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## **Productivity Reviews**

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# Productivity and Competitiveness from the stakeholders' viewpoint

T. Tsekeris, I. Cholezas, A. Chymis, N. Rodousakis, G. Skintzi

## Abstract

This report presents the results of the first public consultation process conducted by the Greek National Productivity Board. This process principally aims to collect, analyse and disseminate the views of social partners and other stakeholders about various issues concerning the productivity and competitiveness of the Greek economy. In turn, it seeks to increase public awareness on these issues and achieve a sufficient degree of social consensus on appropriate policy initiatives to effectively address them. In addition to several horizontal issues raised and policies suggested to enhance productivity and competitiveness, the consultation covers the investigation of key sectors of economic activity to promote sustainable development, the twin (digital and green) transition of the Greek economy, and the role of education and skills. The findings highlight a considerable heterogeneity of perceptions and the multifaceted policy options that could be regarded as suitable to tackle major problems underlying productivity and competitiveness. The outcomes indicate the need for adopting a comprehensive plan with both sectoral and spatial dimensions and use of multiple (fiscal, macroprudential, institutional, employment, education, planning) measures to create synergies and foster the wide acceptability and effectiveness of potential policies.

# 01

## The public consultation process of the Greek NPB

The analysis presented in this report concerns the public consultation process undertaken during 2022 by the Greek NPB. The European Commission attaches great importance to the consultation of National Productivity Boards with social partners and other stakeholders on productivity and competitiveness issues in each country. Among others, the public consultation process can facilitate the access to/collection of (more detailed, disaggregate-level) data, the exchange of knowledge, ideas and best practices, and the mutual understanding and collaboration among experts, policy-makers and stakeholders for reaching a consensus and selecting commonly accepted solutions to crucial productivity-related problems. This process is anticipated to raise the impact of productivity-enhancing recommendations and policies on both individual markets and the whole economy. Additionally, other key issues, mega-trends and macro-forces, which influence the evolution and importance of trends, can be jointly identified regarding the twin transition, demographics, skills, institutions and governance (EC, 2022).

The current process involved the creation of an open-ended questionnaire with nine questions on key issues related to the productivity and competitiveness of the Greek economy (see Table 1). The questionnaire was addressed to 17 social partners and stakeholders, such as chambers/business associations, trade unions, banks, research centres, state authorities. Among these, 14 social partners and stakeholders completed the questionnaire (see Table 2). Its principal aim was to gather information and record views about the main factors inhibiting and policies potentially fostering the productivity and competitiveness of the Greek economy, as well as about sectors and thematic areas (education and skills, digitisation, the green transition) argued to have a horizontal influence on productivity and competitiveness.

The current analysis allows us to identify for the first time in qualitative terms the most critical factors inhibiting productivity growth. It can also be used to prioritise policies, measures and instruments that are expected to have the highest impact on boosting the productivity of the Greek economy, based on the most frequent responses of social partners and stakeholders to the questions at hand.

**Table 1 The questions addressed to the social partners/stakeholders**

Q1	What are the key problems of productivity that the Greek economy faces?
Q2	What are the main horizontal policies that could boost productivity in the coming years?
Q3	What are the key competitiveness problems of the Greek economy?
Q4	List the main horizontal policies that could enhance competitiveness in the coming years.
Q5	What are the key sectors of economic activity whose development should be prioritised to promote the productivity of the Greek economy?
Q6	What policies should be promoted to enhance the contribution of digitisation to the Greek economy?
Q7	What policies should be promoted to enhance the contribution of the green transition to the Greek economy?
Q8	What are the main challenges and policies for education and skills enhancement in the Greek market?

**Table 2 The social partners/stakeholders who participated in the public consultation**

No.	Name	Acronym
1	Economic and Social Council of Greece	OKE
2	Institute of Labour, General Confederation of Greek Workers	INE-GSEE
3	Institute of the Greek Tourism Confederation	INSETE
4	Hellenic Federation of Enterprises	SEV
5	Economic Chamber of Greece	OEE
6	Athens Chamber of Commerce and Industry	EVEA
7	Hellenic Parliamentary Budget Office	HPBO
8	Special Secretariat of Foresight Strategy	SSFS
9	Foundation for Economic and Industrial Research	IOBE
10	Economic Analysis and Research Department, Bank of Greece	BoG
11	Economic Analysis and Research, National Bank of Greece	NBG
12	Greek Economic and Sectoral Research, Piraeus Bank	PB
13	Economic-Markets Research Department, Alpha Bank	AB
14	Economic Research Department, Eurobank	EB

## 02

### Factors inhibiting the productivity of the Greek economy

Concerning the key productivity problems facing the Greek economy, the respondents reported a wide range of issues (Figure 1). These issues have been classified into several broad categories of productivity-related problems. The problems identified by more than 50% of respondents are:

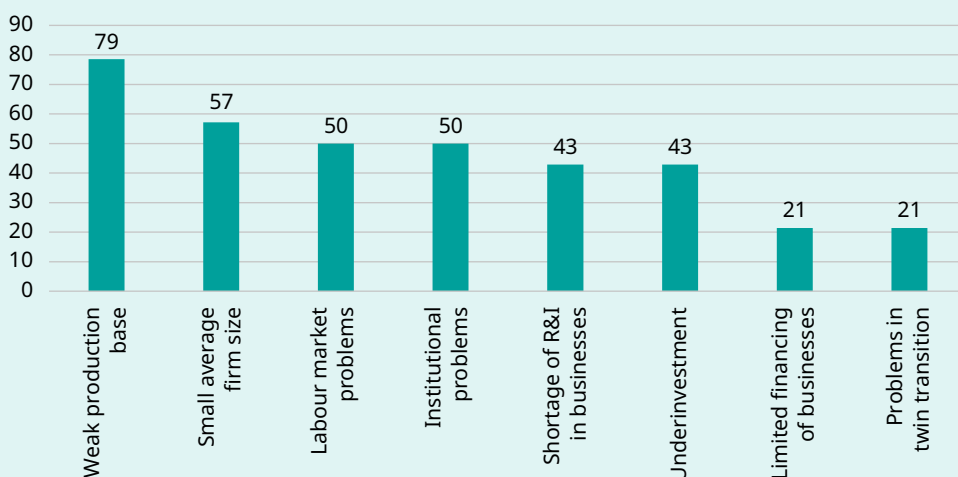
- The weak production base/model of the Greek economy, involving the misallocation of production factors, the low value-added investment and production, the very high share of the services sector, the low economic complexity and the low share of internationally tradable goods and high-tech exports, the low allocative efficiency, and the limited intra- and intersectoral linkages in the Greek economy.
- The small average size of firms, which is connected to reduced scale economies, limited adoption of new technologies, the production of low value-added services, the high share of self-employed and the limited access to funding.
- Poor/inefficient labour market conditions, with reference to labour underutilisation, underpaid jobs, increased non-wage costs, informal/undeclared employment, the lack and waste of skills, the horizontal and vertical mismatch of skills, brain drain, limited labour mobility and the low participation of women.
- Dysfunctionalities in institutions in public administration, the judicial system and the business sectors, which, among others, are associated with remaining complexities in the legal/regulatory framework for the licensing and operation of enterprises, public sector inefficiencies and the lack of spatial planning.

Other key productivity problems facing the Greek economy include:

- The shortage of R&I in businesses and, particularly, the lack of incentives and of new business models, as well as the limited linkages between universities/research centres and businesses.
- The underinvestment or shortage of (productive) investment in infrastructure, networks, and research and development.
- The limited financing of businesses, involving problems of access to loans, low financing and low advisory support by banks, the increased cost of financing and the non-performing loans (NPLs).

- Problems in the twin transition, which mainly refer to the increased cost of the digital and green transitions, and the insufficiency of related incentives and subsidies.

**Figure 1 Key productivity problems facing the Greek economy (as % of total responses)**



### 03

## Horizontal policies to boost the productivity of the Greek economy

Concerning the main horizontal policies that should be implemented to boost productivity in the coming years, there is also a wide range of responses (Figure 2), which have been classified into several broad categories of productivity-enhancing policies. The policies included in each category can be considered —to a large extent— as complementary with each other. Specifically, the policies that are identified by more than 50% of the respondents are:

- Active labour market/education policies, including life-long education and training programmes, particularly in sectors with increased export specialisation; strengthening linkages between education and the labour market; lower taxation and non-wage costs; higher salaries/wages and support of highly skilled employment, young and female workers/scientists.

