

Quarterly Report on the Greek Economy

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ΙΔΡΥΜΑ ΟΙΚΟΝΟΜΙΚΩΝ & ΒΙΟΜΗΧΑΝΙΚΩΝ ΕΡΕΥΝΩΝ

Overview of the report





The wave of recovery and the underlying currents in the Greek economy

- The global economy is recovering steadily; with high growth rates in some important areas.
- Assuming positive developments concerning the pandemic, it is expected that economic recovery will expand in the next months.
- In Europe, the recession in first quarter was milder than expected and the current projections support a stronger growth in 2021.
- Although the economies of the US and many Asian countries have shown great dynamism, Europe has not missed important positions in global trade, which remains strong.
- Fiscal and monetary policy interventions have reduced risks for weaker economies, preventing the pandemic from triggering a financing crisis.
- In this context, the Greek economy also has prospects for strong recovery. The recession in the first quarter was milder than initially expected and some activity indicators are moving up.
- For 2021, strong growth in Greece is expected, probably higher than 5%. However, the recession last year exceeded 8%. Overall, the new crisis, due to the pandemic, has hit the Greek economy harder than other European economies.



The wave of recovery and the underlying currents in the Greek economy

- Over the next five years, the growth rates of the economy can be strong, exceeding under conditions 3% annually. A number of factors can contribute to these developments, Several factors contribute to this. For example, financing costs which are expected to remain low due to central bank policies, reduced uncertainty, and the inflow of funds from the Recovery Fund and other EU programs.
- The large investment gap may gradually decline, as well as unemployment, thereby triggering growth and helping the economy to approach its medium-term production potential.
- Necessary conditions for growth to be high, as well as sustainable, are the following: The economy must become more competitive, and its structure must be strengthened. A key prerequisite is the implementation of substantial structural reforms in the public sector and certain markets.
- These conditions are necessary to fully exploit the wave of recovery after the pandemic and to revert the negative characteristics of the Greek economy (introvert production, inefficient public administration and low competitiveness).



International environment: faster recovery in 2021

- Differences across countries regarding the de-escalation of the **COVID-19 pandemic** and the economic activity prospects
 - In the first quarter of 2021, most developed economies and developing Asia (China) experienced a **recovery** or at least a milder recession **due to the increase in international trade**
 - Additional **support measures**, in developed economies, contribute significantly to halting the effects of the pandemic; however, they increase public debt
 - Heterogeneity in the **vaccination progress** across countries – **New outbreaks** of the virus in many countries
- **Q1-2021**: Annual rate of GDP change -0.4% in the OECD countries, up from -2.9% in the previous quarter. Milder recession than in Q1-2020 (-0.9%)
 - OECD forecast for **global growth of 5.8% in 2021** (1.6 percentage points higher than the December 2020 forecast) and growth of 4.4% in 2022



International environment: challenges in the medium term

Worldwide

- Speed of production and distribution of **vaccines** and **drugs**
- Treatment of **virus mutations**
- Differences in the **speed and quality of recovery** across countries → in correlation with **structural characteristics** (e.g., importance of tourism, exports)
- Restraint of **inflationary pressure**
- Gradual completion of policy interventions & **sustainability of private and public debt**

Europe

- Since the second half of 2021, implementation of the **European Recovery Fund**
- Implementation of a **consensual Brexit** with the EU



Greece: Significantly milder recession in Q1-2021; mostly due to the smaller decline in investment

GDP, Q1-2021: -2.3%, compared to -6.9% in the fourth quarter of 2020. Slightly stronger recession than the Eurozone average (-1.3%)

Most significant changes in the GDP components (first quarter):

- Small increase in investment (+1.0%), like a year ago (+0.6%); Exclusively from higher fixed capital formation (+8.6%).
 - Negative stock accumulation effect, -21% compared to last year
 - Increase in mechanical equipment-weapons systems (+€186 million or +16.1%), due to increased defense costs, in ICT Equipment (+€184 million or +39.1%) and Other Constructions (+€125 million or +10.7%)
- Reduction of household consumption by 4.9%, same as in Q4-2020, versus a marginal rise of 0.3% a year ago.
 - Smaller increase of public consumption (+4.9%) in Q1-2021, compared to the previous quarter (+7.3%). Larger, however, than a year earlier (+1.4%).
- Exports fell by 13.4%, after a 3.0% reduction in Q1-2020
 - Due to a sharp decline in services exports (-38.7%, from -6.3% last year). Resilience of goods exports (+8.2%, from +2.6% a year ago).



State Budget 2021: Below target in the first five months

- **State Budget Balance Jan.-May 2021: deficit of €10.8 billion, versus a target deficit of €9.8 billion**
- **Primary Balance: deficit of €8.1 billion, versus a target deficit of €7.2 billion**
- The balance worsened mostly because of the increase in expenditure (+€757 million over target):
 - More purchases of fixed assets than expected, mainly for defense systems (+€691 million)
 - Higher Public Investment Programme expenditure, by €1.82 billion, mainly because of interventions to support businesses and the self-employed (€1.59 billion).
 - Given support interventions of €11.4 billion by the beginning of June, achieving the expenditure goal for 2021 is a strong challenge. The initial target in the 2021 Budget was €7.55 billion.
- **Revenue was also below target (€249 million below target):**
 - VAT revenue was €384 million below target, excise duties revenue was €221 million below target
 - Despite the increase in current revenue by €346 million (+€209 million from the 5G licenses auction)



Trends in short-term activity indices

Industry

- Industrial production increased by 8.7% in the first four months of 2021, against a decrease by 3.4% a year ago
- Increase in the Eurozone as well, by 10.0%; versus a 11.4% decrease in 2020

Construction

- Production continued to decline in the first quarter of 2021, by 5.6%, following a decline by 6.2% a year ago
- Large decrease in Construction Projects (-15.1%); increase in Civil Engineering Projects (1.6%).

Tourism

- Turnover continued to decrease in the first quarter of 2021: 59.7% decline, after a 6.8% decrease in the first quarter of 2020.

