

Investor

FACTSHEET



LIFE SCIENCES

in Greece

The life sciences industry in Greece, is considered one of the most crucial sectors for the economy, with significant economic output, contribution to employment, and gross added value to other industries. The key segments of interest in Greece refer to the pharmaceutical and medical devices markets.



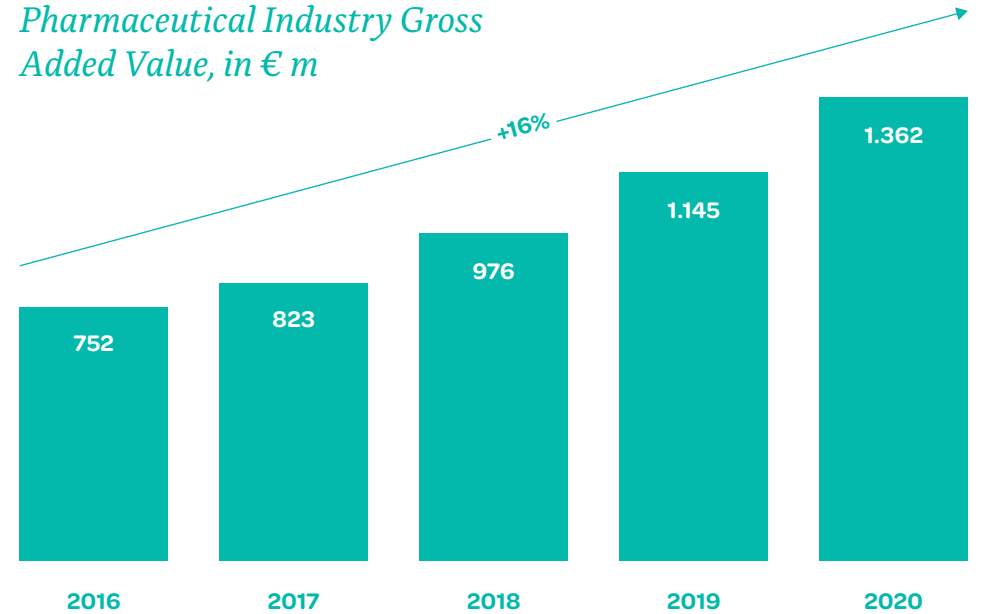
Focusing on pharmaceuticals, there are significant opportunities to invest in the following areas:

- Increased penetration in both sales and productions for generics, allowing for enhanced profitability and increased sales (both domestic and exports).
- Formulation of alliances in production, leveraging local manufacturing infrastructure and capabilities for outsourcing.
- Investing in R&D, either in pre-clinical research or clinical trials and data centers. Such investments are appealing due to the availability of highly specialized personnel and maturing infrastructure of Greece.

State of Play

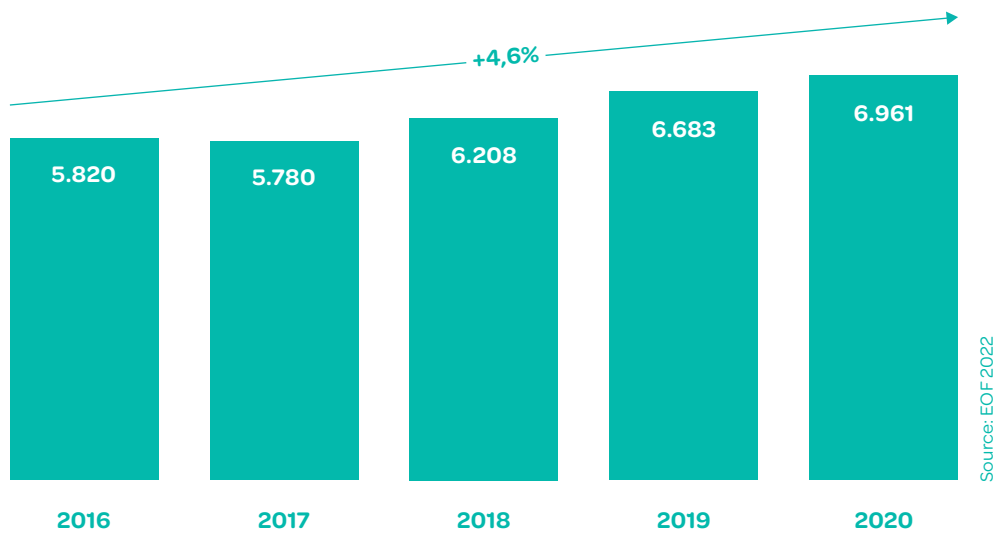
The Greek Pharmaceutical Industry is considered a strategic national contributor for the economy, as the industry's GVA approximates € 1.4 b for 2020, growing at a CAGR of 16%.

