HELLENIC REPUBLIC
Ministry of Labour and Social Insurance

GREEK PUBLIC EMPLOYMENT SERVICE (DYPA)

Strategy for Labour Force Upskilling and Connection to the Labour Market

Update 2023

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MINISTRY OF LABOUR AND SOCIAL INSURANCE

GREEK PUBLIC EMPLOYMENT SERVICE (DYPA)

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Summary

The Strategy for Labour force Upskilling and Connection to the Labour Market 2023 (hereafter the Strategy) is a revised strategy document that takes into account recent developments in the fields of knowledge, competence and skills (hereafter skills) and the labour market. The Strategy incorporates the comments/ observations/ suggestions of the social partners and other stakeholders, with the longstanding aim of "developing a coherent framework for the diagnosis of the skills needs of the labour market, the anticipation of these needs in the near and medium-term future and the use and adaptation of continuing vocational training actions in order to enable the labour force to acquire or upgrade modern skills, so that they can be directly and successfully integrated into the labour market" (Paragraph 1 of Article 26 of Law 4921/2022).

The institutional foundation of the Strategy is Article 26 of Law 4921/ 2022 (Government Gazette A' 75). According to Paragraph 2 thereof, its specific objectives are defined as follows:

- The effective matching of labour supply and demand, in terms of required skills.
- Monitoring and identifing the current occupational trends and skills that meet the requirements of the national labour market with a focus on digital and green growth.
- Enhancing access for all stakeholders without discrimination and exclusion to continuing vocational training and retraining programmes.
- Promoting the active participation of social partners in the design and implementation of continuing vocational training programmes.
- The systematic measurement and evaluation of the results of continuing vocational training, as well as ensuring the quality control of continuing vocational training providers and the programmes offered, in order to improve the employability of beneficiaries and better link them to the skills needs of the labour market.
- The evaluation and improvement of funding models for continuing vocational training by linking the fees of vocational training providers to their performance in terms of employability of beneficiaries, with a view to optimising the efficient management of resources and the effectiveness of the interventions concerned, achieving transparency and simplifying procedures.
- Evaluation and upgrade of the Strategy's governance model by simplification and improvement of the coordination and cooperation between all stakeholders.

A sub-objective of the Strategy for 2023 is to emphasise the provision of opportunities to develop skills that relate to the needs of the trainees, society and the economy. An important aspect in this respect is to encourage businesses to offer better quality jobs; so that upskilling and reskilling programmes for both unemployed and persons employed can provide the necessary conditions for recruiting and retaining skilled staff by businesses, which in turn will make them more productive and competitive. The analysis of the data on training programmes to date and the proposals of relevant stakeholders also revealed the need to extend such programmes to owners of micro -companies, especially those operating outside large urban centres.

A prerequisite for the achievement of the Strategy's objectives is the continuous improvement and evaluation of the quality of teaching and training at all stages of the educational process, and also ensuring the participation of larger percentages of the active population in vocational training activities.

With its annual update the Strategy needs to respond to rapid socioeconomic developments, environmental challenges and rapid technological changes, especially after the dynamic entry of artificial intelligence, cloud computing services and big data management and harvesting[1]. In this context, the upskilling trend supports the process of labour force development and is also a key component for a decent work. It not only aims to increase the value and productivity of work, but also to enrich the lives of the labour force by improving access to the labour market and enhancing their adaptation to a changing, technology-driven and globalised environment.

The Strategy aims to fill the gap created by the skills mismatch between supply and demand in the labour market, through an integrated approach at the level of structures, processes, policies and synergies in order to further develop the employability of the labour force and thus broaden their career prospects and opportunities.

The Strategy specifies the national strategic directions for training, skills and modernisation of the Greek Public Employment Service (DYPA, its acronym in Greek - formerly OAED), as reflected in the objectives of the Ministry of Labour and Social Security on the National Reform Plan "Greece Forward" (2021), in the Digital Transformation Paper 2021-2025, as well as in the National Reform Programme, which is being prepared in the context of the European Semester process. Additionally, it adopts the guiding proposals of the Recovery Plan for the Greek Economy (Pissarides Commission Report, 2020). At the same time, it constitutes a flagship pillar for the implementation of the National Recovery and Resilience Plan "Greece 2.0" (2021), which explicitly seeks to reform the model of continuing vocational training through upskilling the labour force.

The longstanding objective of the Strategy is the transformation of the labour market by upgrading and creatively utilizing the skills of the labour force and at the same time matching the needs of society and the economy and also the rapid technological and environmental changes, by strengthening business innovation and resilience, upgrading the digital skills of the labour force, cultivating environmental awareness and promoting responsible environmental behaviour, through a transformation of needs diagnosis into targeted actions that support skills development with a sectoral, occupational, local and demographic specification, taking into consideration the particular needs of each beneficiary, including persons with disabilities.

The Strategy is fully compatible with the European Pillar of Social Rights (Chapter I: Equal Opportunities and Access to the Labour Market), and in particular with the actions of the sub-chapter on "Education, Training and Lifelong Learning", incorporating in particular the target of

[1] https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en

"at least 60% of all adults should attend training every year by 2030". It also adopts the key principles of the European Skills Agenda which aim to a) enhance sustainable competitiveness (through complementary strategies such as the European Green Deal, European Digital Strategy, etc.), b) ensure social justice through equal access to education, training and lifelong learning for all across the European Union, and c) build resilience to respond to crises, building on the lessons learned during the COVID-19 pandemic.

Finally, it endorses the conclusions of the Osnabrück Declaration (2020) on vocational education and training as a driver for recovery and a just transition to the digital and green economy, as well as the European Disability Rights Strategy 2021-2030, and in line with the principle of equal treatment of Article 3 of Law 4443/2016, supports the equal terms of access to work and employment, working conditions and education/ training, not only due to disability or chronic illness but of all people irrespective of race, colour, national or ethnic origin, genealogical descent, religious or other beliefs, disability or chronic condition, age, family or social status, sexual orientation, identity or gender characteristics.

The Strategy from the labour market side complements the Strategic Plan for Vocational Education, Training, Lifelong Learning and Youth, which is proposed by the Central Council for Vocational Education and Training to the Minister of Education and approved by the Parliament. The Strategic Plan 2022-2024 approved by the Central Council for Vocational Education and Training (CCVET) includes three sub-pillars and sub strategies for a) Vocational Education and Training, b) Lifelong Learning focused on Adult Learning, and c) Youth, which are placed under the same strategic objectives and complement each other in the light of a holistic approach to the mentioned fields.

Finally, the Strategy is in synergy with related strategies, such as the National Strategy for Active Employment Policies, the National Action Plan for the Rights of Persons with Disabilities, the National Strategy for Social Inclusion and Poverty Reduction, the National Strategy and Action Plan for the Social Inclusion and Empowerment of Roma 2021-2030, and the National Integration Strategy.