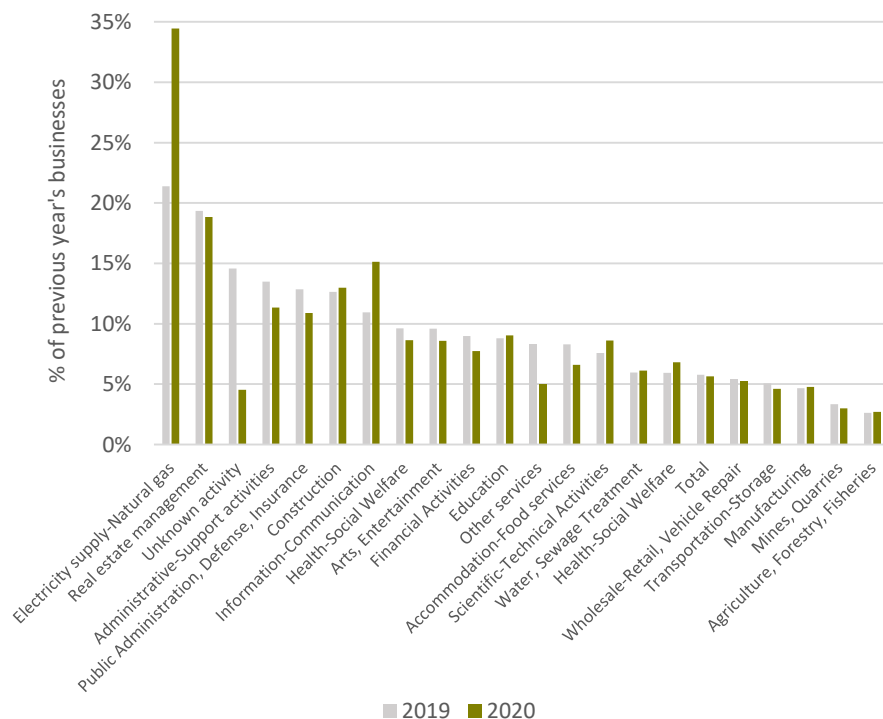
Retail trade

- Turnover increased by 5.4% in the first quarter of 2021. It decreased by 4.0% in the first quarter of 2020.

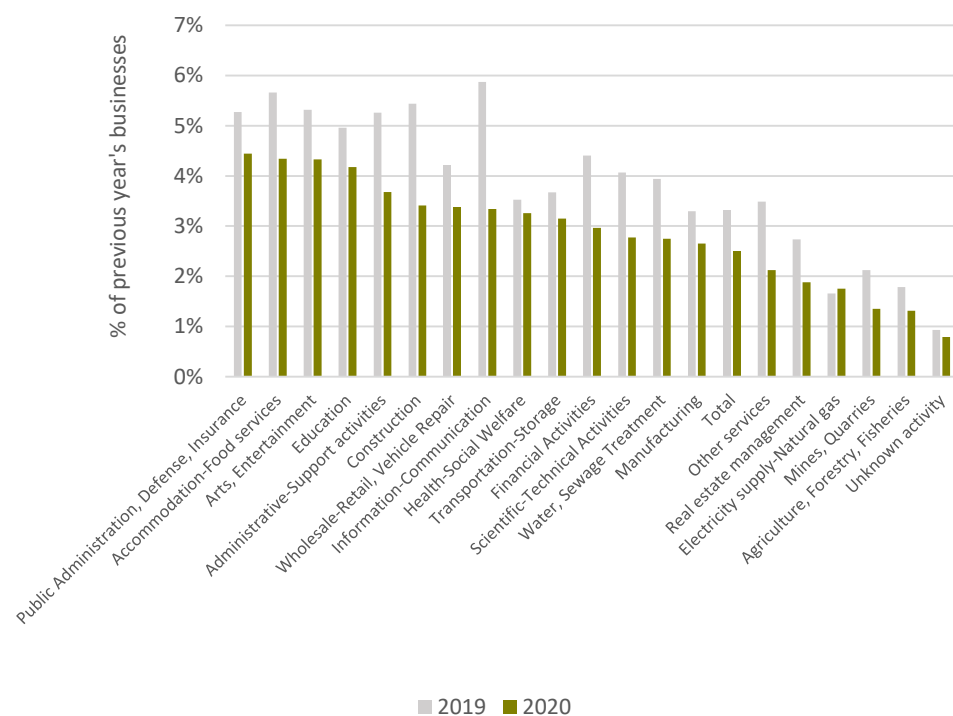


The support measures had a positive effect on entrepreneurship. The number of start-ups remained stable, while business closures declined in 2020.