Pharmaceutical Industry Gross Added Value, in € m



Testifying to the dynamism of the industry, pharmaceutical sales have been steadily growing with a CAGR of 4.6%, reaching ~ € 7 b in 2020

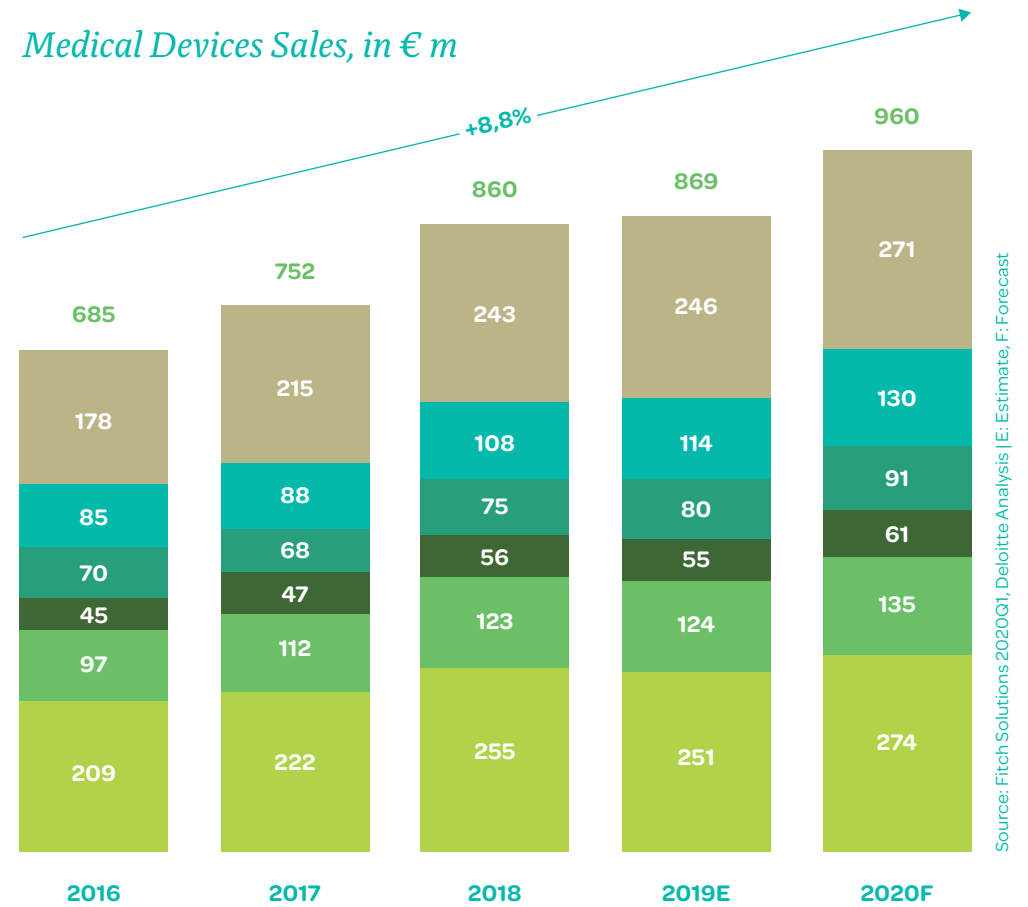
Pharmaceutical Sales, in € m



With the local industry operating in small scale, the country relies in imports (Trade balance deficit at € 590 m for 2018 according to 2020 MedTech Europe).

Nevertheless, the market overall is growing by a CAGR of 8.8%, driven primarily by increased Orthopedics & Prosthetics and Others Segments penetration.