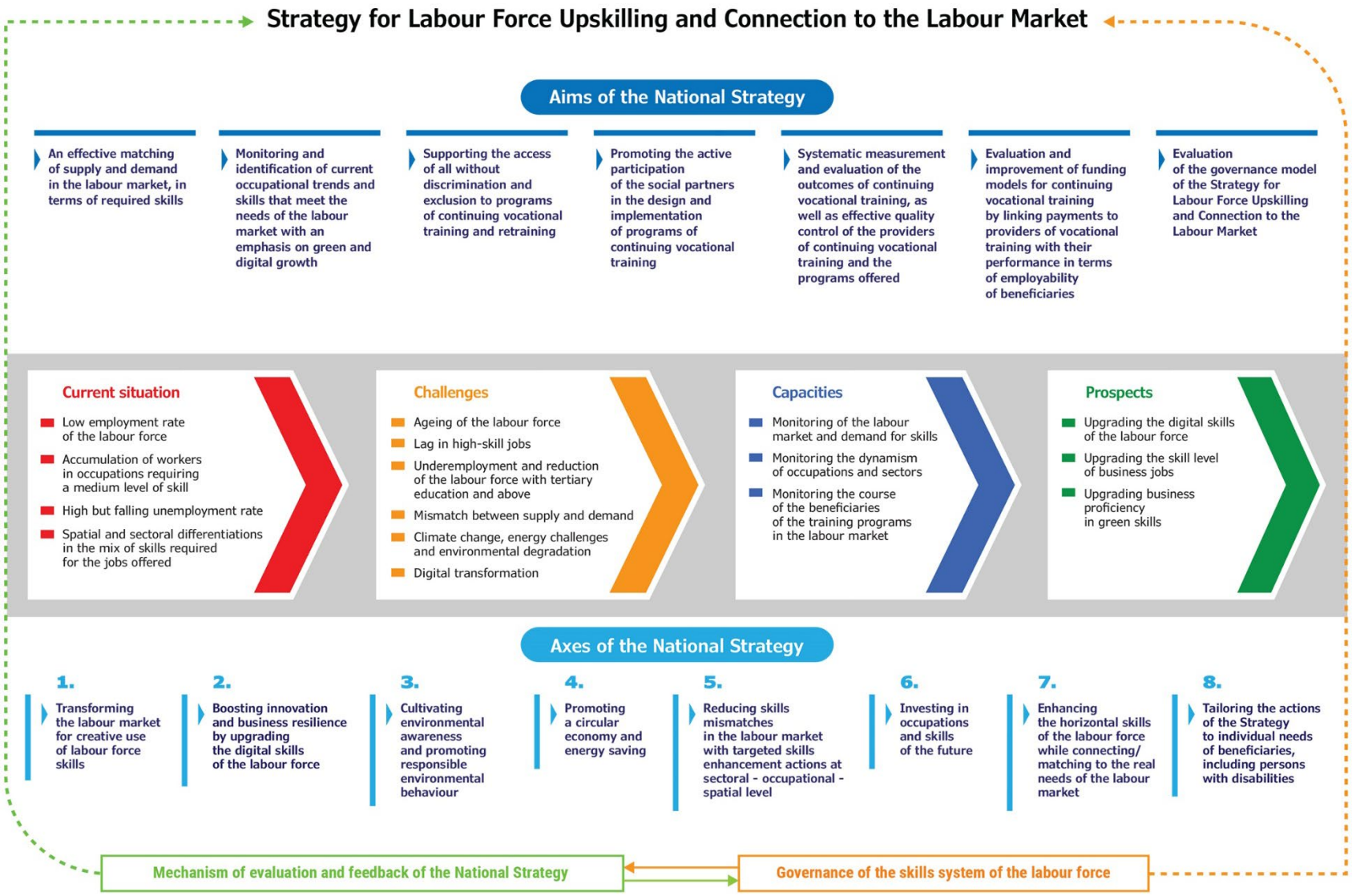


Figure 1. Aims and Axes of the National Strategy for Labour force Upskilling and Connection to the Labour Market

Introduction

The changing nature of work and skills is an important and controversial issue in the public policy debate. Interest in this issue from think tanks, businesses, international organisations, governments and the general public has continued to grow in recent years[2]. The rapid changes triggered by, among other things, the dual, digital-green transition are constantly changing the landscape in terms of job supply and demand. The European Commission's designation of 2023 as the Year of Skills marks the awareness of the need to focus on identifying, highlighting and integrating the skills required by the market in the vocational education and training policies.

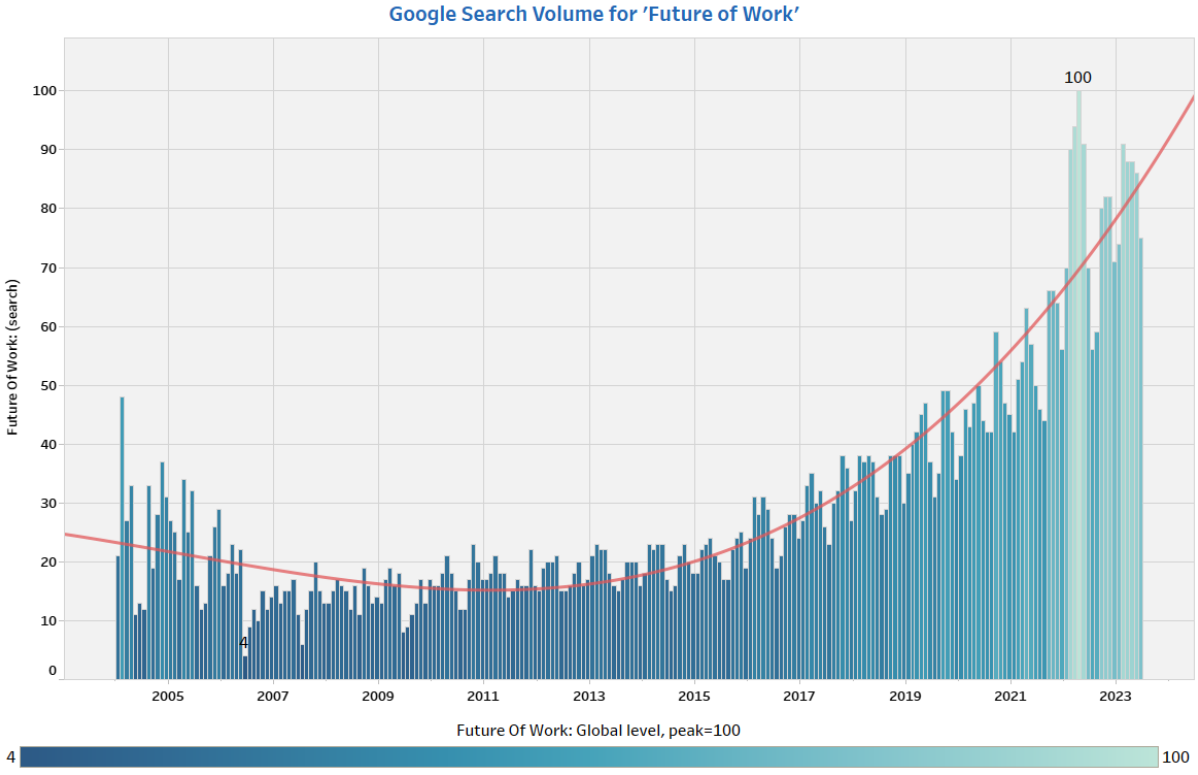


Figure 2. Google Search Volume for "Future of Work" (Global level, cutting-edge=100)
Source: Google Trends. Update data based on JRC idea

[2] Arregui Pabollet, E., Bacigalupo, M., Biagi, F., Cabrera Giraldez, M., Caena, F., CastaÃ±o MuÃ±oz, J., Centeno Mediavilla, I., Edwards, J., Fernandez Macias, E., Gomez Gutierrez, E., Gomez Herrera, M., Inamorato Dos Santos, A., Kampylis, P., Klenert, D., Lopez Cobo, M., Marschinski, R., Pesole, A., Punie, Y., Tolan, S., Torrejon Perez, S., Urzi Brancati, M. and Vuorikari, R., The changing nature of work and skills in the digital age, Gonzalez Vazquez, I., Milasi, S., Carretero Gomez, S., Napierala, J., Robledo Bottcher, N., Jonkers, K. and Goenaga Beldarrain, X. editor(s), EUR 29823 EN, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09206-3, doi:10.2760/679150, JRC117505.
https://publications.jrc.ec.europa.eu/repository/handle/JRC117505

At the international level, economic, health and geopolitical trends have created divergent outcomes for labour markets in 2023. While high-income countries are approaching the full employment of the labour force, in low- and middle-income countries unemployment remains high compared to the period before the COVID-19 pandemic. At the individual level, labour market characteristics also diverge, with workers with basic education, young people, women, persons with disabilities and especially women with disabilities experiencing much lower employment rates. At the same time, real wages are falling as a result of an ongoing crisis and rising costs of living, mainly due to the significant inflationary pressures of recent years, while changing worker expectations and concerns about the quality of work are becoming increasingly important issues worldwide. The adoption of cutting-edge technologies (big data, cloud computing, AI, machine learning) will remain a key driver of business transformation, at least until the end of the current decade. It is also noteworthy that the biggest impacts on job creation and job loss come from environmental and technological trends[3].