Start-ups per industry, as a % of existing businesses, in 2020



Business closures by industry, as a % of existing businesses, in 2020



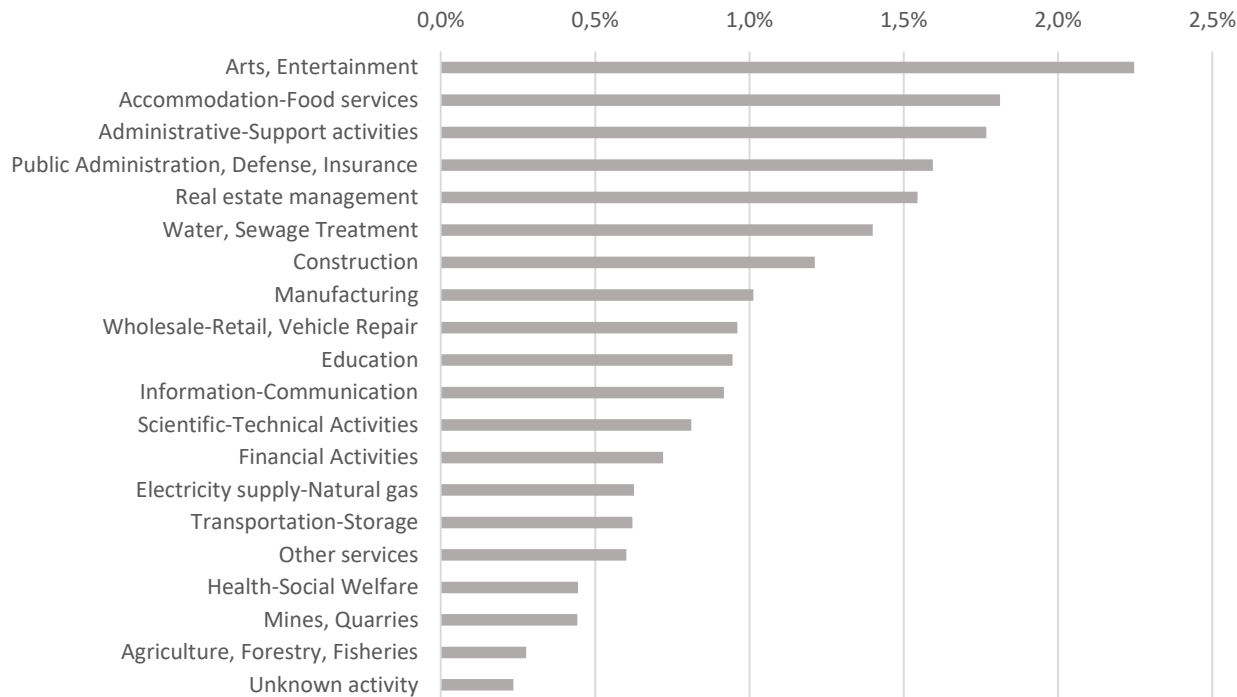
Source: ELSTAT, Data processing: IOBE

- 84.1 thousand start-ups in 2020; the same number as in 2019. Large fluctuations between quarters, depending on the dynamics of the pandemic: y-o-y rise in the first and third quarters, fall in the second and fourth quarters
- 22.7% fewer business closures last year, 37.3 thousand in total. Improvement of the startups - closures balance from 35.9 thousand to 46.7 thousand
- The business support measures reduced uncertainty, thereby encouraging start-ups and preventing closures
- The industries with the largest increase in the number of start-ups (as a % of existing businesses) were Electricity supply-Natural gas, Real Estate Management and Information-Communication.
- Accommodation-Food services, Arts and Education were the industries with the largest increase in the number of closures, reflecting the impact of the suspension of activity in certain industries because of the pandemic



Switch of activity by existing businesses even to industries where restrictions to activity have been imposed

Companies that changed activity, by new industry of activity (% of existing businesses)



Source: ELSTAT, Data processing: IOBE

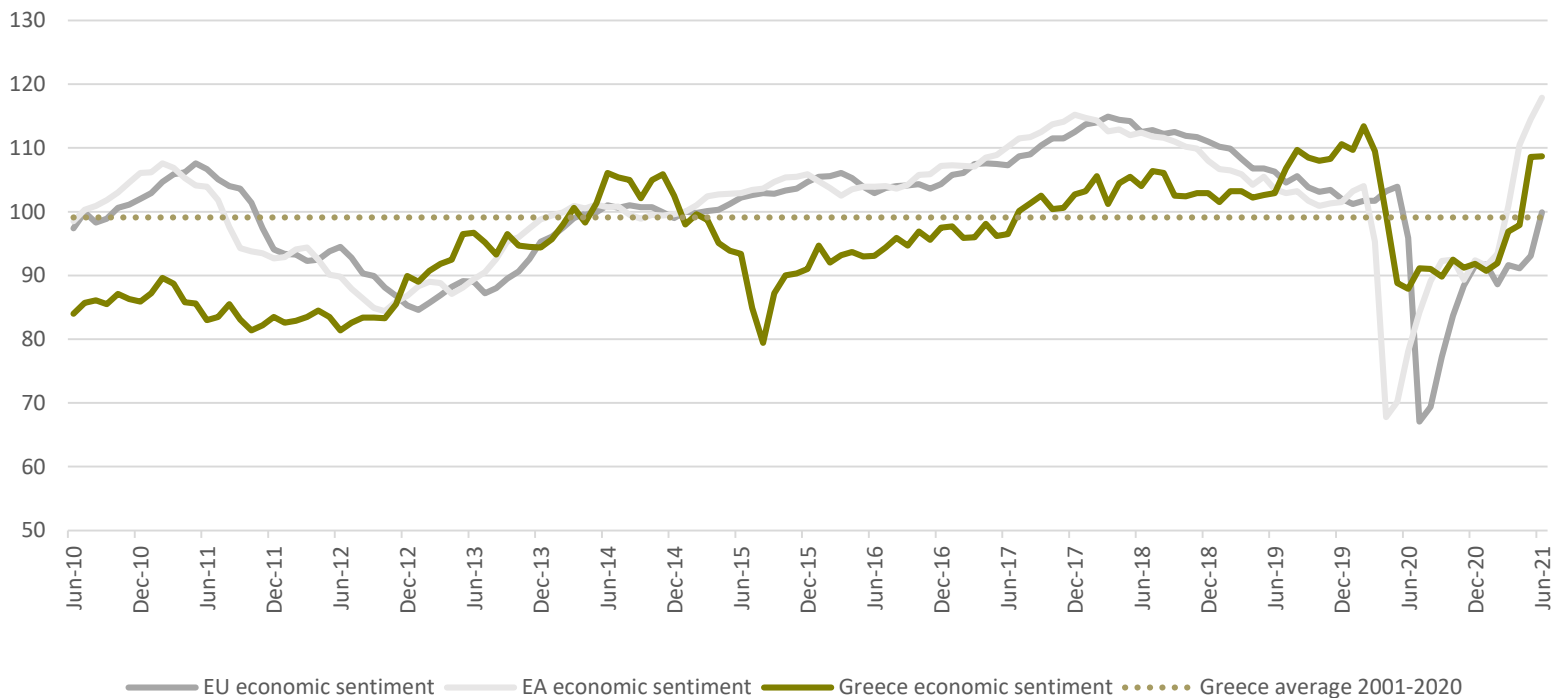
- Switching of activity was proportionally higher towards Arts - Entertainment, Hotels-Restaurants and Administrative-Support Activities
- Opportunities in sectors hit by the health crisis?