Medical Devices Sales, in € m



- Consumables
- Dental Products
- Orthopedics & Prosthetics
- Diagnostic Imaging
- Patients Aids
- Others



Key Trends / Opportunities

Enhanced Generics Penetration

Low penetration of generics in the Greek market compared with EU benchmark, especially given the significantly increased price (+38% vs EU), indicates the potential for enhanced profitability for the industry, for both domestic sales, as well as increased exports.

Sales Mix By Type of Pharmaceutical, 2020

GR



EU-18

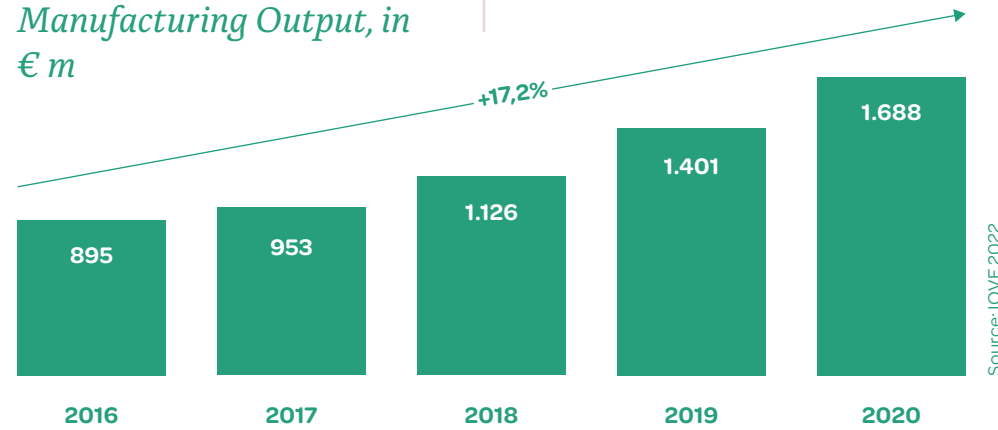


■ On-Patent
 ■ Off-Patent
 ■ Generics
 ■ Other

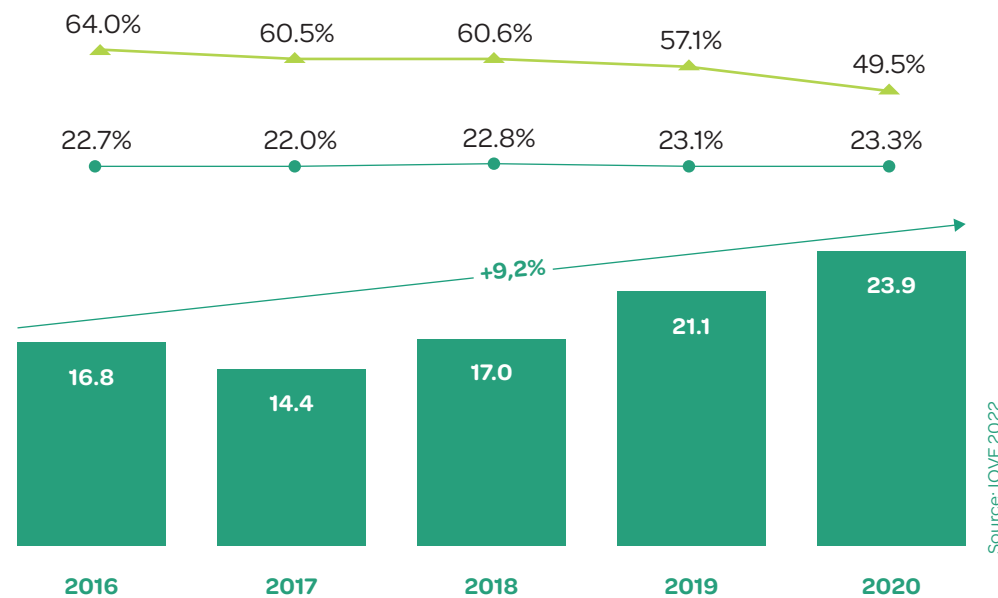
Price Per Unit, in €	GR	EU-18
On-Patent	0.94	2.02
Off-Patent	0.29	0.40
Generics	0.18	0.13