The European Union (EU), responding to the challenges of modern labour markets and wishing to further highlight the issue of skills mismatch at European level, has designated 2023 as the European Year of Skills. The European Year of Skills aims to address the skills gaps in the EU and strengthen the EU's skills strategy, which will help to renew the skills of the labour force with a focus on digital and green technology skills. This will require collective action to help, on the one hand, the unemployed and workers to acquire the right skills for quality jobs, and, on the other the businesses, in particular micro, small and medium-sized businesses, through national or European initiatives and funding opportunities.

In this context, the Greek government is proceeding with the annual update of the Strategy for Labour force Upskilling and Connection to the Labour Market for 2023 (hereafter referred to as Strategy 2023), by further specifying the framework for upgrading labour force skills, with the ultimate aim of changing the domestic model of human capital development and, by extension, transforming the labour market itself, so that it functions efficiently and supportively to the national production base.

In the context of the continuous evaluation, feedback and optimisation of the Strategy and the incorporation of the comments/ observations/ suggestions of the social partners and other stakeholders, theoretical and methodological clarifications are set out below.

Both the 2022 and 2023 Strategies are not based on the implication that unemployment is the result of wrong choices or shortcomings on the part of workers and unemployed. The causes of unemployment should be sought in macro factors, such as insufficient aggregate demand, which, however, are not within the remit of DYPA to influence decisively. The scope of intervention of DYPA is at the micro-level, i.e. it concerns the facilitation of the matching between labour supply and demand, and indeed in relation to skills, as the objective of this Strategy suggests, while a broader framework of unemployment policies can be sought, for example, in the National Employment Strategy. It is understood that, at this level, it is important that (a) businesses adapt

[3] The Future of Jobs Report 2023. World Economic Forum.
https://www.weforum.org/reports/the-future-of-jobs-report-2023/

their orientation towards upgrading the know-how and skills of their staff, and (b) the potential of the Continuing Vocational Training (CVT) system is updated to provide modern skills for trainees. In this context, the first and overarching objective of the Strategy has been and remains the transformation of the labour market for the creative use of labour force skills in production and provision of services, through the investment of businesses/ organisations in the development and exploitation of labour force skills, with a particular focus on small and micro businesses located outside major urban centres, i.e., where the vertical skills mismatch is most pronounced.

Strategy 2022 makes clear reference to the problem of the deficit of Greek businesses compared to the rest of Europe in terms of the integration of high-skilled jobs.[4] Moreover, the reference on p. 38 of Strategy 2022 should not be understood as apportioning responsibility for the vertical skills mismatch to workers and/ or the unemployed, since, on the contrary, it documents the adverse options workers are facing due to the insufficient supply of high-skill jobs by businesses. As noted, "… about 4 out of 10 unemployed people with tertiary education are looking for a job with moderate rather than high skills. This highlights the fact that the unemployed adjust their expectations to the labour market's tendency to absorb mainly workers in medium-skilled occupations".

Strategy 2022 does not underestimate the value of the occupational profiles with ESCO's classification of knowledge, competences, skills and qualifications (hereafter referred to as skills), nor does it attempt to replace them. The certification of occupational profiles by the National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP, its acronym in Greek) consititues an autonomous process of deliberation and consensus between the representatives of employers and persons employed aiming atthe systematic analysis and recording of both the occupation's content as well as the paths through which the requisite qualificaitons for practicing it can be obtained.

The skills corresponding to an occupation are only one part of an occupational profile. The use of ESCO does not attempt to substitute the occupational profiles, but provides opportunities to highlight the technical skills that the labour market is looking for today and in the future. Given the self-evident focus of a Skills Strategy on skills, we focus on highlighting the most dynamic skills, not by diminishing the status of the occupations, but by highlighting, at the basis of the occupations, those skills that are linked (depending on the sector, Region, gender, age, status and type of employment) with the creation of morenew jobs, the highest earnings, the highest share of employment, the highest diffusion in analytical sectors of economic activity (4th level of classification) of each analytical occupational category (at 4th - 5th - 6th - 6th - 7th - 8th level of ESCO analysis). The continuous development of occupational profiles remains an important objective of the State. The analytical approach of the Strategy can contribute to the selection and content of the occupational profiles by prioritising the occupations for which a profile should be drawn up according to the results of the Labour Market Diagnosis Mechanism (MDAAE, its acronym in Greek), and by providing the possibility to compliment/ compare the section of the profiles that

[4] See Section 6.1: "Current situation, trends and prospects" (p. 23), Section 6.2 "Skills and the labour market in Greece: Current situation, challenges, trends and prospects" (p. 25), Section 6.3.2.

concerns the skills with those highlighted by the wider European experience of skills according to ESCO.

Strategy 2022 does not attempt any systematic evaluation of the quality of the continuing vocational education and training (CVET) systems. However, taking into account that the quality of curricula is the most important factor in the effectiveness of CVET (see surveys of EOPPEP and INE-GSEE), Strategy 2023 in its proposed actions sets out specific learning objectives for the development of the preferred digital and green skills. At the same time, through the skills forecasting tools developed in the framework of the MDAAE and presented below, it also aims to delineate learning objectives at a detailed occupational level within different sectors of economic activity, as a contribution to the development of updated curricula.

Strategy 2023 consists of the following chapters:

1. The first chapter presents recent developments in the field of labour market and skills at European level, focusing on green and digital skills.
2. The second chapter presents the actions implemented in the previous period as well as the characteristics of the labour market based on the innovative tools created to support the planning and implementation of Strategy 2022.
3. The third chapter analyses the individual actions proposed to achieve the objectives of Strategy 2023.
4. Chapter four sets out the framework for the governance of the labour force skills development system.
5. Finally, the sources and amount of funding that can be used to finance the individual actions of the Strategy are indicated.

1. Recent labour market and skills developments at European and global level

1.1. Green skills

According to the World Economic Forum, businesses predict that among the environmental, technological and economic megatrends that affect the labour market, the strongest impact on job creation will be due to investments that facilitate the green transition of businesses, enable the wider application of Environmental, Social and Governance (ESG) standards and make supply chains more local, while job growth may be partly offset by job displacement.

At the same time, as Europe rebuilds itself after the COVID-19 pandemic and has set an ambitious goal of becoming climate neutral by 2050, it is equally important to ensure that existing and new education and training policies and practices address current labour market problems, rather than exacerbate them.

International organisations (e.g., OECD, ILO, UNESCO), the European Commission and EU agencies (e.g., CEDEFOP, the European Training Foundation and Eurofound) in the past have carried out surveys to identify the characteristics and types of green jobs in order to provide a real assessment of the supply and demand for green jobs.

Janta et al.[5] in their study note that until autumn 2022 there was no commonly adopted approach to define and measure green jobs and skills at international, European or national level, with various organisations and governmental bodies formulating and adopting their own definitions and approaches. In general, the available definitions cover a wide range of approaches depending on their context, ranging from a narrow view focused on environmental conservation to a much broader view encompassing any job and skill that directly or indirectly contributes to mitigating climate change and harmful impacts on the environment (UNESCO, 2021). Historically, a narrower understanding was more prevalent, however, there has been a notable shift over the years towards defining green jobs, as any job that involves a range of skills and tasks required for the green transition. For example, while CEDEFOP's 2012 definition of green jobs was more focused on the labour market, its more recent 2022 definition takes a broader societal approach.