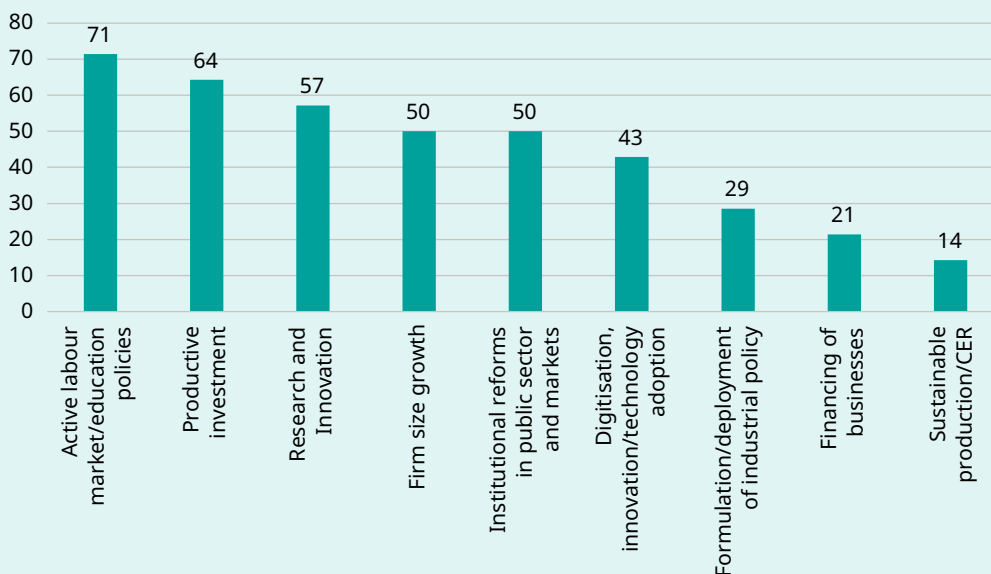


- Productive investment, including foreign direct investment (FDI) and public investment in high-productivity, capital-intensive sectors and in (transport, logistics, energy, information and communication–ICT) infrastructure networks with increased positive externalities and multiplier effects, and investment to improve the efficiency of capital infrastructure usage.
- Promotion of R&I, which encompasses the increase of R&D expenditure, particularly in high-tech and export-oriented industries; the systematic measurement and monitoring of R&I performance; the promotion of R&I funding mechanisms; the provision of related incentives; the establishment of technology transfer centers; and the development of synergies among the government, universities/research centres and the business sector.
- Growth of average firm size, which mainly corresponds to the provision of incentives for the promotion of synergies, acquisitions, merging, scaling-up, the participation of small and medium-size enterprises (SMEs) in global value chains (GVCs) and the intergenerational transmission.
- Institutional reforms in the public sector and markets, which may involve improving of the reliability of economic decision making, reinforcing the protection of property rights, reducing bureaucracy, increasing transparency and accountability, upgrading the quality of public services, completing of the cadastral system, completing general and specific spatial plans (e.g., for renewables, industry, tourism, aquaculture, fossil raw materials) and local and special urban plans, improving the development of business parks, increasing the efficiency of the judicial system and the codification of laws and legal rules, promoting out-of-court dispute resolution mechanisms, strengthening legal training, enhancing market supervisory mechanisms, revising the business taxation system, creating a new corporate governance framework, easing licensing for the operation of economic activities and the installation of renewables, improving in the operation of energy and freight transport markets, and (further) liberalising of some professional legal/engineering services.

The rest of the main horizontal policies that were are suggested to boost productivity in the coming years include:

- Digitisation and innovation/technology adoption, which refers, among others, to the provision of incentives, subsidies and training to adopt and use digital technologies, and the promotion of interoperability of digital services offered to citizens and businesses.
- Formulation/deployment of industrial policy, which encompasses integrated plans for the provision of incentives and the facilitation of processes for goods' exports, the authorisation and planning regulations for industrial plants, the coordination of projects for Industry 4.0 and industrial infrastructure, and the containment of energy costs for industry.

**Figure 2 Main horizontal policies to boost productivity in the coming years (as % of total responses)**



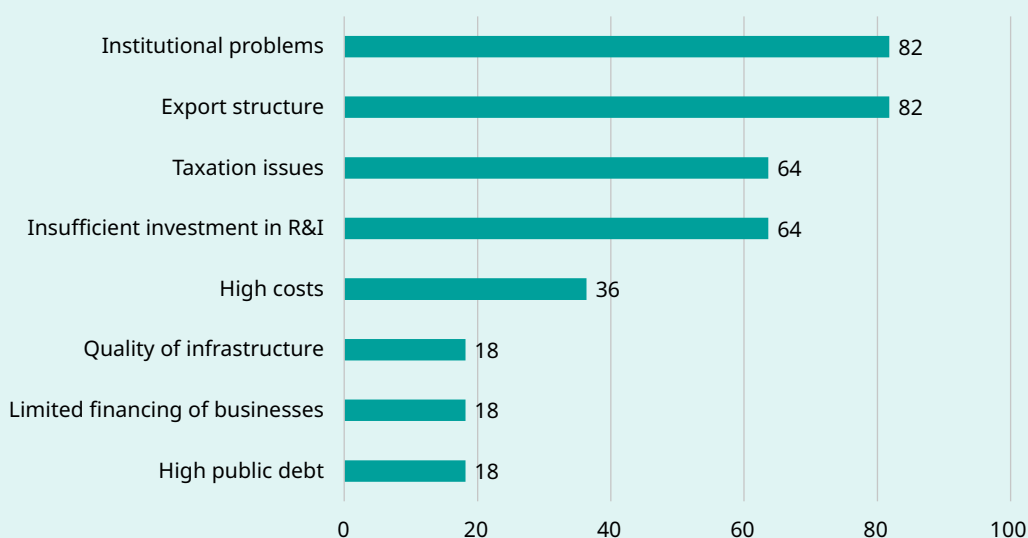
- The improvement of the financing of businesses by banks and other sources, for instance, through the exploitation of capital markets, crowdfunding, micro-credits and loans through the Hellenic Development Bank.
- The promotion of sustainable production and corporate environmental responsibility, through the provision of suitable incentives.

## 04

### Factors inhibiting the competitiveness of the Greek economy

The respondents identified a wide range of factors inhibiting the competitiveness of the Greek economy (Figure 3). The reported issues have been classified into eight broad categories of competitiveness-related problems. It should be noted that several productivity and competitiveness problems coincide, such as the institutional problems, the limited financing of businesses and the insufficient investment in R&I. The problems identified by more than 50% of the respondents are:

**Figure 3 Key competitiveness problems (as % of total responses)**



- Institutional problems concerning dysfunctionalities of the public administration, the judicial system and the business sector that are related to legal complexity, delays of justice procedures, the remaining regulations in certain markets, limited law enforcement at the expense of law-abiding companies and the quality of corporate governance.
- Export structure, relating to the high share of the non-tradable goods and services sector, the high trade deficit and the dependence of the Greek economy on imports, the production of low value-added goods and services, the low share of high-tech and knowledge-intensive exports, the lack of export orientation of Greek companies and their limited participation in global value chains, the inability to exploit the comparative advantages of the Greek economy.
- Insufficient investment in research and innovation (R&I) by both the public and the private sectors, which is also related to underpaying skilled personnel and brain drain.
- Taxation issues associated with the complexity of the taxation system, the high tax burden, and the high non-wage costs/social contributions.

Other key competitiveness problems the Greek economy is facing include:

- High costs, more specifically, high energy costs, transportation and telecommunication costs, and real estate costs.

- The quality of existing infrastructure, physical and digital (roads, railways, ports, broadband services, etc.).
- The limited financing of businesses and the non-performing loans (NPLs).
- High public debt.

## 05

### Policies to enhance the competitiveness of the Greek economy

As far as the proposed policies that could enhance the competitiveness of the Greek economy are concerned, the respondents highlighted a wide range of strategies and courses of action that have been classified into nine categories (Figure 4). It is worth mentioning that, as in the case of the productivity-enhancing policies, the policies that aim to improve Greek competitiveness are complementary to each other. Moreover, several productivity and competitiveness enhancing strategies coincide. The policies proposed by more than 50% of the respondents are:

- Institutional reforms in the public sector and markets, which include digitising the public administration, reducing bureaucracy and increasing transparency, protecting property rights, improving the legal framework (with an emphasis on expediting the resolution of legal disputes), implementing a stable, simple and effective tax framework, reducing the tax burden (including social security contributions), simplifying licencing procedures, removing barriers to enter or exit a market, increasing of wages in accordance to the productivity growth and/or the GDP growth and, overall, creating a stable and investment friendly environment.
- Incentives for encouraging private investments in high-tech, knowledge intensive, export-oriented sectors and in manufacturing, which encompass investments in the digital transformation of businesses, the adoption of Industry 4.0 (I4) technologies, R&D and innovation, as well as the green transition and the circular economy, and investments aiming to strengthen the resilience of companies against climate change risks and other international shocks.
- Export promotion that includes promoting existing and creating new competitive advantages, establishing a national brand name, implementing an industrial development programme targeted to increase exports and reduce imports, encourage the participation of SMEs in global value chains and cooperative schemes, and support investments in export-oriented companies.

**Figure 4 Main policies to enhance competitiveness (as % of total responses)**



- Increased public investment, especially in high value-added, export-oriented and new-economy sectors, which also includes public investment for regional development and inter-regional cooperation and for improving and expanding the existing physical and digital infrastructure.

Other proposed policies that could improve the competitiveness of the Greek economy include:

- Improving of the financing of businesses by banks and other sources, which could also incorporate new financing tools designed for export-oriented companies and SMEs, as well as expanding the eligibility criteria for investments funded by the Hellenic Development Bank (HDB) and the European Investment Bank (EIB).
- Educational policies, including educational reform throughout all levels of education, life-long education, and training programmes, particularly in sectors with increased export specialisation and tourism; educational/training programmes for technical and digital skills development; incentives to recruit highly skilled personnel.
- Accelerating procedures for the implementation of the Greece 2.0 programme, that is, Greece’s Recovery and Resilience plan, in the context of the EU Recovery and Resilience Facility (RRF).
- The promotion of mergers and joint ventures as well as SME clustering.
- Maintaining public debt sustainability.

## 06

### Key sectors of the Greek economy

#### 6.1. Stakeholders' positions about key sectors of the Greek economy

Regarding the question of identifying the key sectors/industries of the Greek economy, the stakeholders' responses can be classified in different ways, as shown in the following figures.

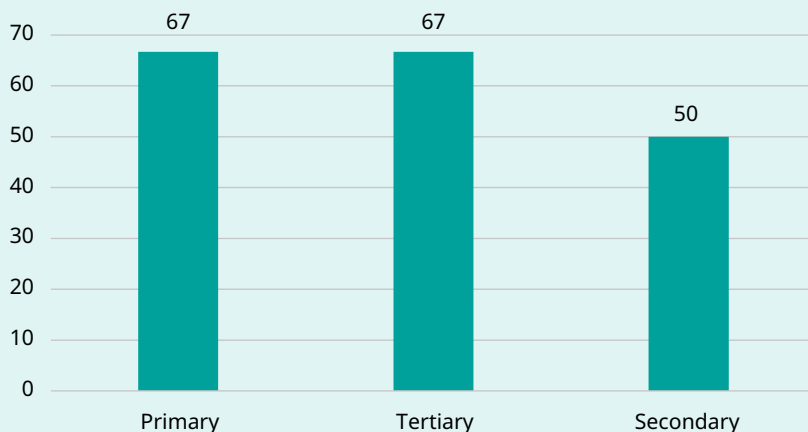
Based on Figure 5, we can give a brief description of each broad sector of economic activity:

- Primary sector, which includes industries involved in the extraction and production of natural resources, such as agriculture, mining, and forestry. The fact that it has a high percentage (67%) suggests that, for the stakeholders, it is a significant contributor to the Greek economy.
- Secondary sector, which includes industries involved in the manufacturing and construction of goods and infrastructure. Examples of industries in this sector include factories, construction companies, and utilities. The fact that it has a percentage of 50% suggests that, for the stakeholders, it is also an important contributor to the Greek economy.
- Tertiary sector, which includes industries involved in providing services, such as banking, education, healthcare, and tourism. The fact that it also has a high percentage (67%) suggests that, for the stakeholders, it is one of the major contributors to the Greek economy.