Significant increase of the Economic Sentiment Indicator in Greece in the second quarter of 2021 (105.1 from 93.2 units in the previous quarter). At pre-pandemic levels.



Economic Sentiment Indicator

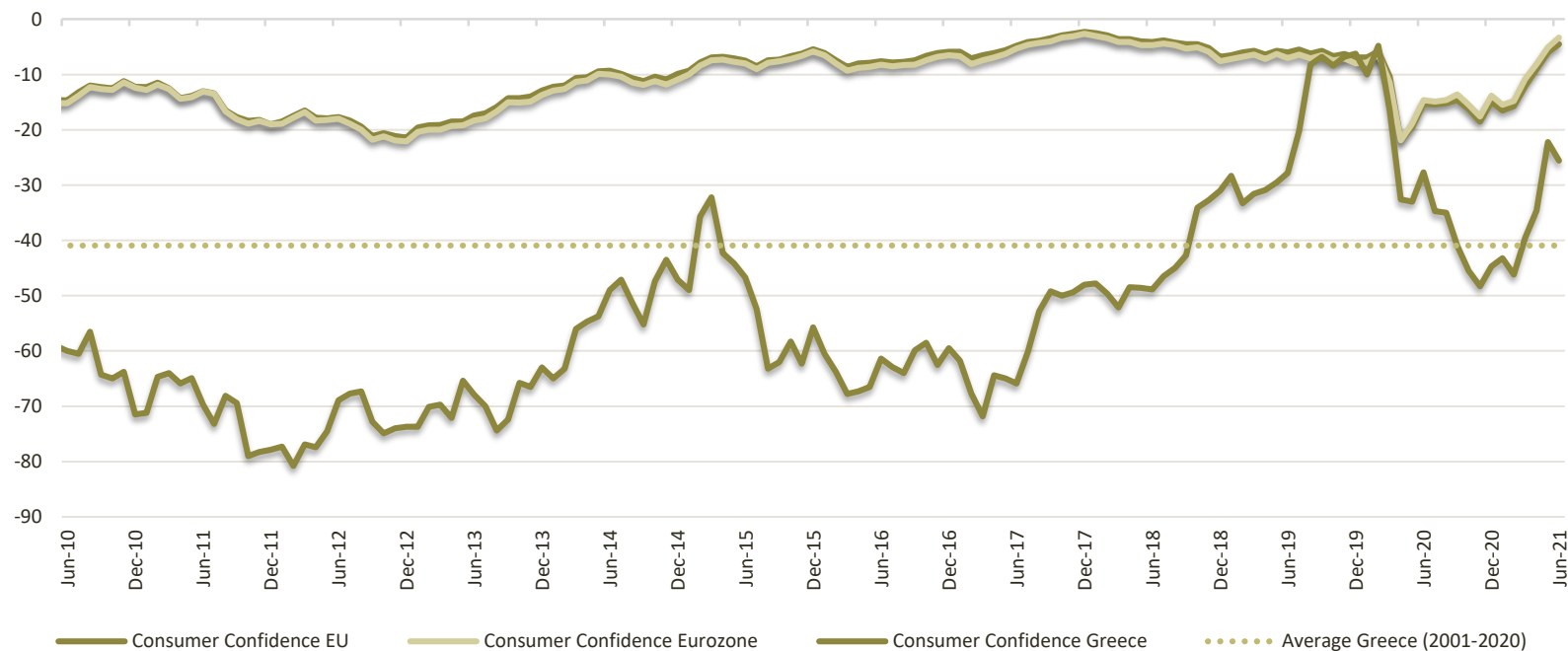


Sources:: IOBE, European Commission



Significant Consumer Confidence Indicator rise the second quarter of 2021 (-27.5 units from -43.0 units in the previous quarter)