- The ILO (2018) definition of a green job focuses on the characteristics of the job and states that green jobs are "jobs that reduce energy and raw material consumption, reduce greenhouse gas emissions, minimise waste and pollution, protect and restore ecosystems, and enable businesses and communities to adapt to climate change". This definition highlights that "green jobs" are jobs that reduce the environmental impact or footprint of businesses and economic sectors to ultimately sustainable levels while meeting the requirements of decent work: adequate wages, safe conditions, workers' rights, social dialogue and social protection (CEDEFOP 2019a; UNEP et al. 2008).

[5] Janta, B., Kritikos, E. and Clack, T. (2023). "The green transition in the labour market: how to ensure equal access to green skills across education and training systems", EENEE Analytical report. doi: 10.2766/563345.

- CEDEFOP's definition of "green jobs" characterises them according to the range of skills involved. "Skills", under a broader interpretation, is a generic term denoting "the knowledge, ability and experience required to perform a specific task or project". The most recent definition by CEDEFOP (2022:1) of "skills for the green economy" states that these are "the knowledge, skills, values and attitudes required to live, work and act in economies and societies that seek to reduce the impact of human activities on the environment". In this context skills development encompasses all forms of human resource development: lifelong learning, including initial and continuing vocational education and training, and lifelong learning, including formal and informal/non-formal learning (CEDEFOP 2019a). CEDEFOP's definition has also been adopted by other European classifications or methodologies such as for example the European Skills, Competences, Qualifications and Occupations Classification (ESCO) (ESCO 2022).

- The OECD follows the ILO or CEDEFOP definitions, depending on the publication. The OECD survey focuses more on "green skills" than on "green jobs".

In autumn 2022, the inter-agency working group on work-based learning, composed of the European Commission, the European Training Foundation (ETF), CEDEFOP, OECD, ILO and UNESCO, published a definition of "skills for the green transition" based on the respective definitions used by these organisations. "Skills for the green transition" mean the skills and competences, as well as the knowledge, competences, values and behaviours required to live, work and act in resource-efficient and sustainable economies and societies. They are:

- **Technical skills**: required to adapt or implement standards, processes, services, products and technologies to protect ecosystems and biodiversity and to reduce energy, material and water consumption. Technical skills may be occupation-specific or cross-cutting and
- **Cross-cutting skills**: linked to sustainable ways to think and act, related to work (in all economic sectors and occupations) and life. Alternatively, they are referred to as "sustainability skills", "life skills", "soft skills" or "core skills" (EC et al. 2022).

1.2. Digital Skills

In recent years, the 4th industrial revolution has been accompanied by concerns that digital technologies and automation will lead to job losses. Already, CEDEFOP's first pan-European skills survey in 2014 found that 43% of persons employed experienced changes in their working environment due to new digital technologies.[6] Early research predicted that up to half of jobs in advanced countries could be replaced by AI algorithms. However, 7 years later, according to the second CEDEFOP survey, despite strong concerns, only 4% of the European labour force (and 11% of those who had to acquire digital skills) experienced job losses. For 31% of persons employed, the introduction of new technologies was accompanied by the creation of new tasks, either in addition to old tasks or replacing them. As Efstratoglou & Kritikidis (2023, p. 174)[7] note, the higher the knowledge intensity, the more positive the employment changes, and conversely, the lower the knowledge intensity, the higher the employment losses. At the same time, as can be seen from the MDAAE's business surveys, the more positive the assessment of persons employed' digital skills proficiency, the more positive the assessment of the firm's prospective performance.

But what are the digital activities of persons employed in their workplaces? According to the CEDEFOP Europe-wide survey, it appears that:

- 72% use the internet for browsing, emailing or using social media.
- 65% write or edit text.
- 57% use spreadsheets.
- 48% use specialised software depending on the sector and occupation.
- 36% prepare presentations.
- 25% use advanced spreadsheet functions, e.g., macros.
- 18% manage databases.
- 13% develop or maintain IT systems, hardware or software.
- 7% write programs or codes.

Regarding investment in digital skills training, the analysis of the survey results shows that 52% of Europe's persons employed need to further develop their digital skills to improve their efficiency in their jobs.

[6] CEDEFOP (2022). Challenging digital myths: first findings from Cedefop's second European skills and jobs survey. Luxembourg: Publications Office. Policy brief. http://data.europa.eu/doi/10.2801/818285.

[7] Efstratoglou & Kritikidis (2023). Technological developments, human resources and occupations. Athens. INE-GSEE.

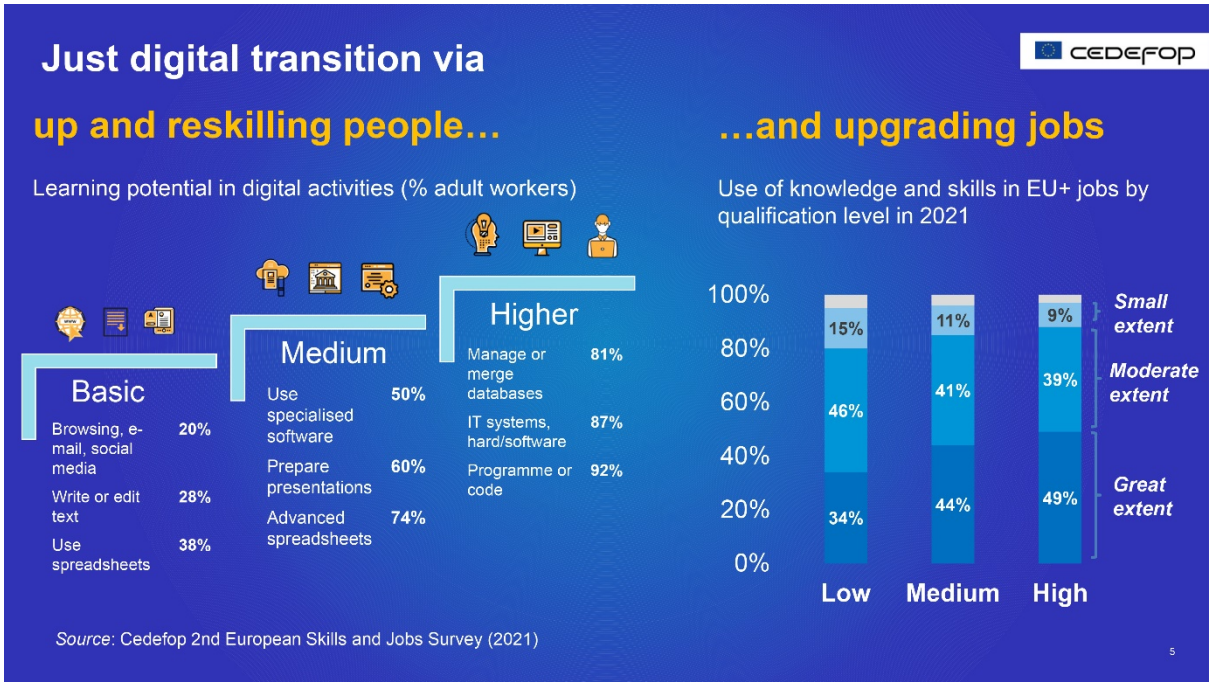


Figure 3. Cedefop 2nd European Skills and Jobs Survey (2021)

Alongside the development of technical and digital skills, the importance of developing and utilising the soft skills of the labour force, such as creative and critical thinking, problem solving, communication and teamwork/ collaboration, is highlighted.[8] According to WEF global research, priority should be given to developing skills such as analytical thinking, creative thinking and the use of artificial intelligence.