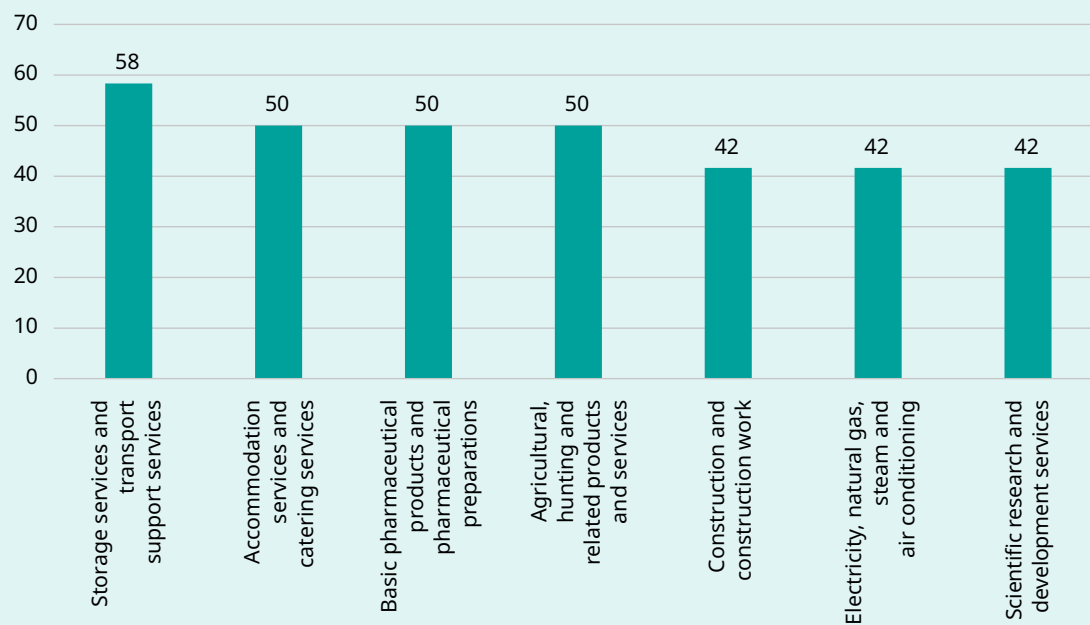
These percentages suggest that the stakeholders consider the Greek economy diverse, with significant contributions from multiple economic sectors. However, without the additional context of a more detailed analysis, it is difficult to explain exactly what these percentages represent. For this purpose, Figure 6 provides the key industries, at a more detailed level than that of the broad sectors (Figure 5). This level concerns the central product classification (CPA), which is structured on the economic origin criterion, with the framework being based on NACE Rev.2.

Drawing from Figure 6, we can provide a concise overview of the most favoured industries by the stakeholders. The most favoured industry that the stakeholders have focused on is the Storage services and transport support services, accounting for 58% of the responses. The stakeholders believe that the country needs investment in infrastructure to support transport services as well as to streamline regulations to make it easier for companies to do business. Agriculture, hunting, and related products and services; Basic pharmaceutical products and pharmaceutical preparations; and Accommodation and catering services are

**Figure 5 Stakeholders' viewpoints about the key broad sectors of the Greek economy (as % of total responses)**



**Figure 6 Stakeholders' opinions about key industries of the Greek economy, with respect to the central product classification (CPA) (as % of total responses)**



the second most favoured key industries, each accounting for 50%. Stakeholders believe that subsidies and incentives should be provided to farmers, together with investments in new technologies to increase efficiency and productivity. Moreover, they note that Greece has a strong Tourism and Pharmaceutical sector, both of which can further be developed.

Next, Construction and construction works; Electricity, natural gas, steam, and air conditioning; and Scientific research and development services each account for 42% of the responses. The stakeholders state that investment in Research and development is necessary to help drive innovation and increase competitiveness in the global market. At the same time, they note that investments in renewable energy sources can help reduce dependence on fossil fuels and increase energy efficiency. All these industries are considered to have a key role in driving growth and stability in the country.

For a better understanding of the stakeholders' views, Figure 7 classifies the various responses in alternative industry categories. This sectoral categorisation is based on the International Standard Industrial Classification of All Economic Activities (ISIC), which is maintained by the United Nations. The ISIC provides a standard framework for the classification of economic activities at the global level. The sectors we have listed correspond to the following ISIC categories:<sup>1</sup>

- Agriculture: ISIC Division A
- Mining: ISIC Division B
- Material Manufacturing: ISIC Divisions C-D
- Machinery and Equipment: ISIC Division C
- Other Manufacturing: ISIC Division D
- Construction: ISIC Division F
- Distributive Trade services: ISIC Division G
- Information, Finance services: ISIC Divisions J-K
- Public and Other services: ISIC Divisions O-Q.

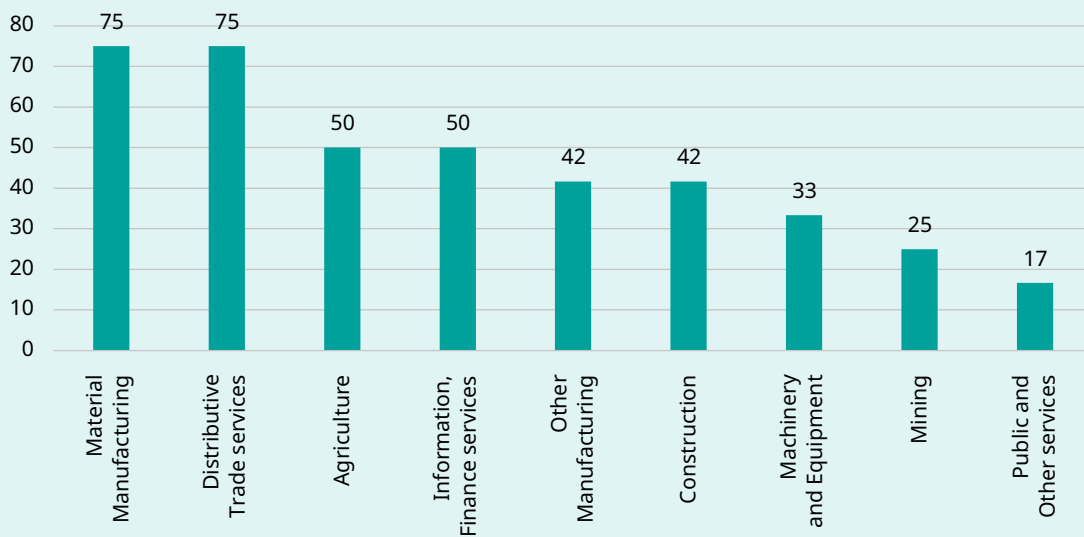
In terms of the alternative industries' categories, the stakeholders have mostly focused on the following: Distributive Trade services, including wholesale and retail trade, and Material Manufacturing, both accounting for 75% of the responses. Furthermore, Agriculture, and Information and Finance services both account for 50% of the responses. Construction and Other Manufacturing industries, such as textiles and clothing, both account for 42%. Finally, Machinery and Equipment manufacturing, Mining and Public and other services account for 33%, 25% and 17%, respectively.

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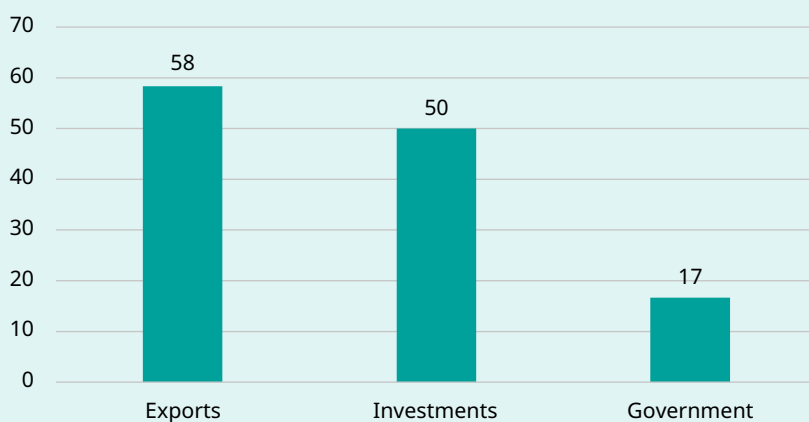
1. More information about the ISIC classification can be found on the United Nations Statistics Division website: <<https://unstats.un.org/unsd/classifications/Econ/ISIC/Default.aspx>>.



**Figure 7 Stakeholders' opinions in terms of the alternative industries categories (as % of total responses)**



**Figure 8 Stakeholders' opinions about exports, investments and government (as % of total responses)**



Therefore, the stakeholders have identified several tradable goods and services sectors that they believe will help to drive growth and stability in the country. As we can observe, they do not consider the public sector services as a key sector of the Greek economy. This result can be also seen in Figure 8, which presents their opinion on the importance of exports, investments and the public sector (government) for the Greek economy.

