Contents

Key messages ........................................................................................................................................... 1
1 Role of intangibles in productivity in services ................................................................................... 1
2 Firm size distribution and sectoral labour productivity ..................................................................... 2
3 Policies for addressing low productivity growth .............................................................................. 2
Key messages

- Greece ranks second-to-last in terms of intangible investment-to-capital ratio. In particular, the contribution from intangible capital growth to productivity growth is quite weak from an EU-wide perspective. In fact, this contribution is negative, meaning that intangible investment does not suffice to even cover depreciation, hence capital is shrinking.

- Greece average firm’s size is smaller than the EU average and the relatively high employment content of such small firms reduces productivity. Greece is characterised in many sectors by a higher share of employment in small firms (below 10 employees), which has a negative impact on sectoral labour productivity, particularly for manufacturing and transport activities. Recent years show positive dynamics related to the firm size distribution, but they have proved to be insufficient for overall productivity growth.

1 Role of intangibles in productivity in services

Figure 1. Investment-to-capital ratio (left) and contribution of intangible capital growth to productivity growth (right) in 2015.

Greece ranks second-to-last in terms of intangible investment-to-capital ratio. This is mainly the result of the low level of non-National Accounts intangible investment (30% versus the average, 36%). Among non-National Accounts intangibles, the investments into organizational capital and into brands are especially low. As non-National Accounts intangibles have a major role in production, the contribution from intangible capital growth to productivity growth is quite weak from an EU-wide perspective. In fact, this contribution is negative which means that investment does not cover depreciation thus capital is shrinking.

---

2 Firm size distribution and sectoral labour productivity

Figure 2. EL – Percentage difference in labour productivity at the aggregate and sectoral levels relative to the EU28, contributing effects (2016)

Figure 3. EL – Percentage change in labour productivity at the aggregate and sectoral levels, contributing effects (2012-2017)

Apparent labour productivity in a representative aggregate of the market economy in Greece was 56.5% below the EU28 figure in 2016. This difference is to a large extent the result of lower intrinsic productivity levels than peers (30.8 percentage points, pp), with more than a third of the gap being explained by a negative contribution of both the sectoral composition effect (-8.8 pp) and, particularly, the firm size distribution effect (-16.9 pp).

In particular, the average size of enterprises is smaller than for the EU benchmark due to a larger employment share in smaller firms (below 10 persons employed), which has been shown to be highly conditional on a relatively weak institutional and judicial framework, including protection of property rights, contract enforcement and regulatory quality.

The overall picture – i.e. negative size distribution effects exacerbating negative pure productivity effects – is to a large extent shared at the sectoral level, particularly for construction (NACE section F), wholesale and retail trade (G), accommodation and food services (I), and professional activities (M). Nevertheless, the most negative assessment corresponds to the manufacturing (C) and transportation and storage (H) sectors, for which the firm size distribution effect explains the majority of the negative gap relative to the EU average.

At a more disaggregated level, the negative size distribution effect is particularly large in some manufacturing activities with lower technological content (e.g. wearing apparel or metal products), as well as land transport and legal activities among services.

On a dynamic perspective, recent developments (2012-2017) suggest a significant positive contribution of the firm size distribution effect to productivity growth (8.5 pp), although compensating only partially the strong decline in genuine productivity levels within sectors (-24.2 pp). The most positive developments at sectoral level are observed for construction and transport, with overall productivity growth.

3 Policies for addressing low productivity growth

According to the June 2018 “Growth Strategy for the Future”, the government has identified key sectors where it seeks further development: transport and logistics, energy, agri-food, manufacturing, shipping, pharmaceutical sector, health, circular economy and sustainable natural resources management, tourism and culture. The main policy tools that may prove to be productivity-enhancing include:

2 C: Manufacturing; F: Construction; G: Wholesale and retail trade; repair of motor vehicles and motorcycles; H: Transportation and storage; I: Accommodation and food service activities; J: Information and communication; M: Professional, scientific and technical activities; N: Administrative and support service activities.
• National envelope of the Common Agricultural Policy - CAP (Pillar I) and the Rural Development Programme (RDP) (Pillar II) approximately €19.6 billion (14.9 of which are direct payments) will be available for the Greek agricultural economy.

• A number of measures for tourist sector development, including supporting/funding small and medium entrepreneurship for new tourism projects and thematic tourism through NSRF programs (Operational Program Competitiveness, Entrepreneurship and Innovation).

• Boosting start-ups and SMEs. For promoting innovative entrepreneurship the following actions are in place:
  o Support for cooperative research and innovation projects between HEIs, ROs and companies through Structural Funds.
  o Creating opportunities for new innovative companies through the establishment of a Fund-of-Funds for equities capital: EquiFund includes three funds: The Innovation Window transforming research ideas into start-ups; the Early-Stage Window supporting new companies in their first steps; and the Growth Window for the support of mature enterprises.

• National Action Plan for enhancing export capacity. It aims to boost exports and to improve the export orientation of the Greek enterprises. Exposure to international markets might have a considerable impact on Greek firms' productivity levels.

• Attracting Foreign Direct Investment: introduction of a fast-track framework (Law4608/2019 – New Law for the Strategic Investment Framework), and the new Development Law (4399/2016), which aim to facilitate and accelerate the development of large-scale investments in Greece.
The European Commission's science and knowledge service
Joint Research Centre

JRC Mission
As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.

EU Science Hub
ec.europa.eu/jrc

@EU_ScienceHub
EU Science Hub - Joint research Centre
EU Science, Research and Innovation
EU Science Hub