Consumer Confidence Index

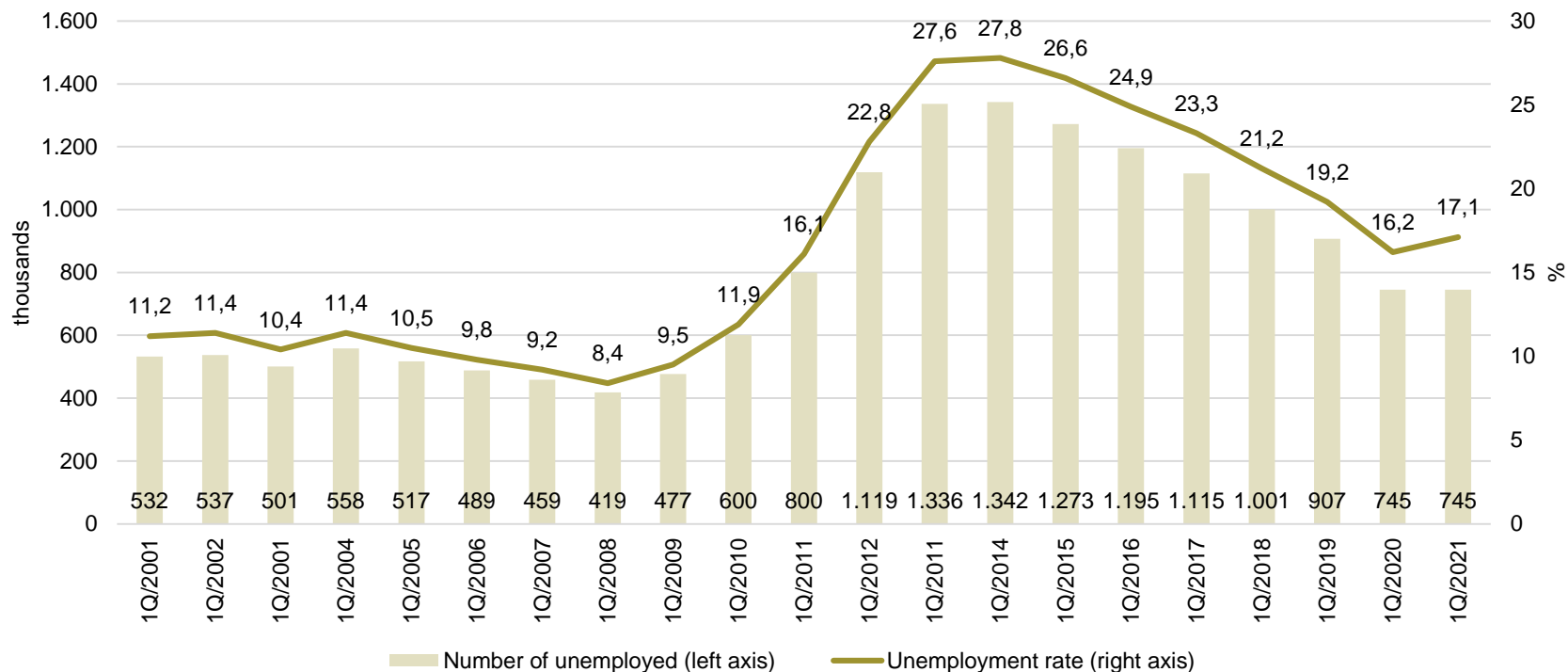


Sources:: IOBE, European Commission



Y-o-y unemployment rise for the first time since the first quarter of 2014, due to a reduction in the labor force

Number of unemployed and unemployment rate in Greece



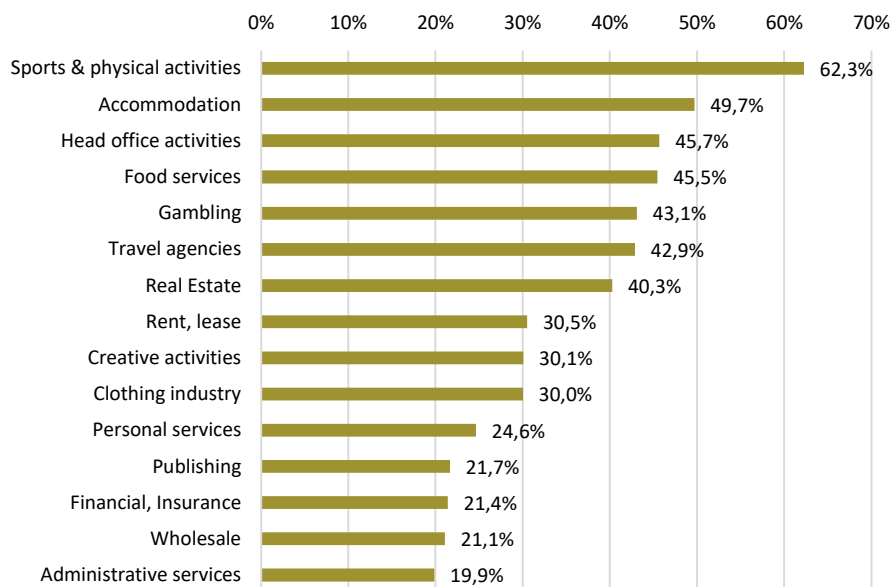
Source: ELSTAT

- The unemployment rate stood at 17.1% in Q1-2021, up from 16.2% in Q1-2020. The rise came almost exclusively from the labor force reduction (-227.2 thousand), not from an increase in unemployment (+0.3 thousand).
- Employment fell in 15 sectors. Examples: Tourism (-135.9 thousand), Wholesale-Retail (-53.3 thousand), Arts-Entertainment (-22.1 thousand), Education (-21.7 thousand).
- Employment increased in 6 sectors. Examples: Public administration (+38.9 thousand), Professional-Scientific-Technical activities (+34.3 thousand), Primary sector (+19.6 thousand).

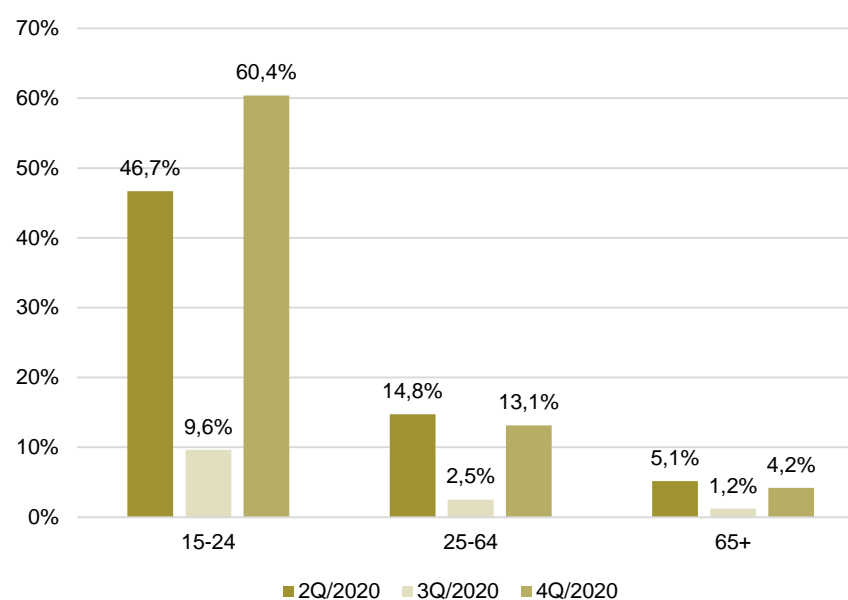


Effects of the measure of suspension of employment contracts on employment during 2nd- 4th quarter 2020

Suspensions from work by industry (as a % of employment in the industry)



Suspensions from work by age (as a % of employees of the same age)