[8] Matthias Galster, Antonija Mitrovic, Sanna Malinen, Jay Holland, Pasan Peiris, Soft skills required from software professionals in New Zealand, Information and Software Technology, Volume 160, 2023, 107232, ISSN 0950-5849, https://doi.org/10.1016/j.infsof.2023.107232.

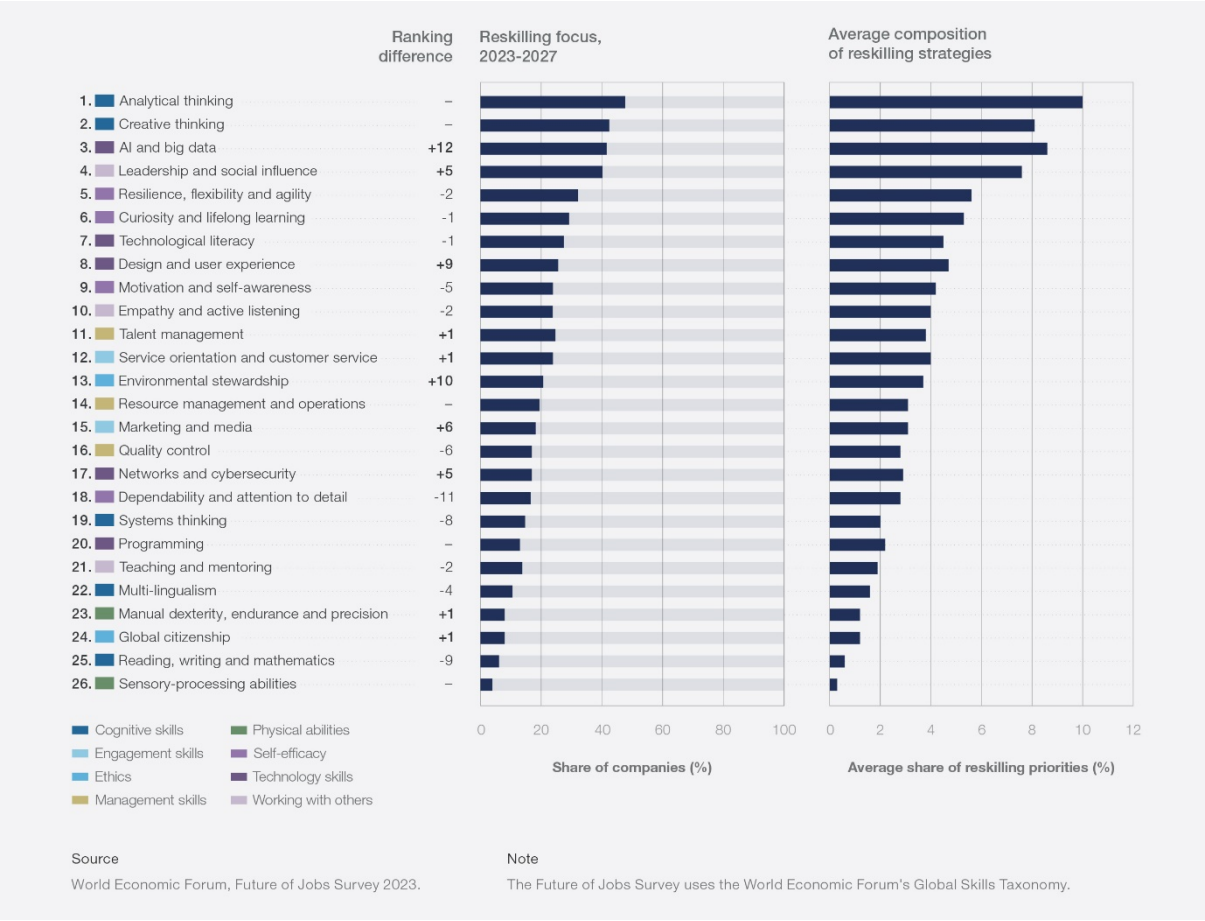


Figure 4. Global Skills Taxonomy, World Economic Forum, Future of Jobs Survey 2023

2. Actions implemented in the previous period under the objectives of Strategy 2022

2.1. Upskilling Programmes

In the previous period (from 1/7/2022 to 15/5/2023), training activities were carried out by DYPA, with funding from the Recovery and Resilience Fund, in the framework of the projects:

1. "Upskilling and reskilling programmes for unemployed people in high demand sectors, with particular emphasis on digital and green skills", aiming to effectively link them to the labour market and improve their employability as well as to maintain future jobs. Aimof the project was the provision of theoretical training services - leading to the certification of the knowledge and skills acquired in the framework of the training - and will be addressed to beneficiaries, registered in DYPA Register of unemployed persons, aged over 18 years old. The aim of the project was to upskill and reskill the unemployed persons in the framework of the National Recovery and Resilience Plan. More specifically the project aimed for the beneficiaries either to acquire new knowledge and skills or upgrade them as well as obtain the relevant certification, in order to meet the modern labour market requirements in sectors of the economy with growth prospects, with the following objectives:

- Preventing and tackling unemployment, through upskilling the unemployed persons and in particular in the field of digital and "green" knowledge and skills.
- Enhancing the unemployed persons' employability.
- The qualitative upskilling of the unemployed, through continuing vocational training programmes that meet the modern requirements of the productive structure and the economy.

2. "Upskilling and reskilling programmes for unemployed people in high demand sectors, with particular emphasis on digital and green skills" under the action: "SUB2: Horizontal upskilling/reskilling programs to targeted populations - Action 16913". The aim of the project was to upskill private sector employees in line with the skills dictated by modern trends in the workplace, and to improve the productivity of the benefiting workers and to support job retention within the framework of the National Recovery and Resilience Plan, which includes an integrated and coherent set of reforms and investments structured in four (4) Proposal Packages that make up eighteen (18) Sub Axes. The present project is part of the third (3) package: Employment, Skills, Social Cohesion, and in particular the sub-Axis 3.2: Strengthening the digital capacities of education and modernising vocational education and training. More specifically the project aimed for the beneficiaries either to acquire new knowledge and skills or upgrade them as well as obtain the relevant certification, in order to meet the modern labour market requirements in all sectors of the economy. The implementation of the project was expected to achieve the following indicative objectives:

- Upgrading vocational knowledge, skills and competences - and in particular the digital and "green" skills of private sector employees in all sectors of the Greek economy.
- Improving staff productivity.
- Qualitative upgrading of knowledge, competences and skills, through continuing vocational training programmes, which meet the modern requirements of the productive sector and the economy. The results of this project will both support the enhancement of the skills of human resources and contribute to the preservation of workers' jobs.

In total until 15/5/2023 162,843 beneficiaries received training/ were upskilled, of which 108,403 were unemployed and 54,440 were employees. Specifically, of the 162,843 who started the training, 68.92% finished the training and 50.18% were certified. In particular, due to the fact that the employees' programmes started later, by the date of the audit only 35.14% of the employees had finished the training and 7% had been certified, while 85.88% of the unemployed had completed the training and 71.86% had been certified. There was no differentiation in the status of beneficiaries in relation to the training theme (green or digital skills). Off all the beneficiaries, 82.12% were trained in digital skills and 17.88% in green skills. At regional level, Western Macedonia had the lowest percentage of beneficiaries trained in digital skills and the highest in green skills. Regarding digital skills, the modules that attracted about 80% of the beneficiaries were Basic digital skills and office applications, Digital marketing and E-commerce. In terms of green skills, the modules that attracted 80% of the beneficiaries were Circular economy, Business skills for exploiting green opportunities, Environmental restoration methods, Bioclimatic design and Energy performance of buildings.