Regarding the opinion of stakeholders about exports, investment and government sectors, we have obtained the following results (Figure 8):

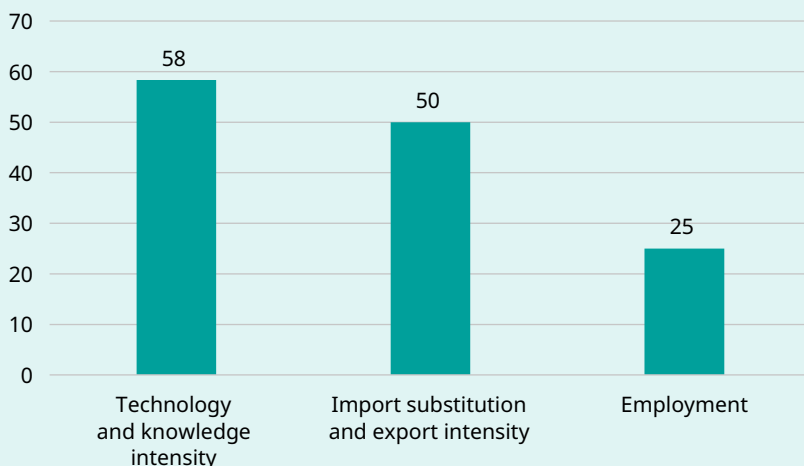
- Fifty-eight percent of stakeholders choose exports as a key factor for economic development. It is clear that there is a recognition of the potential for growth and revenue generation through exports. Greece has a diversified economy and has made significant progress in recent years in exporting goods and services, especially in the areas of agriculture, food processing, and tourism. Focusing on exports can also help to increase foreign currency inflows, which can help to strengthen the country's balance of payments.
- Investments are essential for the growth and development of any economy. It is encouraging to see that half (50%) of the stakeholders have chosen investments as a key factor for the development of the Greek economy.
- Only 17% of stakeholders choose government expenditures as a key factor for economic development. It is obvious that there is a low recognition of the importance of government spending to drive growth in the economy. However, it is well known that increased government expenditures can help to create jobs, stimulate demand, and support businesses. The government can also invest in infrastructure projects, such as transport, energy, and communication, which can further drive economic growth.

The results indicate that stakeholders strongly believe that export growth is crucial for economic development. As we can observe in Figure 9, this opinion is coupled with the need for import substitution, and two other factors: technology and knowledge intensity, and employment.

More specifically, the stakeholders have identified three criteria for choosing the key sectors/industries of the Greek economy (Figure 9):

- The first criterion is high technology and knowledge intensity, which accounts for 58% of their responses. This criterion reflects the growing importance of innovation and technology in driving economic growth and competitiveness in today's global economy.
- The second criterion concerns the high import substitution and export intensity, which accounts for 50% of the responses. This criterion reflects the need for Greece to reduce its dependence on imports and increase its exports to improve its balance of trade. By focusing on sectors that can substitute imports and boost exports, the

**Figure 9 Stakeholders' criteria for choosing the key sectors/industries (as % of total responses)**



stakeholders believe the country's economic competitiveness will increase and its vulnerability to external economic shocks will decrease.

- The third criterion refers to employment, which accounts for 25% of the stakeholders' responses. This criterion highlights the importance of job creation and unemployment reduction in Greece, which has been a persistent challenge in recent years. By focusing on sectors that can create more jobs, the stakeholders believe that economic growth will be boosted and living standards will improve.

By focusing on these factors, it could be argued that Greece can leverage its strengths and capabilities to achieve sustainable economic growth and improve the well-being of its inhabitants. Nevertheless, it should be stressed that the majority of stakeholders do not consider job creation and unemployment reduction in their selection criteria for determining the key sectors/industries. Below, we present our viewpoint on the key sectors/industries based on alternative criteria to those of the stakeholders.

## 6.2. Our own position about the key sectors/industries

In order to determine which industries are the most effective for implementing economic policies, we evaluate them based on two factors: their output and employment multipliers, and their import multipliers. Those industries that have high output and employment multipliers and low import multipliers are considered as key industries and

are most suitable for the implementation of short-term demand policies that focus on growth and job creation.

For the long-run structural policies, we consider industries that have an output multiplier-to-employment ratio higher than the economy's average, and an output multiplier-to-imports ratio higher than the economy's average. These ratios serve as indicators of productivity and the economy's import dependence, respectively. In order to promote sustained growth, it is important to take both of these factors into account when formulating policies.<sup>2</sup>

The industries that provide the essential commodities for an effective demand management policy in Greece include Agriculture, hunting, forestry, Fishing and aquaculture; Support service activities for mining; Food products, beverages and tobacco; Construction; Wholesale and retail trade and repair of motor vehicles and motorcycles; Land transport and transport via pipelines; Postal and courier activities; Accommodation and food service activities; Publishing, audiovisual and broadcasting activities; Financial intermediation; Professional, scientific and technical activities; Administrative and support service activities; Public administration and defense, compulsory social security; Education; Human health and social work activities; Arts, entertainment and recreation; Other service activities; and Activities of households as employers, undifferentiated goods and services activities of households for own use. Essentially, all of the key industries required for boosting output and employment in the Greek economy come from primary production and services, with the exception of products related to Mining and quarrying, energy products and Mining and quarrying, non-energy products.

From our analysis, it also becomes apparent that certain sectors of the Greek economy exhibit characteristics that are more conducive to short-term growth, compared to sectors of economy that are better suited for long-term growth. Services are the only sector that display product and employment multipliers above the economy's average, while also having an import multiplier below the average. This finding, along with the primary sector, indicates that these two sectors are best equipped for providing an immediate boost to both employment and production. In contrast, the secondary sector has the highest labour productivity ratio, but it also has the highest dependence on imports. Therefore, long-term policies to raise productivity in Greece should be directed towards this sector.

An effective policy of managing the demand of the economy for immediate growth effects can be achieved by primarily choosing government spending. The labour productivity ratios for government spending are relatively high, and the import dependence ratios are low. Additionally, exports have a much higher labour productivity ratio, but a relatively

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2. We have utilised the most recent OECD data to revise the intersectoral analysis discussed in Section 2.4 of the Greek NPB (2020).

**Table 3 Industries for short-term demand and long-term structural policies**

**Short-term demand policies**

- 01T02: Agriculture, hunting, forestry
- 03: Fishing and aquaculture
- 09: Mining support service activities
- 10T12: Food products, beverages and tobacco
- 41T43: Construction
- 45T47: Wholesale and retail trade; repair of motor vehicles
- 49: Land transport and transport via pipelines
- 55T56: Accommodation and food service activities
- 58T60: Publishing, audiovisual and broadcasting activities
- 64T66: Financial and insurance activities
- 69T75: Professional, scientific and technical activities
- 77T82: Administrative and support services
- 84: Public administration and defense; compulsory social security
- 85: Education
- 86T88: Human health and social work activities
- 90T93: Arts, entertainment and recreation
- 94T96: Other service activities

**Long-term structural policies**

- 07T08: Mining and quarrying, non-energy products
- 23: Other non-metallic mineral products
- 35: Electricity, gas, steam and air conditioning supply
- 36T39: Water supply, sewerage, waste management and reclamation activities
- 52: Storage and transport support activities
- 53: Postal and courier activities
- 61: Telecommunications
- 62T63: IT and other information services
- 64T66: Financial and insurance activities
- 68: Real estate activities
- 84: Public administration and defense, compulsory social security
- 90T93: Arts, entertainment and recreation

high import dependence ratio, indicating that it could form the basis for a long-term growth-oriented policy. Hence, fiscal risks should also be considered when selecting this policy option. Investment has the lowest labour productivity ratio and an average import dependency ratio, making it less suitable for short-term growth policies.

It is worth noting that most internationally traded goods belong to the secondary sector and that the industries that produce them are dependent on imports. As a result, the country's export sectors are also reliant on imports. Therefore, in addition to the above-mentioned policies, there is a need for implementing another policy for reducing the import dependency of these sectors. This can be achieved by substituting imported goods with domestically produced goods, whenever possible, and improving the positioning of the country in global value chains (especially in terms of the forward linkages). Table 3 summarises the selected industries for short-term demand policies and for long-term structural policies.

To sum up, our results suggest that a combination of short-term policies, such as increased public spending, and long-term policies, such as boosting productivity in the secondary sector and promoting exports, could help to revitalise the Greek economy. By reducing import dependency and supporting key industries, the government can foster more sustainable and resilient growth and reduce unemployment. Finally, it is worth noting that there are differences in the results of our analysis with those of the stakeholders. This is mainly due to the fact that the stakeholders do not take into account the high dependence of most industries belonging to the secondary and primary sector on imports and the different selection criteria.

## 07

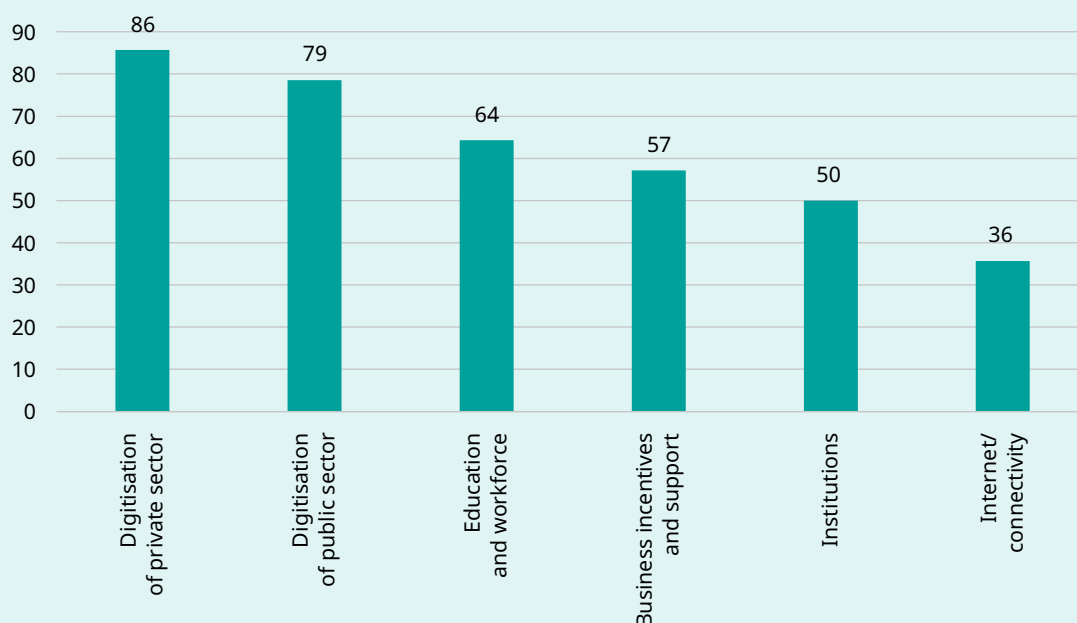
### Stakeholders' views on policies to promote digitisation

Digitisation is an important pillar of competitiveness and productivity, as demonstrated by the stakeholders' views. The Recovery and Resilience Facility (RRF) offers considerable funding to the EU27 member states to promote and implement the so-called digital transformation of the economy and society. According to the Digital Economy and Society Index (DESI), the European Commission's index on the digitisation of the economy and society, Greece ranked 25<sup>th</sup> among the EU27 in the 2022 edition. However, the Greek economy has made significant improvements on all four aspects of the DESI, particularly human capital, connectivity, and the integration of digital technology, ranking 22<sup>nd</sup> in all three. Regarding digital public services, despite efforts, it ranks 26<sup>th</sup>.