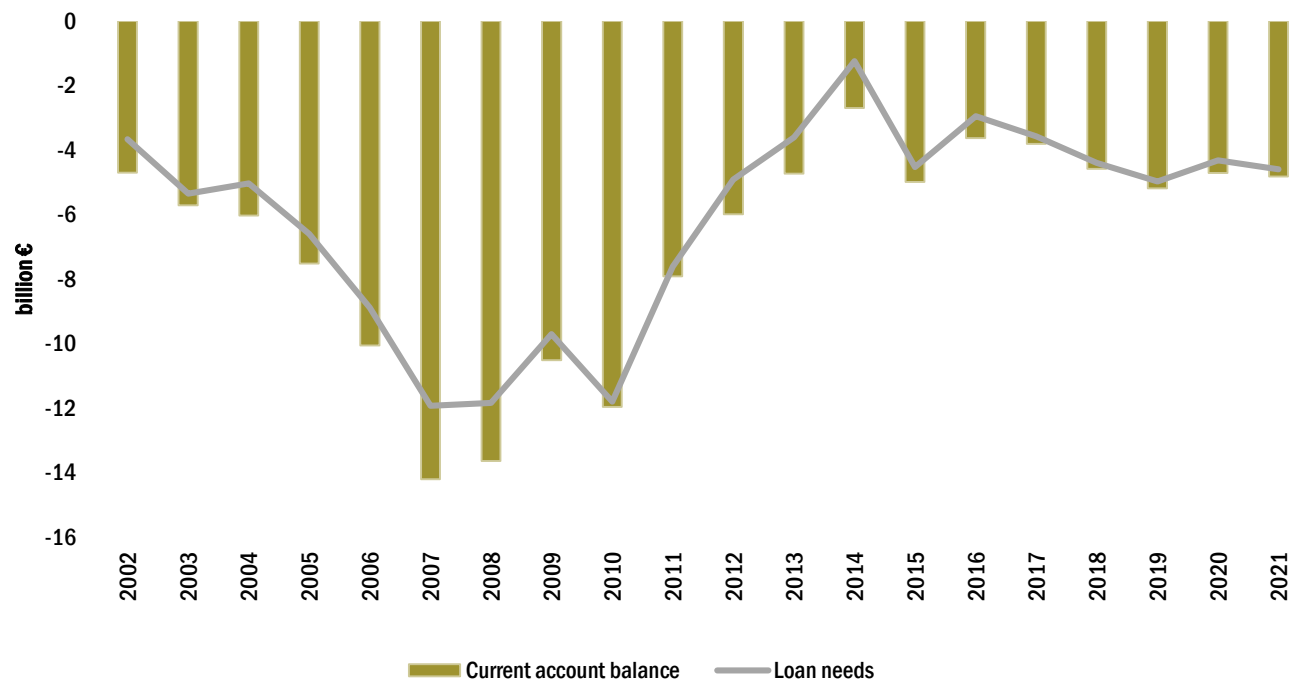


Source: Ergani system

- On average, 11.0% of employees (425.4 thousand) were put to work suspension
- **Women** (13.1% on average) and persons **aged 15-24** (38.9%) have the highest rates of suspension from work in terms of gender and age respectively
- The implementation of the measure had larger impact on **island regions and large urban centers**: South Aegean (14.5%), Attica (13.8%), Ionian Islands (12.6%), Crete (12.2%), Central Macedonia (11.1%)
- Much higher rate of work suspensions for **part-time workers** (58.7% vs. 5.8% for full-time workers) → the suspension remuneration is defined according to the days of suspensions, not based on working hours
- Activities of the **services sector** had the highest rates of work suspensions: Sports & physical activities (62.3%), Accommodation (49.7%), Head office activities (45.7%), Food services (45.5%), Gambling (43.1%)



Small increase of the current account deficit in the first 4 months of 2021, to €4.8 billion from €4.7 billion in 2020



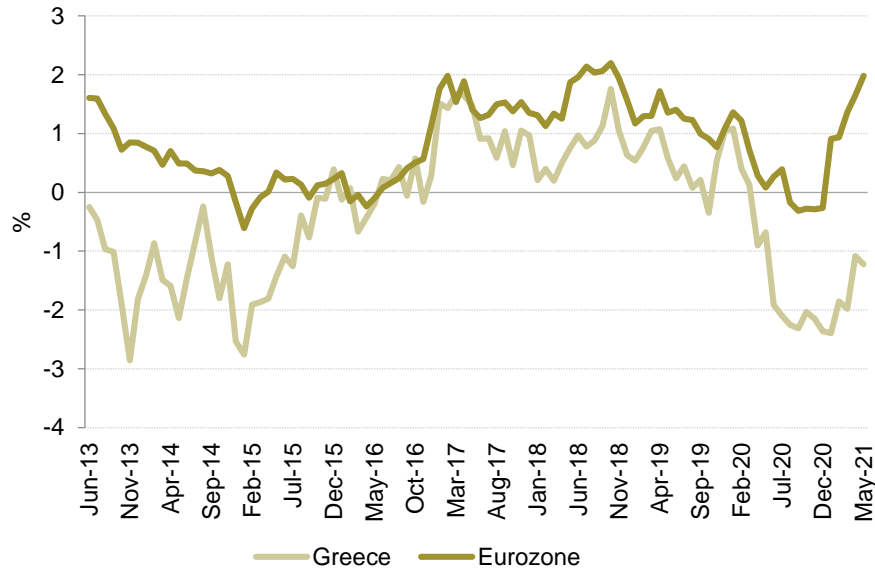
Source: BoG

- Deterioration in all balances apart from the primary incomes balance
- Significant increase in exports of other goods (pharmaceuticals, basic metals) and imports of other goods (computer equipment, transportation equipment)
- Increase of fuel exports by 26%, stabilization of their imports
- Decrease by 6.2% in Services receipts, with a 79.3% decrease in tourism receipts