Pharmaceutical Manufacturing Output, in € m



FTEs in Pharmaceutical Manufacturing, in 000'



- ▲ % of FTEs with tertiary education (Pharma)
- % of FTEs with tertiary education (Other Manufacturing)

Pharmaceutical Manufacturing output has been steadily increasing, growing at a CAGR of 17.2% in order to support the increased domestic sales and exports. In contrast, the number of the workforce in pharmaceutical manufacturing has been increasing with a slower rate (9.2%), indicating enhanced efficiency in production. Finally, the increased % of workers with tertiary education (compared to other manufacturing activities) is testament to the high caliber workforce active in the industry.

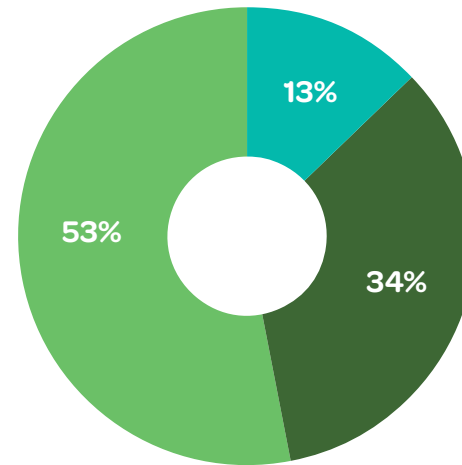


Key Trends / Opportunities

Promoting Joint Ventures in Production

Currently, 13% of the consumed pharmaceutical products is manufactured locally, outsourced by international firms. Given the high contribution of imported products, combined with the future plan of domestic and international players to scale up production (more than 10 new production facilities have been announced), international firms could leverage domestic excess capacity to boost local production.

Consumption Mix by Manufacturing Origin



■ Imported ■ Domestic
■ International LMP

Source: IOVE 2022



Despite significant increase in recent years, R&D expenditure remains below EU benchmarks. However, the total number of new patent applications and grants is increasing at a faster rate, compared to the expenditure, indicating an efficient research output. At the same time, there is a notable increase of the conduct of clinical trials (key focus in Stage II & III) within the Greek healthcare system.

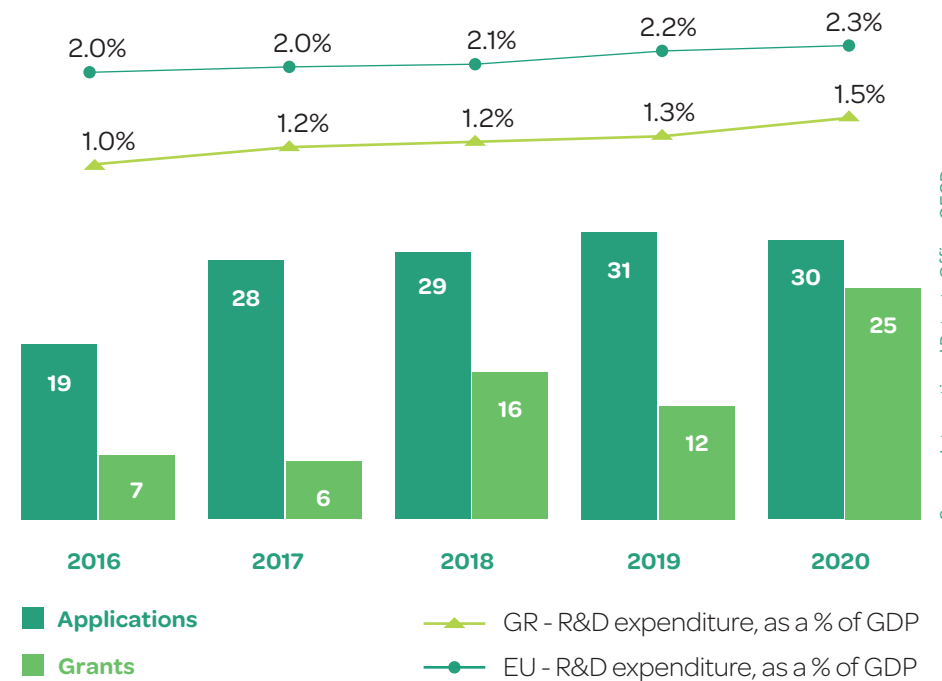
Opportunities in R&D

Given the efficient research output, supported by quality scientific and medical talent, as well as a maturing medical infrastructure and a vibrant innovation ecosystem, there are significant opportunities for R&D Investments.