Training of registered unemployed and employees

Training theme	Programme phase	Grand Total	Unemployed	Employeess
Grand Total		162.843	108.403	54.440
DIGITAL SKILLS	Started the training	133.729	87.119	46.610
	Completed the training	91.288	75.071	16.217
	Certified	65.841	62.834	3.007
GREEN SKILLS	Started the training	29.114	21.284	7.830
	Completed the training	20.941	18.026	2.915
	Certified	15.877	15.061	816

Figure 5. Training of registered unemployed and employees (Digital and Green Skills)

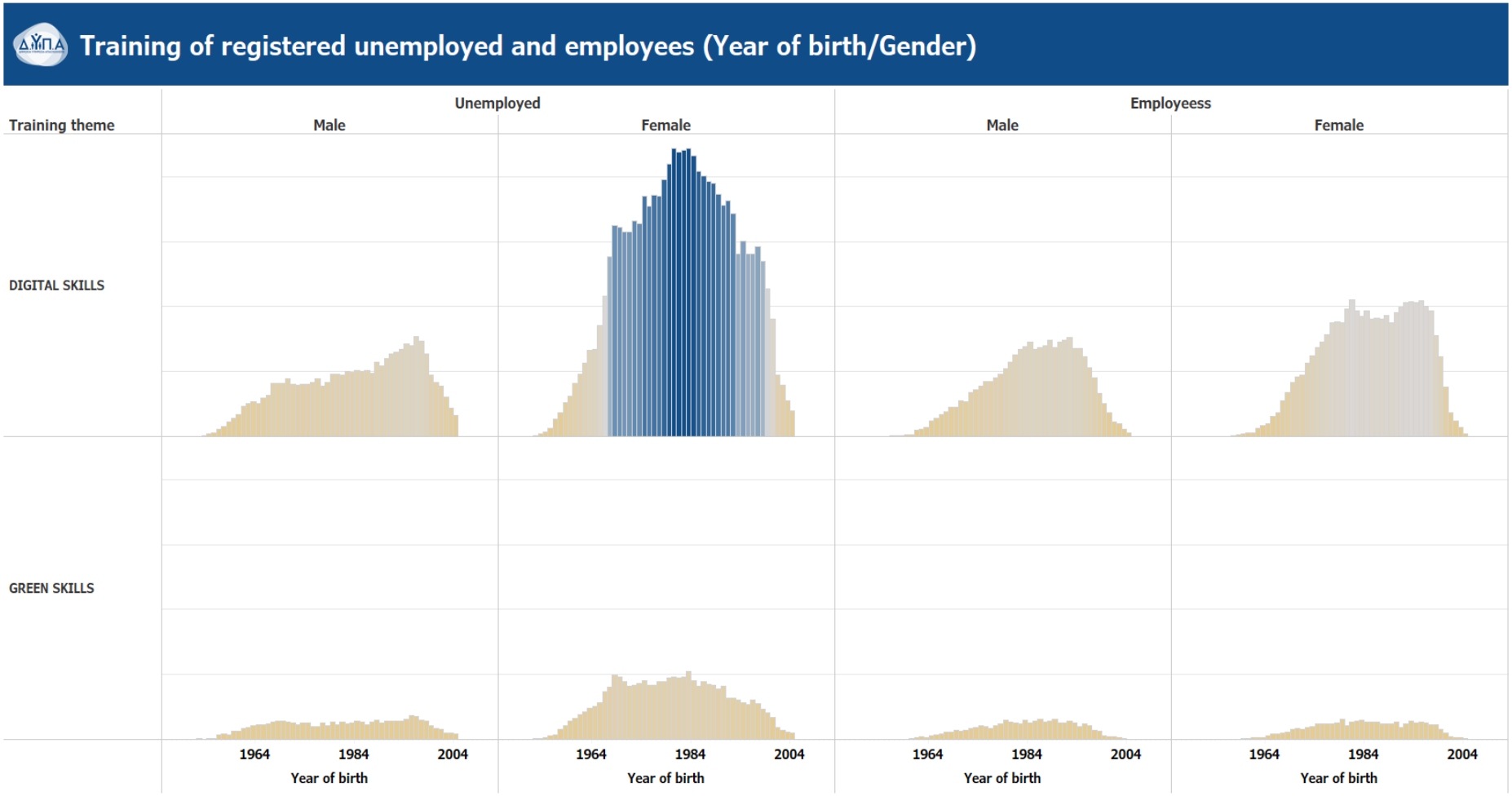


Figure 6. Training of registered unemployed and employees (Digital and Green Skills) by year of birth and gender

Training of registered unemployed and employees (Programme phase)

Programme phase	Training theme	Grand Total	Unemployed			Employeess		
			Subtotal	Male	Female	Subtotal	Male	Female
Grand Total		162.843	108.403	26.390	82.013	54.440	22.047	32.393
Started the training	Total	162.843	108.403	26.390	82.013	54.440	22.047	32.393
	DIGITAL SKILLS	133.729	87.119	20.833	66.286	46.610	18.256	28.354
	GREEN SKILLS	29.114	21.284	5.557	15.727	7.830	3.791	4.039
Completed the training	Total	112.229	93.097	22.479	70.618	19.132	7.868	11.264
	DIGITAL SKILLS	91.288	75.071	17.819	57.252	16.217	6.398	9.819
	GREEN SKILLS	20.941	18.026	4.660	13.366	2.915	1.470	1.445
Certified	Total	81.718	77.895	18.209	59.686	3.823	1.584	2.239
	DIGITAL SKILLS	65.841	62.834	14.375	48.459	3.007	1.181	1.826
	GREEN SKILLS	15.877	15.061	3.834	11.227	816	403	413

Figure 7. Training of registered unemployed and employees (Digital and Green Skills) and programme phase

Training of registered unemployed and employees (Region)

Region	Grand Total	Digital skills			Green skills		
		Total	Unemployed	Employees	Total	Unemployed	Employees
Grand total	162.858	133.729	87.119	46.610	29.114	21.284	7.830
Eastern Macedonia & Thrace	12.606	10.356	6.720	3.636	2.250	1.723	527
Attica	36.331	31.916	19.212	12.704	4.415	2.507	1.908
Northern Aegean	1.609	1.316	996	320	293	268	25
Western Greece	19.573	14.908	10.737	4.171	4.665	3.936	729
Western Macedonia	9.953	7.014	4.599	2.415	2.939	2.066	873
Epirus	8.353	6.468	4.206	2.262	1.885	1.377	508
Thessaly	21.190	16.477	10.931	5.546	4.713	3.572	1.141
Ionian islands	1.353	1.252	867	385	101	101	
Central Macedonia	32.202	26.897	17.044	9.853	5.303	3.818	1.485
Crete	5.732	5.191	3.206	1.985	528	333	195
Southern Aegean	985	918	650	268	67		67
Peloponnese	6.960	6.263	4.243	2.020	697	459	238
Central Greece	6.011	4.753	3.708	1.045	1.258	1.124	134

Figure 8. Training of registered unemployed and employees (Digital and Green Skills) by Region