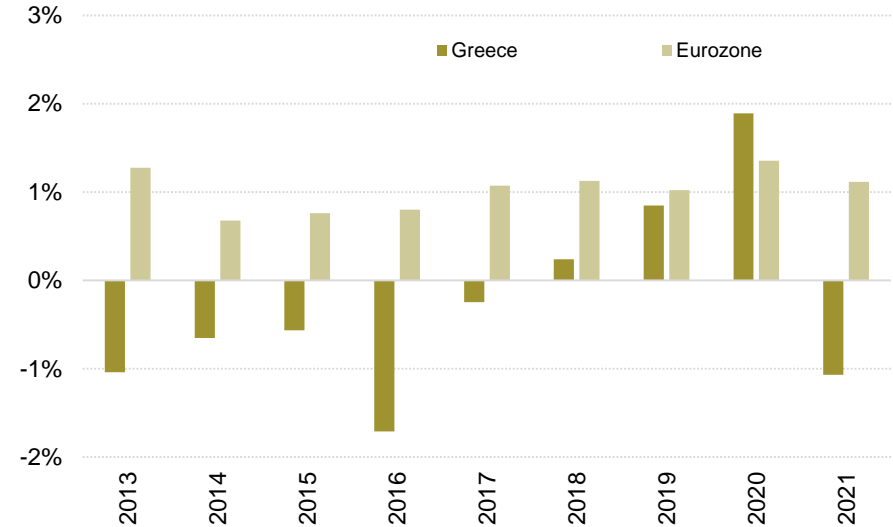


Deflation in the first five months of 2021, mostly due to indirect taxation

Harmonized inflation



Harmonized CPI without energy products and with fixed taxes



Sources: ELSTAT, Eurostat

Eurozone: Higher inflation in the first five months of 2021, compared to a year ago: 1.4% from 0.7%

Greece: Negative rate of change during January-May 2021: -1.7%, versus 0.0% a year ago

- **Negative effect** of domestic demand (-1.1%) and indirect taxes (-0.9%). Small positive effect of energy goods (0.2%).
- **Producer Price Index** (January - April 2021): 4.1% increase, versus a 5.3% decrease a year ago, mostly due to coal and lignite prices



The pandemic weakens, but there is still uncertainty

Steady decline in the number of cases in Greece. Extension of the vaccination to more age groups.

- Lifting of restrictions, revival of economic activity
- But also, gradual completion of support interventions, following their significant increase during the first semester

The international tourist season began earlier this year than in 2020 (14/5 vs. 1/7)

- Subdued activity until March, due to prolonged health protection measures
- Increased uncertainty because of the virus mutations; possible resumption of health protection measures during the summer

International trade increase; with the most developed countries and China at the forefront

- Exports of products and the Manufacturing sector are favored
- Significant increase in commodity prices, mainly oil

The implementation of the European Recovery Fund began

- The rapid utilization of such an amount funds is an unprecedented challenge; in combination with the NSRF 2021-2027, the National Development Fund 2021-2025 etc.

The end of the pandemic is drawing near, but the transition to a new equilibrium will take time and it is not certain for everyone...



The role of banks in financing the real economy is crucial

Positive developments

- Consistently high liquidity supply to banks, at low cost
- Systematic increase of private deposits
- Low cost of new public and private sector lending

Challenges

- NPLs under stagnation in Q1-2021, after 5 years of continuous decline
- Pressure on profitability due to low interest rates
- Banks' assets exposure to government bonds has increased

Priorities

- Reduction of NPLs, both organically and through the "Hercules 2" scheme, in order to increase the lending capacity of banks.
- Balanced development of bank assets, between the public and the private sector

- The increase of bank financing to businesses continues, albeit at a declining pace, while the credit contraction to households continues unabated.
- Inflows from the European Recovery Fund are a key opportunity to leverage private funding for productive investment



Challenges and opportunities ahead

Greater emphasis on reforms and less on support measures in order to achieve transition to recovery

❑ Public health protection must continue

❑ Implementation of reforms (taking advantage of the resources from the RRF)

- ✓ social security system
- ✓ bankruptcy code
- ✓ labor market
- ✓ digital transformation
- ✓ circular economy

❑ Sustainable fiscal management

❑ Consolidation of the banking system's assets



Macroeconomic forecasting process

Baseline scenario:

- No outbreak of the pandemic in the second half of 2021 (e.g. like the one in March). There might be smaller escalations however, with respective health protection measures.
- Much more fiscal transfers than initially predicted because of the pandemic.
- Gradual rise of tourism. Possible big escalation in the middle of the third quarter. Longer tourist season than last year: receipts at 40-45% of the 2019 level, up from 24% in 2020
- Recovery Fund resources: approximately €8 billion, which exceed the target in the 2021 Budget (€5.5 billion)
- Faster recovery of the Eurozone: $\approx 4.3\%$ instead of 3.8%

Alternative scenario:

- New large outbreak of the pandemic in the second half (e.g., due to powerful mutations, significant slowdown in vaccinations) → implementation of strong restrictive measures
- Even more fiscal transfers, to halt the effects of the measures
- Smaller increase of tourism due to the new outbreak (especially if it takes place during the third quarter), shorter extension of the tourist season: revenue at 35% of the 2019 level
- Recovery Fund resources: at the level of the 2021 budget target (€5.5 billion) or slightly higher
- Eurozone recovery: $\approx 3.5\%$



Macroeconomic forecasts for 2021

Baseline scenario

- Public consumption: +3.0% to +4.5%
- Private consumption: +3.5% to +4.5%
- Investment: +14% to +17%
- Exports: +12% to +15%
- Imports: +10% to +13%
- **Growth: 5.0% to 5.5%**
- Unemployment: 16.0% - 16.3%
- Inflation: 0.3% to 0.6%

Alternative scenario

- Public consumption: +5.0% to +6.0%
- Private consumption: +1.0% to +2.0%
- Investment: +8% to +10%
- Exports: +7% to +9%
- Imports: +7% to +9%
- **Growth: \approx 2.5% to 3.0%**
- Unemployment: 17.0 – 17.3%
- Deflation: -0.1 to -0.3%

Special study

INNOVATION OF VERY SMALL, SMALL AND MEDIUM-SIZED ENTERPRISES IN GREECE AND GERMANY

Research project carried out by IOBE in collaboration with the German Institute for Economic Research (DIW Berlin)

NATIONAL ACTION: "BILATERAL AND MULTILATERAL R&T COOPERATIONS" - Bilateral and Multilateral R&T Greece-Germany Cooperation (GSRT),
Operational Program "Competitiveness, Entrepreneurship & Innovation".