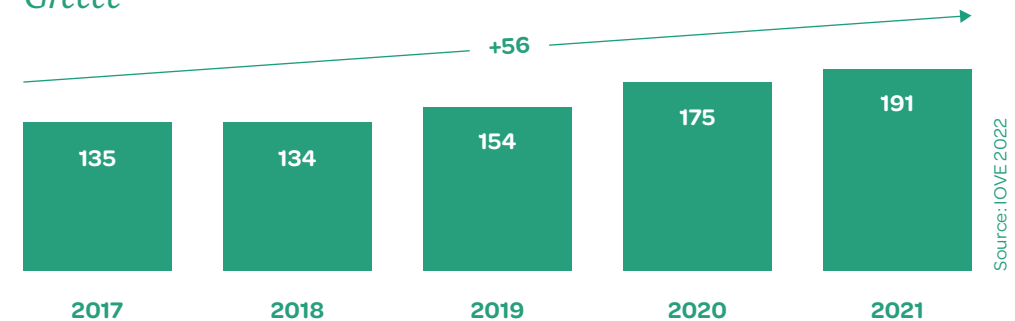
Recent initiatives and regulatory reforms have been further facilitating the case for investing in R&D. Greece is heavily promoting digitalization initiatives across the healthcare system (to be funded by the Greek RRP), further enhancing the potential for clinical trials. Furthermore, the country has set as a strategic priority the aim to become a regional hub for data storage and colocation, sparking a strong investment cross-industry momentum with major domestic and international companies (incl. pharmaceutical) investing heavily in data centers and research hubs. Finally, recent EU regulatory developments are focusing on harmonizing clinical trial regulations across EU countries and governance of secondary health data usage (European Health Data Space) with key objectives to streamline processes across countries, enabling cross-country collaboration, and further foster innovation.

Source: Desk Research

R&D Spending, as a % of GDP and # of Medical, Biotech & Pharmaceutical Patent Applications & Grants



of Clinical Trials in Greece



Greek Unique Benefits - Key Considerations

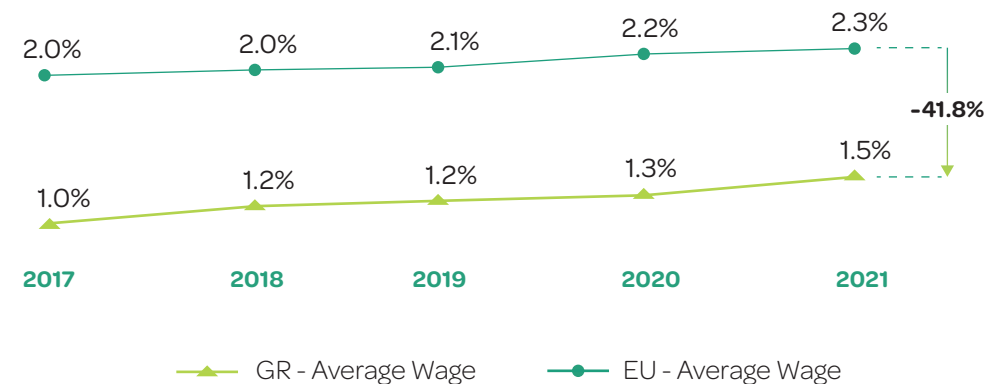


A Highly Skilled & Cost efficient Workforce

Greece is scoring overall in the 16th place (out of 132 countries) in Human Capital & Research dimension of the Global Innovation Index for 2021, backed by the almost universal enrollment of the population in tertiary education, high % of graduates from science and engineering fields (~23% - ranking in 21st position), which is eventually translated in a high number of researchers per capita (ranking in 34th position). More specifically, there were approximately ~120k enrollments for BSc, ~41k for MSc and ~20k for PhD in 2019 (Source: Hellenic Statistics Authority), in relevant to life sciences operations field (varying from medical and scientific areas to engineering, computer science and business studies).