Following the above digital performance of the Greek economy, stakeholders express specific views on policies that could further boost digitisation of the Greek economy and society. Most, if not all, of the stakeholders mention that both digital and green transformations are necessary for increasing productivity and competitiveness of the economy. One stakeholder explicitly mentions the generally recognised opinion that the pandemic, despite its devastating effects, offered a unique opportunity for the acceleration of the digital transformation of the Greek economy, which was lagging considerably behind all other member states. This view is corroborated by the DESI data, which show that Greece was last among the EU27 until 2020, the year of the pandemic.

While the range of stakeholders' views cannot exactly fit within the four main DESI categories (i.e., Human capital, Connectivity, Integration of digital technology, and Digital public services), most stakeholders' propositions are very closely related to these categories. As Figure 10 illustrates, views, opinions and policy recommendations expressed by the stakeholders can be grouped into six main categories: 1) digitisation of the private sector, 2) digitisation of the public sector, 3) education and workforce, 4) business incentives and support, 5) institutions, and 6) internet/connectivity.

**Figure 10 Stakeholders' views on policies for the digitisation of the Greek economy (as % of total responses)**



Regarding the first category, the digitisation of the private sector, 86%, or 12 out of 14 stakeholders, would like to see policy actions targeting the private sector's digital transformation. Policies targeting the public sector's digitisation are suggested by 79%, or 11 stakeholders. Nine stakeholders (64%) make policy suggestions that target students and employees. Eight stakeholders (57%) propose the implementation of measures that could offer incentives to and support business digitisation. Half the stakeholders stress the need for appropriate institutions to boost digitisation, while only five (36%) stakeholders include recommendations for improving internet facilities and connectivity.

Digitisation of the private sector includes propositions such as business investments in cloud technology, ERP, CRM, big data analytics, AI, new technologies and innovation, e-commerce, the automation of production, the use of cutting-edge technologies and the adoption of financial technology (fintech) practices. Digitisation of the public sector mostly involves the further development of digital services to citizens and firms, the promotion of digital transactions in the public sector as well as the interoperability of public services and information systems in the public sector. Reference is made to justice, although it is explicitly mentioned by only two stakeholders.

Education and workforce policies refer to the upskilling and reskilling of workers to limit the possible negative impacts of automation. Moreover, stakeholders call for reforming and modernising the education system (from pre-school education to universities) to build digital skills for students, starting when they are very young, and adding computer science courses in secondary and tertiary education. Stakeholders also stress the need for incentives and policies to reverse brain drain and attract Greek employees (brain gain), as well as foreign employees (including digital nomads) and particularly specialised scientific personnel in technology sectors. Other suggestions include digital infrastructure development in schools, more university IT departments, greater job market-university connections, technology transfer offices in universities, as well as offering digital skills education to local communities to reduce the gap between rural and urban areas.

Business incentives and support encompasses incentives (mostly tax incentives) for businesses and mainly SMEs to develop and adopt technologies such as the Internet of Things, AI, big data, establish ICT research laboratories, enhance the digital transformation of SMEs, facilitate access to financing start-ups, attract foreign tech companies, reduce the cost of firms' digitisation as well as serving business at a local level (chambers, etc.).

Institutions is a major category that is also found in the green transition discussion (see following section). As many as half of the stakeholders consider that creating the appropriate institutional framework for a series of policies facilitates the implementation of such policies and paves the way for an accelerated reform and transition. Stakeholders stress the need for the harmonisation of laws and regulations with international standards for innovation and property rights protection, as well as for institutions that facilitate the



use of new technologies for economic development, enhance the dissemination of digital technology in the economy and society, promote digitisation, stimulate public-private sector cooperation for technology investments, enable the adoption of best practices, integrate data, infrastructures and processes, promote Greece as an ICT service center as well as realise the creation of a national AI strategy.

Internet/connectivity contains policies that enhance faster and cheaper internet including broadband, fiber optic networks, internet coverage in remote areas, and cyber security. It is worth noting that one stakeholder suggested free internet access without specifying who should enjoy free internet. While cyber security is a very important issue and is always discussed in European and international indices of digitisation, only one stakeholder referred to it.

It should be noted that stakeholders' views on digitisation are consistent with the theory and the internationally used indicators, such as the European Commission's DESI and IMD's digital competitiveness ranking (DCR), 2022 edition. While the DESI focuses on the digitisation of the public sector, the DCR also stresses the role of the public sector (i.e., government and institutions) as a catalyst and facilitator of an economy's and a society's digitisation. According to DESI, Greece has the worst performance in the indicator of digital public services. However, the category with the highest percentage (86%) of responses is the digitisation of the private sector. This does not contradict DESI or the DCR. If suggested policies that refer to the digitisation of the public sector are put together with the role of the public and the state in general as institutions or as facilitators and supporters of business digitisation, then these categories reach 93%, or 13 out of 14 stakeholders.

According to the DCR, Greece does not perform well on cybersecurity. Specifically, cybersecurity and software piracy rank 48 and 53, respectively, among 63 countries. However, as mentioned before, only one stakeholder referred to cybersecurity. It is probable that cybersecurity is not the first that comes to mind when talking about the digitisation of the Greek economy, but it is something that is very important and should not be neglected.

Finally, justice may seem unrelated to the topic of digital transformation, but a better look would reveal that a smoothly functioning justice system is a necessary condition for a developed economy and a prosperous society. According to the DCR, Greece ranks 59<sup>th</sup> in enforcing contracts, mostly because it takes a very long time for a court decision to be made and then to be enforced. This has crippling effects on all potential investors, both domestic and foreign, including investors in digital technology and services. Even if only two stakeholders proposed the digitisation of justice, this is something very important that needs to be addressed appropriately.

## 08

### Stakeholders' views on policies to promote the green transition

#### 8.1. The status of the green transition in Greece

The climatic crisis has long called for a big change in the energy mix around the globe. Accompanied by a series of other, more recent, crises such as the credit-financial crisis, the war in Syria as well as many other local wars and the subsequent immigration waves, the pandemic, the war in Ukraine, and an ongoing demographic crisis for most developed economies, the climate crisis has made necessary a series of transitions for most countries of the world. These transitions refer mainly to the economy, society, governance, and the environment. The last one permeates all socioeconomic activities of modern life, while the severity of climate change makes this transition (mostly referred to as green or energy transition) perhaps the most important one.

According to the Transitions Performance Index (TPI) published in 2020 by the European Community (EC), Greece has a quite satisfactory performance (10<sup>th</sup> among the EU27) regarding the environmental transition, when in the other three transitions (economic, social and governance) it ranks 25<sup>th</sup>, 25<sup>th</sup> and 26<sup>th</sup>, respectively. According to the same index, Greece achieved the second-best improvement (11%) during the period 2011-2020, behind Croatia (13.5%).

However, the environmental transition does not cover all aspects of the so-called green transition. This is why other indices are used to better capture the level of green transition of an economy. Such indices include the EU data on renewable energy sources (RES), the Green Future Index (GFI), which is constructed by MIT, and the Renewable Energy Country Attractiveness Index (RECAI), which is compiled by Ernst & Young (E&T). According to the EU data, Greece is doing relatively well (ranked 13<sup>th</sup>) in terms of the use of RES in a) gross final energy consumption, b) electricity consumption and c) energy for heating and cooling, while it ranks last (27<sup>th</sup>) in d) transport activities.

According to the GFI, Greece has made significant improvement, climbing up 15 ranks between the 2021 (37<sup>th</sup>) and 2022 (22<sup>nd</sup>) editions of the index. The GFI is the most comprehensive index, capturing almost every aspect of the green transition such as carbon emissions, RES development, recycling, the energy efficiency of buildings and transport, forestation, green patents and innovation, and climate policy. RECAI focuses on green investments and measures completed, on-going and scheduled or announced investments, while it considers public policy that hinders or enables RES exploitation as well as grid infrastructure quality and storing capacity, macroeconomic stability, and country investment climate. According to the November 2022 edition of the index, Greece

has gained 5 ranks since the May 2022 edition, moving up to the 16<sup>th</sup> rank from the 21<sup>st</sup> among 40 countries.