More information about the project: <https://innomsme.gr/>



Scope of the overall project and of the specific study

Goals of the overall project

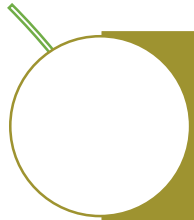
- Analyze the link between innovation and productivity growth in very small, small and medium-sized enterprises in Greece and Germany
- Analyze the impact of R&D investment on growth, innovation and productivity for small and medium-sized enterprises in Greece and Germany
- Analyze the role of a company's intangible assets on its growth and productivity
- Analyze the relationship between the institutional framework and innovation in obstructing the diffusion of knowledge in companies in Greece and Germany.

Goals of the specific study

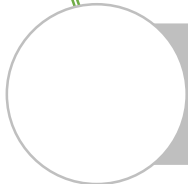
- Identify the driving forces of the emergence of fast-growing companies in economies affected by the economic crisis, like Greece, with particular emphasis on the role played by the following factors:
 - ✓ corporate strategy
 - ✓ research and development capabilities
 - ✓ human capital



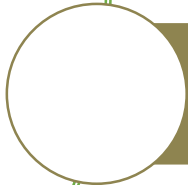
Why is it important for policymakers to focus on high-growth businesses?



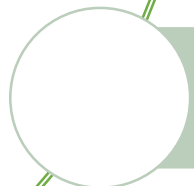
The recent economic crisis has highlighted the need not only for start-ups, but also for high quality business ventures, that could become viable even under adverse economic conditions. Such businesses can boost growth and employment, even during crises.



An increase in the number of typical start-ups is not a viable solution for boosting economic growth and job creation. Typical start-ups have difficulties growing and surviving.



It would be more beneficial for an economy if a critical mass of high-growth companies operated, instead of a very large number of typical start-ups that are difficult to grow and survive.



Quality entrepreneurship in fast-growing companies is likely to be more resilient to recessionary economic cycles; it is also a major driver of economic growth.



Possible determinants of gazelle businesses rise

Corporate Strategy

- Interdisciplinary Expansion
- International geographical dispersion
- Mergers & Acquisitions

Human Capital

- Employee educational level
- Employee training programs

Research & Development Skills

- R&D department
- Research collaborations



- Econometric analysis using data for 1500 Greek businesses that participated in two waves of a field research. The research was conducted in 2011 and 2013 by IOBE and LIEE, on behalf of SEV.
- For a business to be classified as fast growing it must be in the top 10% of the business growth distribution.

Descriptive characteristics of high growth businesses:

- ✓ Businesses that have grown during the 2-year period (2011-2013) by at least 37% (based on the relevant employment index) or have created at least 20 jobs (based on the absolute employment index).
- ✓ Companies that increased their turnover in the 2-year period by at least 27% (based on the relevant sales index) or by 2,825,589 euros (based on the absolute sales index).



Econometric results for the determinants of business gazelle creation

	1st specification (Relative growth based on employees)	2nd specification (Absolute growth based on employees)	3rd specification (Relative growth based on sales)	4th specification (Absolute growth based on sales)
<i>Corporate Strategy</i>				
Interdisciplinary expansion	0.0168*** (0.0059)	0.0111* (0.0060)	-0.0054 (0.0081)	-0.0090 (0.0068)
International Geographical Dispersion	0.0507** (0.0240)	0.0685*** (0.0230)	0.0718*** (0.0287)	0.0464* (0.0273)
Mergers & Acquisitions	0.0067 (0.0065)	0.0071* (0.0042)	0.0104 (0.0081)	0.0045 (0.0076)
<i>Human capital</i>				
Employee Training Level	-0.0011 (0.0007)	-0.0009 (0.0008)	0.0015** (0.0007)	0.0019*** (0.0007)
Employee Training Programs	0.0092 (0.0174)	0.0338* (0.0197)	0.0141 (0.0218)	0.0038 (0.0234)
<i>Research and development skills</i>				
R&D department	0.0462** (0.0212)	0.0230 (0.0190)	0.0313 (0.0244)	0.0289 (0.0216)
Research collaborations	0.0422* (0.0252)	0.0335 (0.0224)	-0.0560* (0.0355)	-0.0702** (0.0296)
<i>Control variables</i>				
Business size	-0.0470*** (0.0068)	0.0222*** (0.0056)	-0.0266*** (0.0072)	0.0523*** (0.0067)
Liquidity constraints	-0.0028 (0.0053)	-0.0011 (0.0052)	-0.0123** (0.0062)	-0.0042 (0.0057)
<i>Number of observations</i>	1335	1335	980	980

* Statistically significant at 10% level ** Statistically significant at 5% level. *** Statistically significant at 1% level
Typical errors are shown in parentheses. Sectoral pseudo-variables included in all the specifications.



Key study conclusions

Businesses' efforts to grow through internationalization is not just a defense strategy when domestic demand is low, but a substantial growth strategy

Small-scale, fast-growing companies increase their R&D activity during economic crises and turn to cross-sectoral expansion as a strategy for survival and employment growth, in order to offset uncertainty and increased risk in their core business area.

Large, fast-growing companies can significantly increase their workforce through international dispersion, but also through mergers and acquisitions; under adverse economic conditions, opportunities to acquire vulnerable companies that hold valuable and non-replicable assets increase.

Large, fast-growing companies may also choose to hire low-skilled staff and invest in employee training.



Next steps

1) Analyze the correlation between R&D, innovation, and productivity, in very small, small and medium-sized businesses in Greece.

- ✓ This will be the first attempt in the literature to examine how a persistent shock causes major economic imbalances in moderately innovative economies

2) Examine "if" and "how" SME growth can improve in terms of sales by adopting different forms of intangible ICT capital.

- ✓ It will also be a first attempt to assess whether the relationship between the adoption of intangible ICT capital and SMEs' business growth, differs across firms with different growth potential.

These results are valuable; they could provide insights to companies and policymakers, especially in the context of the current health and economic crisis that has harmed the business system in Greece.

Thank you for your attention!



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