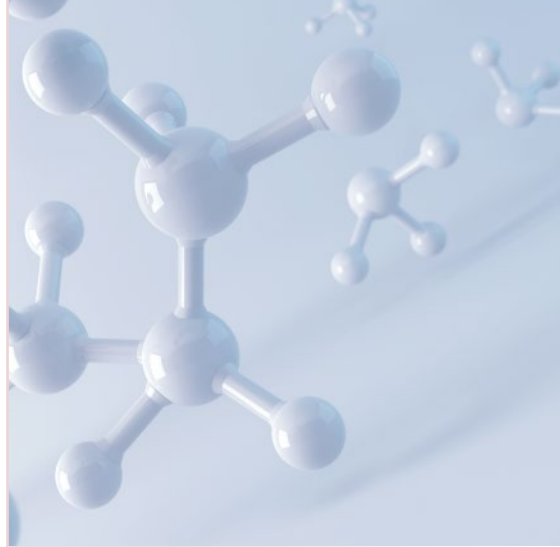
Furthermore, Greece is offering competitive labor rates compared with EU peers, as a result of the adverse effects of the 2010 debt crisis. Specifically, minimum monthly wage in Greece is at € 831.8, which is 17% less than EU average (€ 1,002.6). At the same time, the difference between average wage in Greece and in EU is demonstrating a constant upwards trend. Forecasts are indicating a similar future trend that is expected to slow down due to the late effect of unemployment reduction.

Monthly Average Gross Wage, in \$



The RRP as the Economy's Accelerator

Through the Recovery and Resilience Fund (RRF) of European Commission, Greece has secured a significant amount of funding in order to implement the proposed investments reforms from the National RRP ("Greece 2.0") in selected sectors. The Greek RRP is constituted by ~€ 17.8 b in the form of grants, to be invested in upgrading public infrastructure and reforming the Greek economy, and by ~€12.5 b in the form of loans, to be invested in the private sector. Overall, the Greek RRP is expected to enhance the Greek GDP by 7% by 2026, create 180,000 new jobs and increase private investments by 20%.



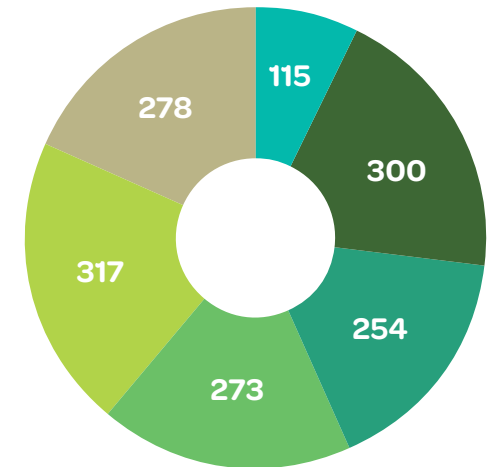
Focusing on the Healthcare & Life Sciences Sector (Component 3.3 - Improve resilience, accessibility and sustainability of healthcare, Pillar: Employment, Skills and Social Cohesion: Health, Education, Social Protection), the industry will be benefitted by a total grant budget of ~€1.5 b.



A Robust Investment Framework

- Tendency towards Tax rationalization – recently Greece has decreased corporate income tax (from 24% to 22%), while social security contributions were reduced by 3% (expected to further decrease).
- Recent legislation has transformed the labor market, by adding flexibility, expanding allowed overtime, and governing teleworking (introduction of digital card) amongst others.
- A series of incentives and mechanisms have been introduced in the past few years, in order to elevate the attractiveness of Greece as an investing destination, in respect to both the general economy (i.e. Development Law, Strategic Investments) as well as the specific industry (i.e. Clawback reduction, R&D Tax Superdeduction, Patent Box).

Greek RRP grants investments & reforms, Health Pillar



- **Clawback Reduction**
- **Implementation of National Health Program "Spyros Doxiadis"**
- **Reform of Primary Care Health System**
- **NHS hospital renovation & infrastructure upgrade**
- **Digital Transformation of Health**
- **Other**