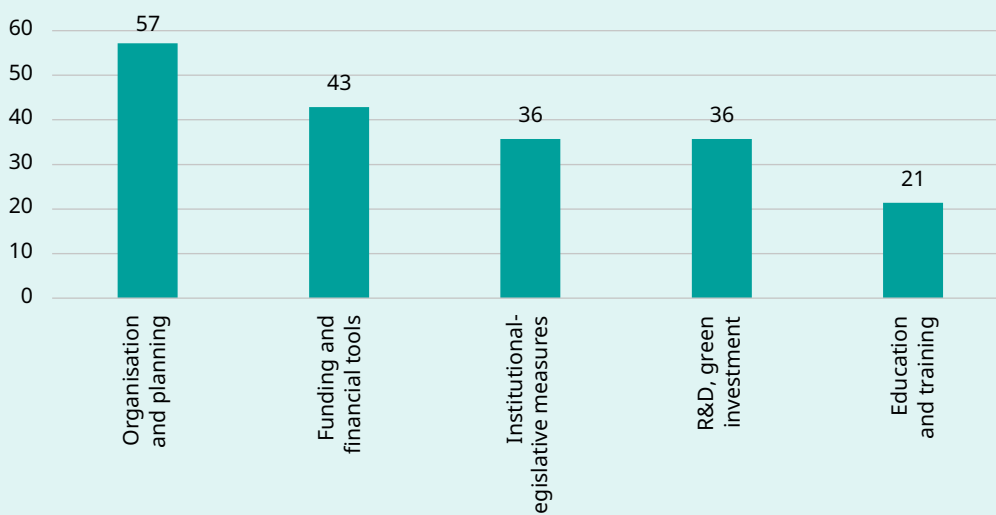
## 8.2. Proposed measures supportive of the green transition

Stakeholders' suggestions can be categorised into two main groups, each containing five and seven subgroups, respectively. The first group includes policies supportive of the green transition, whereas the second group includes green transition policies *per se*. Figures 11 and 12 illustrate stakeholders' views.

As Figure 11 demonstrates, stakeholders propose measures that could support the green transition. Such proposals are divided into five subgroups. Organisation and planning calls for policies such as urban and spatial planning/reform, the completion of the cadastre, forest maps and land use determination, medium/long term energy strategy, cooperation between universities and enterprises, cooperation between Mediterranean countries regarding climate change as well as efficient management of European funds. Eight stakeholders (57%) expressed such measures.

Funding and financial tools refers to measures such as financing green investments using private and public bonds, low interest rates, tax incentives to firms to switch to green fuels and to households for photovoltaic installation as well as energy upgrading of buildings. Six stakeholders, or 43%, are in favor of this group of actions. Five stakeholders (36%)

**Figure 11 Stakeholders' views on policies that are supportive of the green transition (as % of total responses)**

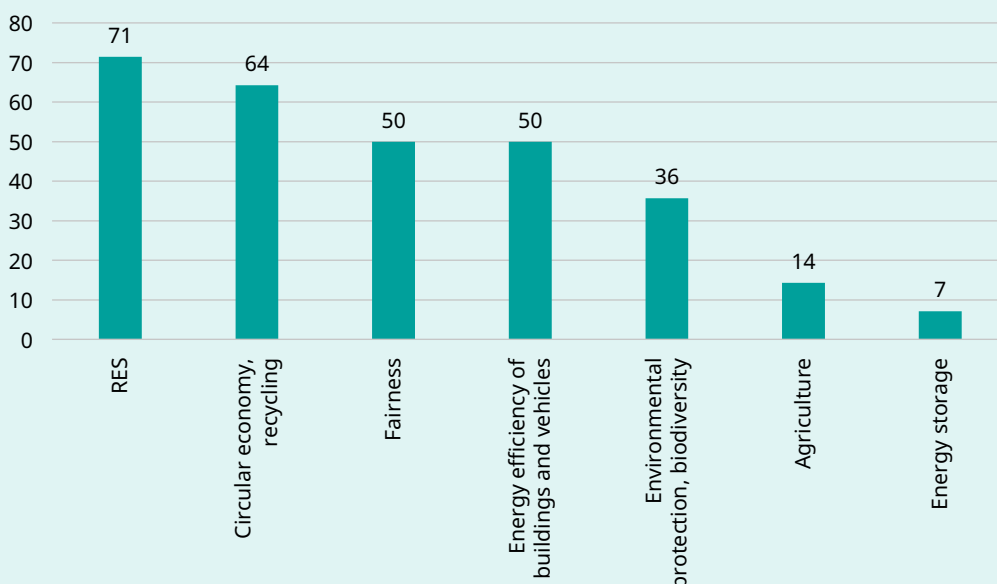


supported institutional and legislative measures, which encompass the improvement or creation of the appropriate institutional framework for funding green investments as well as for the installation and use of RES. The same number of stakeholders would like to see R&D and green investment, which refers to the promotion of R&D for green investments and technologies to boost RES and CO<sub>2</sub> absorption. Finally, three stakeholders (21%) mentioned education and training that involves education programmes and information campaigns on environmental issues, energy transition and climate change to increase public awareness of such issues.

### 8.3. Proposed policies for the green transition

Contrary to the above group of stakeholders’ responses, the following group of proposed policies refer to direct measures to promote the green transition. Figure 12 shows the policies suggested by stakeholders that directly target the green transition. The first policy, suggested by 10 out of 14 stakeholders (71%), refers to measures included in the subgroup RES. This subgroup covers actions to increase the production of RES, even at a household scale (roof photovoltaic), and economise on energy use and, thus, reduce emissions.

**Figure 12 Stakeholders’ views on green transition policies (as % of total responses)**



The second policy refers to a subgroup of measures concerning the circular economy and recycling (64%, or 9 stakeholders), which encompasses recycling, waste reduction, product reuse, recyclable materials, and efficient and integrated waste management. In the third place is the concept of fairness. Seven stakeholders (50%) suggested compensatory benefits to communities where RES units are installed as well as to communities that used to produce lignite and who will experience a loss of economic activity and jobs due to the phase out of lignite production.

Also, half of the stakeholders expressed measures for the energy efficiency of buildings and transport, which refers to policies promoting the use of electric public and private transport vehicles and the energy upgrade of buildings. Five stakeholders (36%) stressed the need for environmental protection and biodiversity. Such measures include the protection of forests and reforestation, water resource protection and preservation as well as the reduction of overfishing.

Agriculture is an economic activity that is recognised to have a heavy footprint. Two stakeholders (14%) specifically referred to the need to take measures to make agriculture more sustainable by using green fertilisers, green machinery, etc. Finally, one stakeholder (7%) suggested an increase in energy storage capacity from RES.

#### **8.4. Own reflections on stakeholders' views about the green transition**

Overall, stakeholders views are in accordance with the literature and several indices that try to capture the multifaceted green transition. Furthermore, stakeholders seem to have a very broad view that captures both direct and indirect policies for the green transition. It could be argued that their views on supportive measures and policies (Figure 11) are even broader than the indices presented in the beginning of this section. Organisational measures such as spatial planning/reform, the completion of cadaster, land use determination, business-university cooperation, the efficient management of funds, and financial tools such as low interest rates, tax incentives and green bonds to promote green investments are not commonly discussed by the organisations that publish green transition indices. Institutional and legislative measures as well as R&D to promote green investment are more commonly discussed, particularly by RECAI. Stakeholders stressed the importance of education programmes and information campaigns that, in the case of Greece, can be useful for increasing public awareness about a series of issues, such as the right way to recycle, waste management/reduction, how to economise on energy and water use, etc.

Moving to the direct policies to promote the green transition, stakeholders' views are also aligned with the extant literature and international indices. Stakeholders raised the issue of fairness, which is not often seen in the international green transition indices and reports but is very important from a socioeconomic perspective.

Agriculture is an industry that contributes significantly to GHG emissions, uses huge quantities of water, and produces toxic waste. The GFI refers to agriculture through three indicators: a) GHG emissions growth in agriculture, b) meat and dairy consumption and c) sustainable agriculture policy/strategy. Relatively to the EU27 member states, Greece does better in meat and dairy consumption. However, this is a result of the relative overconsumption of such products in western societies, including the EU27. Greece also performs relatively well in GHG emissions growth, but there is a lot to do in making its agricultural sector sustainable, as it currently lacks a clear strategy that will drive agriculture to a more sustainable path.

Last but, surely, not least is the technologically challenging issue of energy storage. The fact that only one stakeholder mentioned energy storage capacity from RES does not mean it is a low priority issue. On the contrary, the storage capacity of renewable energy is one of the biggest challenges of the green transition and one of the main reasons why even pioneers (countries) of the green transition still rely to some extent on fossil fuels.

## 09

### Main challenges and policies for education and the reinforcement of skills

Stakeholders were asked to identify the main challenges and recommend policies for education and skills' reinforcement in the Greek labour market (LM). However, most of them focused on the second part, recommending policy changes in the education and training process and less often reforms in labour market practices and institutions.

#### 9.1. Challenges facing the Greek labour market

Two out of fourteen stakeholders identified the extensive vertical skills mismatch<sup>3</sup> as a main challenge in the Greek labour market that causes problems to both the employed (lower wages, depreciation of knowledge and skills, poor career prospects, etc.) and the employers (higher staff turnover, reduced productivity, lower satisfaction from work, etc.). It is estimated that the vertical mismatch reached 30.2% in 2020, when the EU27

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3. There is also horizontal skills mismatch (31.2% in 2018), but the situation is similar with other EU countries (EU average: 29.1%).

average stood at 21.5%.<sup>4</sup> The poor utilisation of skills is also verified by the low ranking of Greece (29<sup>th</sup>) in the European Skills Index, calculated by CEDEFOP,<sup>5</sup> in 2022 (the same ranking with 2020), as noted by one stakeholder, and the low performance in skills matching (2<sup>nd</sup> to last), skills development (4<sup>th</sup> to last) and skills activation (5<sup>th</sup> to last).

The insufficient investment in human resource development by businesses is pointed out by one stakeholder. It is indicative that, according to Eurostat,<sup>6</sup> the share of Greek businesses providing training to their employees was 17.8% in 2020, while the EU27 average stood at 67.4%. There is a substantial differential, irrespective of the firm size. However, it is more pronounced amongst small firms, i.e., employing fewer than 49 persons (16.3% in Greece vs. 63.5% in the EU27 provide training). The fact that the EU27 average share is relatively constant while the share of Greek firms providing training has dropped since 2010 by 10 percentage points is even more alarming, but it could certainly be justified, at least to some extent, by the economic turmoil Greece had to deal with.

Job vacancies constitute another challenge identified by one stakeholder. Job vacancies are more pronounced in specific occupations and sectors, and are expected to increase in the future as technology progresses fast and the demand for high skills expands. Looking at the available data by Eurostat,<sup>7</sup> the job vacancy rate in Greece was 0.6% of total employed in 2021, much lower than the EU27 average, which stood at 2.9%. There are wide differences across sectors however. The highest vacancy rates are detected in Construction (4.3%); Water supply, sewerage, waste management and remediation activities (4.2%); Professional, scientific and technical activities (2%); and Accommodation and food service activities (1.5%).