Training of registered unemployed and employees - Digital Skills

Programme	Training theme	Grand Total	Unemployed			Employees		
			Total	Male	Female	Total	Male	Female
Grand Total		133.729	87.119	20.833	66.286	46.610	18.256	28.354
Digital skills	Total	133.729	87.119	20.833	66.286	46.610	18.256	28.354
	BASIC DIGITAL SKILLS & OFFICE APPLICATIONS	56.061	39.496	8.395	31.101	16.565	6.192	10.373
	DIGITAL MARKETING	35.473	23.767	5.613	18.154	11.706	4.214	7.492
	E-COMMERCE	9.611	5.839	1.434	4.405	3.772	1.617	2.155
	SUPPLY CHAIN (LOGISTICS)	7.276	4.814	1.242	3.572	2.462	1.122	1.340
	WEB & WEB APPLICATION DEVELOPMENT	5.061	4.060	1.356	2.704	1.001	589	412
	PROJECT MANAGEMENT & PROJECT MANAGEMENT	3.444	995	288	707	2.449	1.051	1.398
	SPECIALIZED DIGITAL SKILLS IN VARIOUS FIELDS	3.147	1.189	243	946	1.958	723	1.235
	DIGITAL SKILLS IN TOURISM, SHIPPING AND HEALTH	2.958	1.956	438	1.518	1.002	326	676
	OTHER DIGITAL SKILLS	2.100	186	44	142	1.914	713	1.201
	DIGITAL TRANSFORMATION OF BUSINESSES	1.579	354	116	238	1.225	550	675
	COMPUTERIZED ACCOUNTING & WAREHOUSE ORGANIZATION	1.168	239	70	169	929	328	601
	2D AND 3D MODELING AND 3D PRINTING	903	573	196	377	330	190	140
	EDUCATIONAL TECHNOLOGIES	845	579	101	478	266	79	187
	DATA SECURITY/GDPR & CYBERSECURITY	833	526	200	326	307	167	140
	PC NETWORKS & MOBILE PHONE NETWORKS (5G)	735	718	313	405	17	17	
	IMAGE & VIDEO EDITING, CREATION OF DIGITAL PRINTS	715	561	193	368	154	55	99
	GEOGRAPHIC INFORMATION SYSTEMS (GIS)	387	260	84	176	127	56	71
	PROGRAMMING LANGUAGES	302	252	154	98	50	34	16
	BIG DATA ANALYSIS	218	172	80	92	46	32	14
	STATISTICAL DATA PROCESSING	193	152	63	89	41	25	16
	MACHINE LEARNING	163	77	50	27	86	61	25
	DEVELOPMENT OF MOBILE APPLICATIONS	117	117	54	63			
	ERP & BUSINESS MANAGEMENT SYSTEMS	114	19	6	13	95	41	54
	DIGITAL SKILLS IN THE AGRICULTURAL SECTOR	109	89	34	55	20	12	8
	INTERNET OF THINGS & MICROCONTROLLERS	81	10	8	2	71	51	20
	CLOUD COMPUTING & DATA CENTERS MANAGEMENT	73	73	33	40			
	DATABASES	63	46	25	21	17	11	6

Figure 9. Training of registered unemployed and employees (Digital Skills) by skill and gender

Training of registered unemployed and employees - Green Skills

Programme	Training theme	Grand Total	Unemployed			Employees		
			Total	Male	Female	Total	Male	Female
Grand Total		29.114	21.284	5.557	15.727	7.830	3.791	4.039
Green skills	Total	29.114	21.284	5.557	15.727	7.830	3.791	4.039
	CIRCULAR ECONOMY	8.723	6.453	1.482	4.971	2.270	981	1.289
	BUSINESS SKILLS FOR EXPLOITING GREEN OPPORTUNITIES	4.616	3.736	1.022	2.714	880	395	485
	ENVIRONMENTAL RESTORATION METHODS	3.804	2.999	737	2.262	805	413	392
	OTHER GREENS SKILLS	3.572	2.253	570	1.683	1.319	579	740
	BIOCLIMATIC DESIGN & ENERGY PERFORMANCE OF BUILDINGS	2.243	1.607	587	1.020	636	369	267
	RENEWABLE ENERGY SOURCES	2.154	736	259	477	1.418	768	650
	CERTIFICATION OF ENVIRONMENTAL STANDARDS	1.410	1.346	368	978	64	27	37
	WASTE MANAGEMENT	737	713	133	580	24	13	11
	SMART HOME & SMART CITIES - REMOVE APPLICATIONS CHECK	660	400	135	265	260	175	85
	TECHNICAL GREEN SKILLS ACCORDING TO THE OBJECT OF THE WORK	523	523	124	399			
	ASSESSMENT OF THE ENVIRONMENTAL IMPACTS OF A PROJECT	467	410	109	301	57	23	34
	GREEN ENTREPRENEURSHIP	108	108	31	77			
	STRATEGIC & LEADERSHIP SKILLS FOR THE TURN TOWARDS SUSTAINABLE DEVELOPMENT	80				80	40	40
	USE OF NEW TECHNOLOGIES IN THE GREEN ECONOMY	17				17	8	9

Figure 10. Training of registered unemployed and employees (Green Skills) by skill and gender

2.2. Upgrading the Labour Market Diagnosis Mechanism

According to the law "Jobs Again" (Law 4921)/2022 - FEK 75/A'/18.4.2022), the Unit of Experts in Employment, Social Insurance, Welfare & Social Affairs (MEKY, its acronym in Greek) plays a key role for the documentation and evaluation of the Strategy for Labour force Upskilling and Connection to the Labour Market, which analyses data in order to design targeted and effective policies and operates and manages the Labour Market Diagnosis Mechanism (MDAAE, its acronym in Greek).

During the previous period and in the framework of the project of Upgrading the Labour Market Diagnosis Mechanism, innovative tools were created that enable the National Skills Council as well as the general public to monitor the latest developments in the fields of skills and the labour market.

In particular, under the responsibility of MEKY, a special website has been created using business intelligence tools and it provides real-time answers to questions about skills and the labour market; a modern tool available both in Greek and English at the following website:

https://mdaae.gr/en/

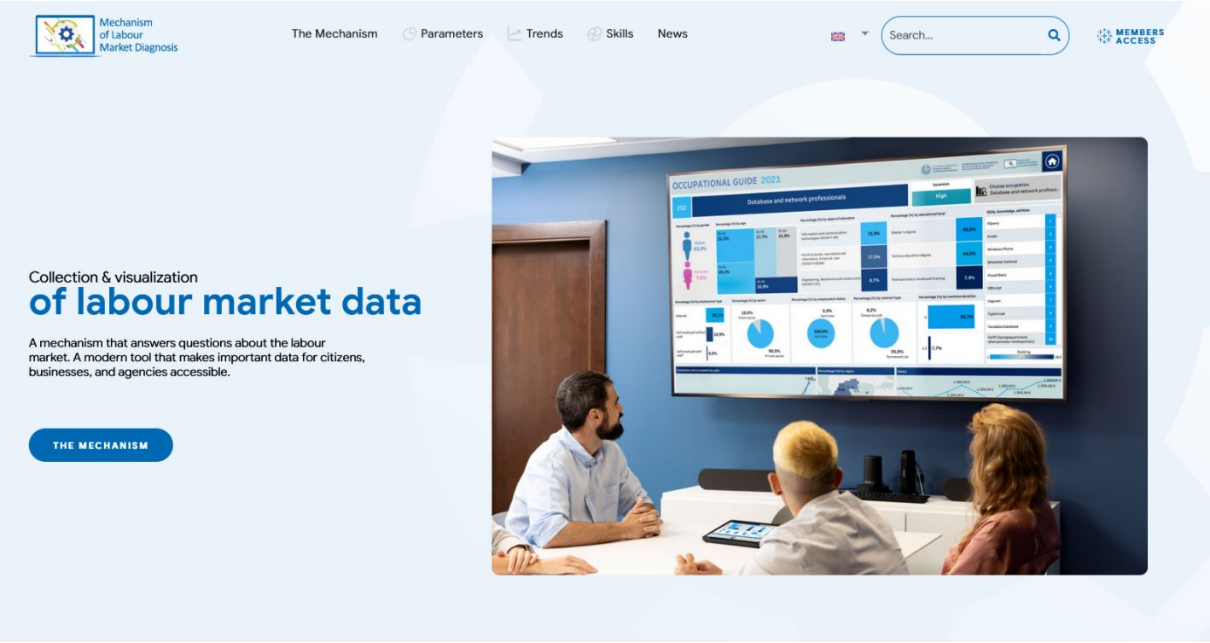


Figure 11. Website of the Labour Market Diagnosis Mechanism (MDAAE))

2.3. Recent developments in the fields of skills and the labour market

The following sections present recent developments in the fields of skills and the labour market, in the same way as they are organised on the website of the Labour Market Diagnosis Mechanism, in order to provide all stakeholders studying this Strategy with access to more detailed and continuously updated relevant data. Each interactive table is accompanied by a User Manual, a detailed description and A feature for evaluating the its usability and sending optimising suggestions in terms of the visualisations. The interactive panels are updated regularly according to the data availability.

