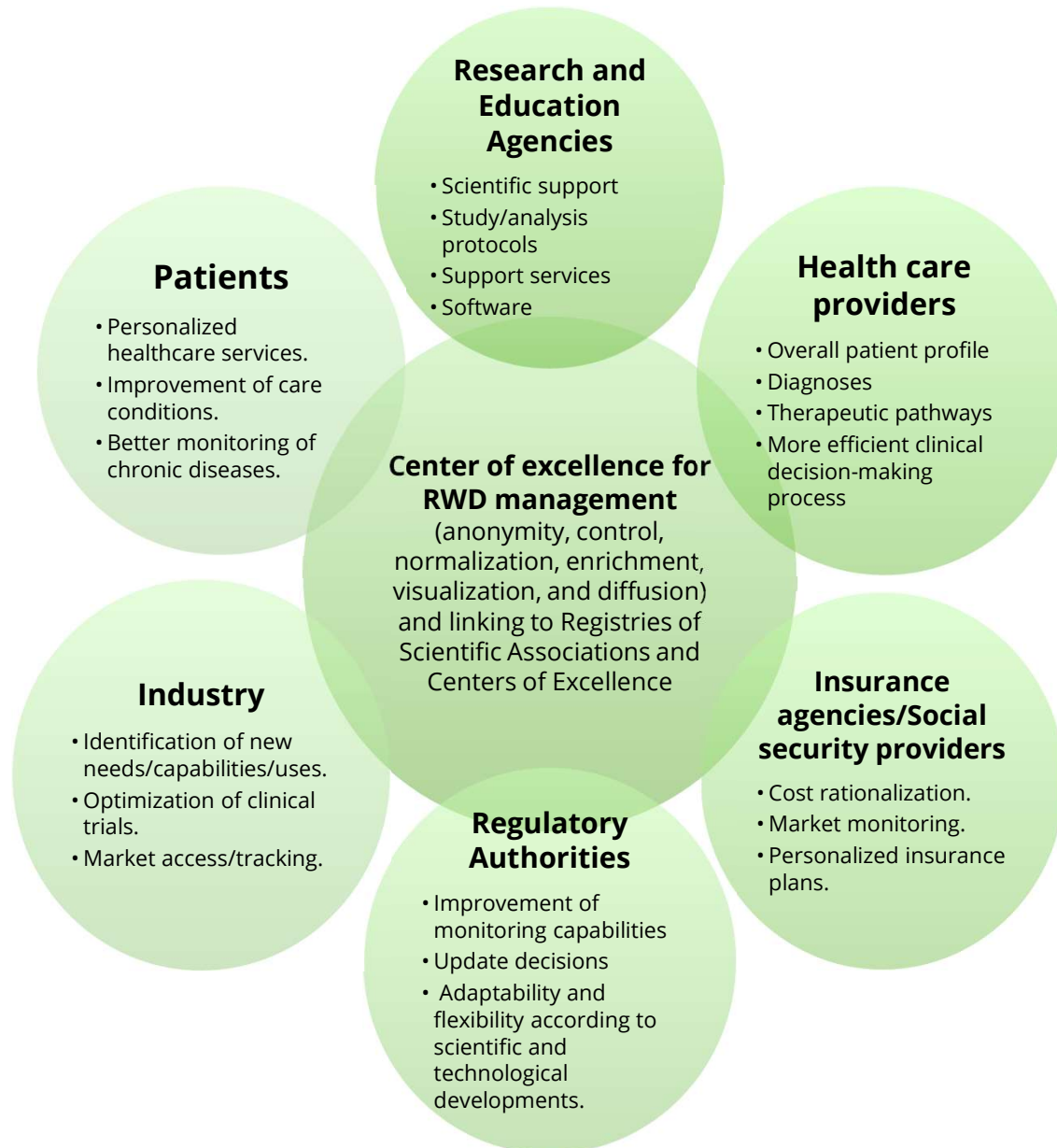
Source: IOBE estimates



The national strategy needs to be redefined

- ▶ Attracting appropriate **investment** is a key **prerequisite** for the digital transition of **healthcare** systems and the **Healthcare** sector.
- ▶ If health-related data is utilized, investments are channeled in two main directions:
 - ▶ Data **collection** and **storage**
 - ▶ Data **processing** and **utilization**
- ▶ Greece is in a **privileged position** regarding RWD collection as **collection/storage systems** have already been developed by multiple agencies, while strategic planning for their interconnection/interoperability is already in place.
- ▶ However, a significant **gap** in national strategic planning is related to the management and **exploitation of this wealth of available data** and the **leveraging of relevant investments** towards this field.
 - ▶ This **lack of a RWD utilization roadmap deprives** the country's health system and **economy** of **significant benefits**, as potential RWD applications are directly related to the **transformation/rationalization** of medical care, healthcare expenditure, and the **promotion of clinical research** and **innovation**.

The national strategy needs to be redefined



A framework of interventions to integrate RWDs into the country's digital health policy

Short term

- Integrate RWD/RWE into the country's digital transformation **strategy**.
- **Distinguish** strategic planning for **the utilization of RWD** from the rest of the digital health transformation actions of the National Recovery and Resilience Plan Greece 2.0.
- Introduce **RWD collection** from sources outside the wider health ecosystem as a **distinct mission** within an **industrial policy**.
- Invest in a national **public awareness** campaign on the benefits of digital health and the potential to provide advanced health services through the sharing and utilization of RWD.

Medium term

- Establish a **regulatory body** to control and ensure the sharing of health data, under the auspices of a public body.
- Channel **public funds** and attract **private investment** to maintain/upgrade existing RWD digital collection and storage infrastructure.
- **Establish a center of excellence** to promote research and innovation through the utilization of RWDs
- Support **private and public sector partnerships** to promote research on the collection and management of health data.
- Establish a **collaboration framework** between academic and research institutions and the private sector for the utilization of health data in order to promote medical research in the country.

Long term

- Record, **control**, and **evaluate** the **sharing** of health data and their **commercial exploitation**.
- Record the project's impact on citizens and **evaluate the results** in order to plan the next steps.
- **Document the added value** of RWD-RWE collection and utilization for citizens, clinical research, and the country's economy through detailed studies.
- Ensure a continuous flow of **government support** and **investment** aimed at **ensuring the quality** and responsiveness of the digital health and RWD ecosystem to technological developments.
- Take actions to **disseminate results** and the value of RWD-RWE to ecosystem stakeholders and the public.

Contact details

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