Given that there is some underreporting, since firms lack the motivation to register their vacancies with the Public Employment Service (PES or DYPA in Greece), these figures should be treated as a lower boundary. In fact, there are surveys<sup>8</sup> that estimate many more job vacancies than the official PES data. Even so, recent data by ELSTAT,<sup>9</sup> referring to the fourth quarter of 2022, indicate that the number of vacancies has increased sharply

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4. These figures are available at <<https://ec.europa.eu/eurostat/web/experimental-statistics/skills>>, in section *Detailed data on over-qualification rate by economic activity for the period 2008 to 2020*.

5. This figure is available at <<https://www.cedefop.europa.eu/en/tools/european-skills-index>>.

6. <[https://ec.europa.eu/eurostat/databrowser/view/trng\\_cvt\\_01s/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/trng_cvt_01s/default/table?lang=en)>

7. <[https://ec.europa.eu/eurostat/databrowser/view/JVS\\_A\\_RATE\\_R2\\_\\_custom\\_5436116/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/JVS_A_RATE_R2__custom_5436116/default/table?lang=en)>

8. See for example <[https://insete.gr/blog\\_news/δελτιο-τυπου-ινσετε-03-03-2022-ινσετε-1-στις-5-θ/](https://insete.gr/blog_news/δελτιο-τυπου-ινσετε-03-03-2022-ινσετε-1-στις-5-θ/)>. According to the INSETE, there were 53,249 unfilled job posts in 2021 and more than 60,000 in 2022.

9. <<https://www.capital.gr/oikonomia/3704664/etisio-alma-42-stis-kenes-theseis-ergasias-stin-ellada-sto-kleisimo-tou-2022>>

(42%) since 2021Q4: from 14,713 to 20,927 vacancies. For instance, it is estimated<sup>10</sup> that more than 75,000 job posts will not be filled in Accommodation and food service activities this summer (2023).

## 9.2. Recommended policy changes to improve the educational outcome and labour market performance

Overall, stakeholders made twenty recommendations to improve the educational and labour market outcomes. Thirteen recommendations (65% of total) are associated with reforming the education and training system. Six more (30%) propose labour market interventions. Figure 13 presents the classification of the recommendations, while Table 4 provides a list of relevant abbreviations.

The recommendation involving the improvement of processes is —strangely enough— reported by only one stakeholder. In particular, it is recommended to monitor and assess the results of any reform or intervention adopted, i.e., any policy change, targeting either the education and training system or the labour market, in order to make necessary adjustments and achieve higher efficiency and improved results. Strange as it may sound, there are no systematic and comprehensive procedures to monitor and assess reforms apart from fragmentary efforts that are rarely made publicly available.

### 9.2.1. Non-formal education and training, recommended policy changes

Starting from recommendations associated with the education and training process, the reform considered most widely necessary involves lifelong learning (LLL), since 78.6% of stakeholders consider it as a step to improve labour market outcomes (Figure 14). LLL<sup>11</sup> is the process of increasing one's (usually an adult) human capital, i.e., the knowledge, skills, competences and other attributes embodied in individuals that are relevant to economic activity (OECD, 1998),<sup>12</sup> voluntarily and often outside the formal education system. Hence, LLL could also be considered part of the non-formal education and training system. LLL treats the process of human capital accumulation, including skills'

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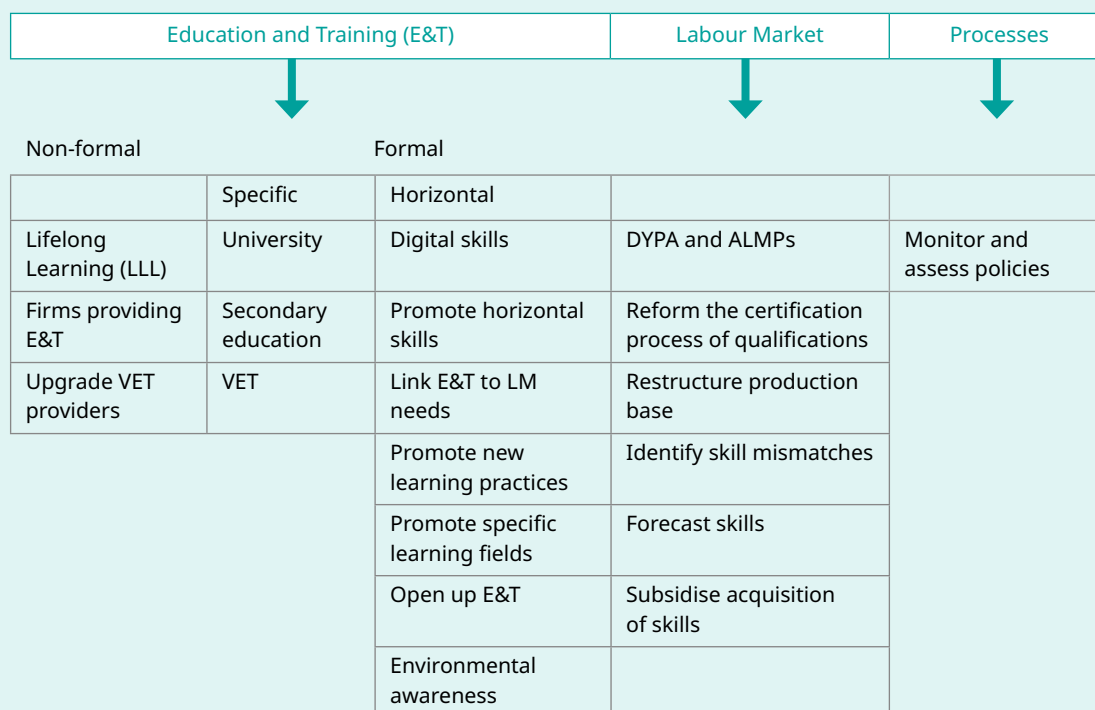
10. <<https://www.capital.gr/oikonomia/3699579/den-epistefoun-oi-ergazomenoi-ston-tourismo-pano-apo-80-xil-kenes-theseis-prin-to-anoigma-tis-sezon>>

11. According to UNESCO (2005), *Education for all: literacy for life; EFA global monitoring report, 2006*. Paris: UNESCO, 2005, LLL is 'the concept of learning as a process that continues throughout life to address an individual's learning needs. The term is used widely in adult education to refer to learning processes in many forms and at many levels.'

12. OECD (1998), *Human Capital Investment: An International Comparison*. Paris: Organization for Economic Cooperation and Development, Centre for Educational Research and Innovation.



**Figure 13 Classification of recommended policy changes**



**Table 4 List of abbreviations**

E&T	Education and Training
VET	Vocational Education and Training
LM	Labour Market
PES	Public Employment Service (DYPA)
LLL	Lifelong Learning
ALMP	Active Labour Market Policy
IEK	Institutes for Vocational Training (initial)
KEK	Centres for Vocational Training (continuous)
ICT	Information and Communications Technology
STEM	Science, Technology, Engineering, Mathematics

acquisition and development, as continuous throughout one's life span. Moreover, it is often offered through formal education institutions, like universities or post-secondary non-tertiary institutions (IEKs), but also other education providers, like the Centres for Vocational Training (KEKs). Either way, LLL clearly involves education and training. In this context, most stakeholders consider LLL necessary in order to upgrade existing skills and develop new ones whenever this is required by firms and the economy in general. The rapid technological advancements over the past years and the increasing job vacancies over time, especially when they involve lack of skills or their underutilisation, seem to justify such an argument.

One stakeholder (7.1%) recommends strengthening the role of firms in the provision of education and training to their employees. As previously discussed, Greek firms are less active in this respect. However, the best way to adapt the labour force to changing skill needs is through engaging firms, which actually demand those new skills, in the process of developing them. Other, less common, stakeholder recommendations (7.1%) regarding non-formal education and training include upgrading vocational education and training (VET) providers and engaging them in the design, implementation and assessment of VET programmes. In this way, accountability would be promoted and results could be improved along with the employability of the participants who are usually unemployed.

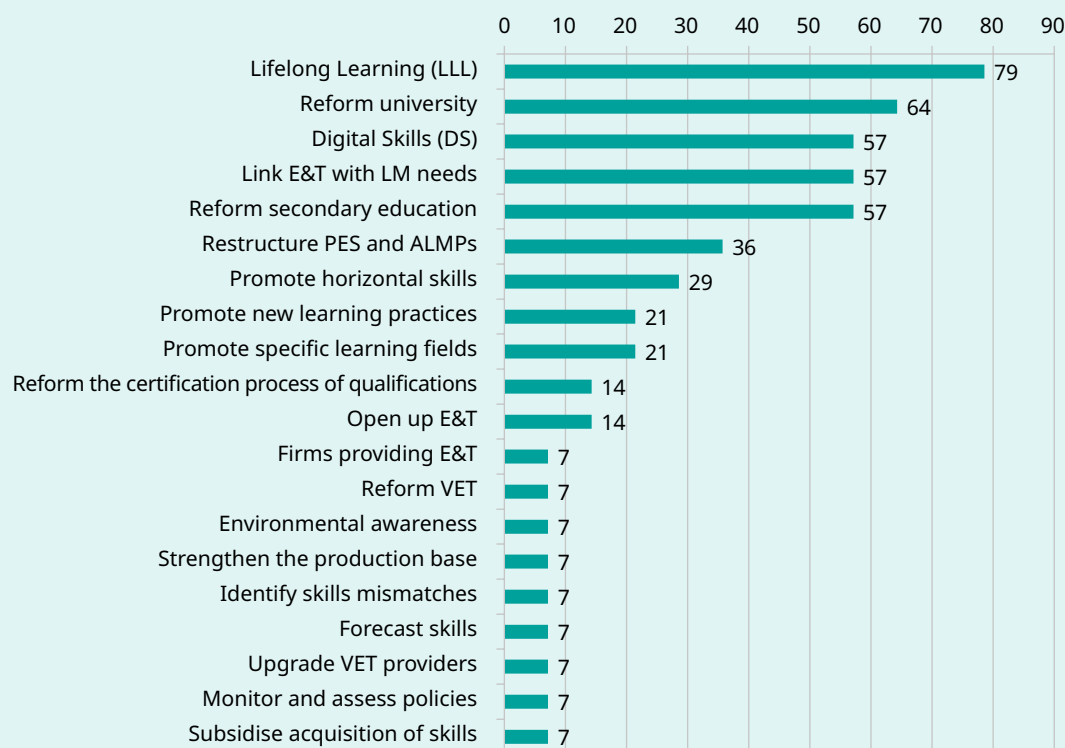
## **9.2.2. Formal education and training, recommended policy changes**

### ***Specific policy changes recommended for education and training***

The most popular intervention regarding formal education regards universities (Figure 14). Approximately 64.3% of the stakeholders argue that studies offered should develop skills that correspond to actual labour market needs through introducing new teaching practices like projects, simulation exercises, firm visits, etc. Such reforms would involve changes in higher education, in terms of both the syllabus and the curriculum. Cooperation between universities and businesses (definitely including small and very small ones) should be promoted, especially in the field of applied research. In the same context, it would be beneficial to increase cooperation between Greek universities and foreign ones, since the latter have already resolved several issues the former are now facing, like ways to effectively ensure and promote internships. Moreover, more efforts must be devoted to the promotion of the National System for Research and Innovation to improve the cooperation between universities, research centres and businesses, to support the restructuring of the Greek economy, to attract private investments and to increase employment opportunities for researchers (see also the Greek NPB [2022]).

More than half of the stakeholders (57.1%) suggest reforms in secondary education, specifically with a focus on 'Digital School' as a means to improve the educational

**Figure 14 Recommended policy changes (% of total responses)**



Source: Survey results, KEPE processing.

outcome.<sup>13</sup> Relevant reforms should include developing specific skills, improving infrastructure and ICT in schools, increasing internet speeds, updating and upgrading teachers' ICT skills systematically through suitable education and training programmes, introducing new teaching practices that incorporate ICT in the learning process, and adding subjects like informatics, robotics and new technologies to the curriculum. At the same time, a surprisingly much smaller share of stakeholders (7.1%) stresses the importance of vocational education and training (VET) in labour market outcomes and suggests reforming this type of education as a means to improve its effectiveness, attract more students, improve graduates' labour market prospects and reduce job vacancies. To be fair though, it could be that many more stakeholders referring to interventions across all levels of the education and training system (i.e., horizontal), which will be

<sup>13</sup> According to PISA, Greek 15-year old students perform poorly in subject like mathematics, science and reading. A brief summary for the 2018 results can be found at: <<https://gpseducation.oecd.org/CountryProfile?primaryCountry=GRC&treshold=10&topic=PI>>.

discussed in the next section, have vocational education and training in the back of their mind as well.

### ***Horizontal policy changes recommended for education and training***

Apart from addressing specific levels of education, most recommendations are more general and involve the entire education process and, therefore, are labelled horizontal. Two such popular recommendations are mentioned by 57.1% of the stakeholders (Figure 14). The first one is the development and upgrade of digital skills across all levels and types of education through prioritising the use of ICT in teaching and learning practices. The second recommendation suggests linking all types of education and training to the labour market through adapting both the syllabus and the curriculum across the board. In this way, it would become possible to improve the relevance of the education outcome and increase employability, i.e., the ability of an individual to find a suitable job, while, at the same time, decreasing job vacancies. A third recommendation, which is less popular but still supported by 28.6% of the stakeholders, stresses the need to provide students of all levels of education, starting from pre-primary education, with horizontal skills that apply in all situations, like working in a team, taking initiative, making decisions after utilising appropriate information, solving problems, etc.

Approximately one stakeholder in five (21.4%) supports the introduction of new learning practices in the education and training processes, like internships, apprenticeships and learning by doing. Although these practices have also been mentioned in the context of reforming higher and secondary education, this time the argument stresses the need for a change in the philosophy across all levels of education. Moreover, 21.4% of stakeholders also support the promotion of specific learning fields in higher and vocational education and training (initial and continuous) in the context of both formal and non-formal education. For example, steps to encourage students to acquire skills related to Science, Technology, Engineering and Mathematics (STEM) are deemed necessary, even though they are not thoroughly defined. Other stakeholders stress the need to focus on fields of study, like construction, green energy, digital transformation, the efficient use of water resources (for farmers), health and the production of drugs, the efficient management of cooperatives, especially in the agricultural sector, and tourism.

Additional recommendations call for policy changes in the education and training processes that are more general and less frequently cited. For example, 14.3% of stakeholders refer to the need to open up the education and training system to the society and the economy, as well as to the world. The aim is to promote the adaptability of the education and training system to changing social and economic conditions and to facilitate the transfer of best practices from abroad to the Greek system. Lastly, one stakeholder stresses the need to increase environmental awareness and protect the planet (7.1%).

### 9.2.3. Labour market, recommended policy changes

The most popular recommendation supported by five stakeholders (35.7% of total), involves restructuring the Public Employment Service (DYPA) and redesigning Active Labour Market Policies (ALMPs) (Figure 14). This is seen as a way to increase the effectiveness of both and improve the employment opportunities of the unemployed, who are the main beneficiaries of such interventions. Given that unemployment in Greece is considered primarily structural, the large share of the long-term unemployed is a solid argument in favour of that; education and training programmes aiming at the upskilling and reskilling of the unemployed are crucial and necessary to keep the unemployed attached to the labour market and prevent the depreciation of their human capital and skills.

A less popular suggested labour market intervention involves reforming the certification process of qualifications (14.3% of stakeholders). Clearly defining the necessary skills corresponding to each qualification would facilitate the design and implementation of more effective education and training programmes either in the context of the non-formal education and training system or in the context of active labour market policies, such as the education and training of the unemployed. Based on the need to reduce the occurrence of over-skilled individuals (i.e., vertical mismatch), one stakeholder suggests strengthening the production base of the economy so that it demands more skilled labour. That would be an interesting exercise; however, further details on how to accomplish that were not shared.

Digging deeper into the Greek labour market, one stakeholder recommends identifying skill mismatches before trying to restore the balance. This is not an easy task. However, the Labour Market Diagnosis Mechanism (LMDM), supervised by the Ministry of Labour and Social Affairs, is a valuable step towards this end. The next step would be to forecast skill needs or, in other words, to attempt to prevent skill mismatches from happening by adapting the output of the education and training system beforehand. It is easily understood that such an exercise entails risks that could themselves create serious imbalances should forecasts fail, but it is certainly an interesting suggestion. Last but not least, another stakeholder recommends subsidising the development of skills as a means to motivate both individuals and businesses to invest in both upskilling and reskilling.

## 10 Conclusions

The analysis of the findings of the first public consultation process conducted by the Greek National Productivity Board offers several useful insights about the way various

social partners and stakeholders a) perceive productivity and competitiveness, and b) consider suitable policies to treat related problems of the Greek economy. The results constitute an original database of a qualitative nature that allows researchers and policy facilitators/makers to design and evaluate arguably more effective and socially acceptable measures to enhance productivity and competitiveness, on a basis of greater consensus and common understanding.

The findings verify the considerable heterogeneity of perceptions and the multifaceted policy options considered to tackle productivity and competitiveness issues. For this reason, the responses were classified into several broad categories for analysis and comparison purposes. Regarding the questions about productivity and competitiveness, the proposed policies included in each category can be considered –to a large extent– as complementary among each other. Additionally, productivity and competitiveness problems and relevant measures were found to largely coincide with each other.

Such common problems include institutional dysfunctionalities, the limited financing of businesses and the insufficient investment in R&I and utilisation of labour input/skills. Correspondingly, common productivity and competitiveness enhancing policies encompass institutional reforms in the public sector and markets; incentives for encouraging private investments in high-tech, knowledge intensive, export-oriented sectors; public investment in high value-added, export-oriented and new-economy sectors; improvement of the financing of businesses, educational/skills development policies and promotion of mergers and joint ventures.

Regarding the key sectors of the Greek economy, the findings suggest that a combination of short-term policies, such as increased public spending, and long-term policies, such as boosting productivity in the secondary sector and promoting exports, could help to revitalise the Greek economy. In addition to supporting major key industries, such as several manufacturing activities and storage/transport services, the reduction of import dependency could foster more sustainable and resilient growth and reduce unemployment. However, it is worth noting that stakeholders use different criteria for selecting key industries and do not sufficiently take into account the high dependence of most industries belonging to the secondary and primary sectors on imports.

Regarding the issue of the green transition, stakeholders' views on suitable direct policies are largely aligned with the extant literature and international indices. Stakeholders also raised the issue of fairness, which is not often met in the international green transition indices and reports, but it is very important from a socioeconomic perspective. The first major subgroup of policies refers to renewables, while the second one relates to the circular economy/recycling. As far as the issues of education, skills and labour market are concerned, more than half of the stakeholders' recommendations concentrated on how the educational outcome and the labour market performance can be improved through i) lifelong learning, ii) reforms in the tertiary education, iii) the development of digital skills, iv) the linkage between education and training and labour market needs, and v) reforms in secondary education.

By and large, the outcomes of the public consultation process show the need for adopting a comprehensive plan with the use of multiple (fiscal, macroprudential, institutional, employment, education, planning) measures. In this way, a better policy coordination and strategic complementarities among production factors can be achieved, while taking into account the main economic and societal challenges, such as those related to the climate crisis, technological progress and population aging.

The public consultation can proceed to the next stage where all social partners and other stakeholders would give their feedback on the aggregate results and comment on them in order to crystallise their recommendations and widen acceptability and consensus on the main productivity and competitiveness issues. This process can also be extended to encompass further stakeholders, e.g., from regional/local authorities and chambers,<sup>14</sup> to help more adequately address the spatial dimension of productivity issues that the Greek economy faces.

## References

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<sup>14</sup>. A relevant process involving questions for local productivity and competitiveness issues on Greek islands is the Barometer of Insular Entrepreneurship <<https://www.surveymonkey.com/r/islandentre>>.





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