2.4. Labour market parameters

For the documentation and the evaluation of the Strategy for Labour force Upskilling and Connection to the Labour Market, it is necessary to use both administrative-secondary and primary-empirical data and micro-data[9].

The administrative-secondary data and micro-data that can feed the design and evaluation of this Strategy come primarily from four data sources:

- EUROSTAT, ELSTAT, ERGANI, OPS-DYPA

while the primary empirical data derive from surveys, within the framework of the MDAAE and other bodies.

In order to identify and better understand the relevant data, the following data categories are presented on the MDAAE website in the thematic section **Labour market parameters**, by publication source:

- **The labour market in Europe** (Source: EUROSTAT)
  https://mdaae.gr/data_type/megethi-agoras-ergasias/i-agora-ergasias-sti-evropi/
- **The labour market in Greece** (Source: ELSTAT, Greek acronym of the Hellenic Statistical Authority)
  https://mdaae.gr/en/data_type/megethi-agoras-ergasias/i-agora-ergasias-stin-ellada/
- **Salaried employment** (Source: ERGANI)
  https://mdaae.gr/en/data_type/megethi-agoras-ergasias/misthoti-ergasia/
- **Registered unemployment** (Source: DYPA)
  https://mdaae.gr/en/data_type/megethi-agoras-ergasias/anergia/

[9] https://mdaae.gr/en/data_type/megethi-agoras-ergasias/

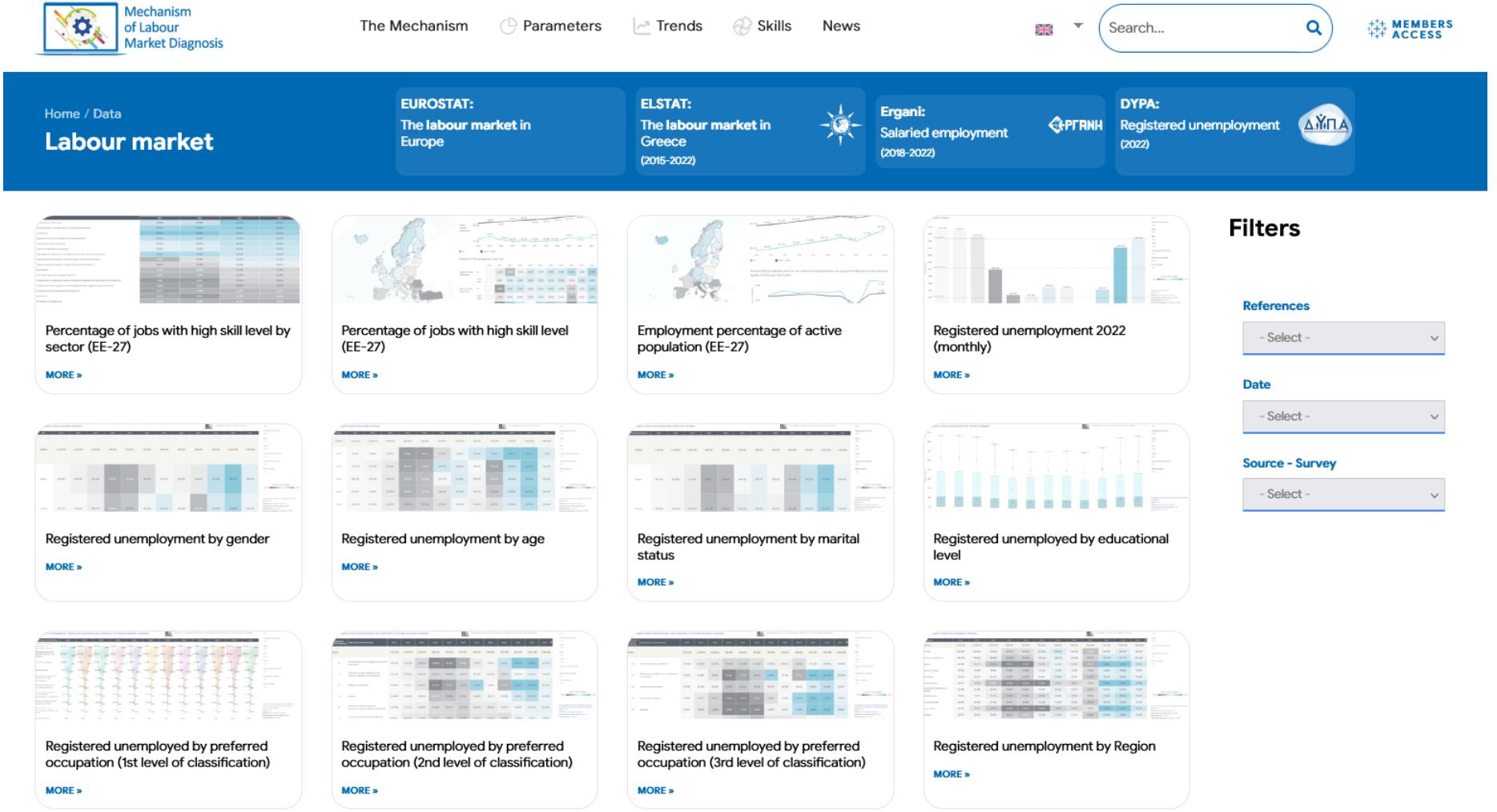


Figure 12. MDAAE website, Labour market parameters

2.4.1. The labour market in Europe

The employment rate of the active population (in the age group 15-64 years) is over time one of the lowest among the EU-27 Member States (Source: EUROSTAT)[10]. In Greece in 2022 the employment rate of the active population (aged 15-64 years) was 60.7%, increased by 6.1% compared to 2021, while in Europe was 27 69.8%, increased by 2.2% compared to 2021, with a maximum value of 83.3% in Iceland and a minimum value in Italy of 60.1%.

The share of jobs requiring high level of skills in Greece in 2022 was 32.0% of all jobs and 42.7% in Europe 27. The deficit in jobs requiring high level of skills compared to the EU-27 is long-standing and since 2018 exceeds 10%. At the European level, there is a longitudinal trend of an increase in the number of people employed in jobs requiring high level of skills, from 38.6% in 2012 to 42.7% in 2022, while in Greece in the same period the corresponding percentage is consistently below 33%.

This trend is partly explained by the strong and statistically significant correlation over time between a country's prosperity and the share of high-skill jobs among Eurozone countries (R2: 0.745 p<.01) (Gavroglou and Kotsios 2020[11]).

More detailed information is available for all interested parties on the MDAAE website, under the category: **The labour market in Europe**, where the following interactive tables with analyses and visualisations of labour market data are presented (Source: EUROSTAT):

- Employment percentage of the active population (EU-27)
  https://mdaae.gr/en/data/pososto-apascholisis-tou-energou-plithysmou-ee-27/
- Percentage of high-skill jobs (EU-27)
  https://mdaae.gr/en/data/pososto-theseon-ergasias-ypsilou-epipedou-dexiotiton-ee-27/
- Percentage of high-skill jobs by sector (EU-27)
  https://mdaae.gr/en/data/pososto-theseon-ergasias-ypsilou-epipedou-dexiotiton-ana-klado-ee-27/

[10] https://mdaae.gr/en/data_type/megethi-agoras-ergasias/i-agora-ergasias-sti-evropi/

[11] https://mdaae.gr/wp-content/uploads/2023/01/dexiotites-mythoi-pragmatikothtes-FINAL2.pdf

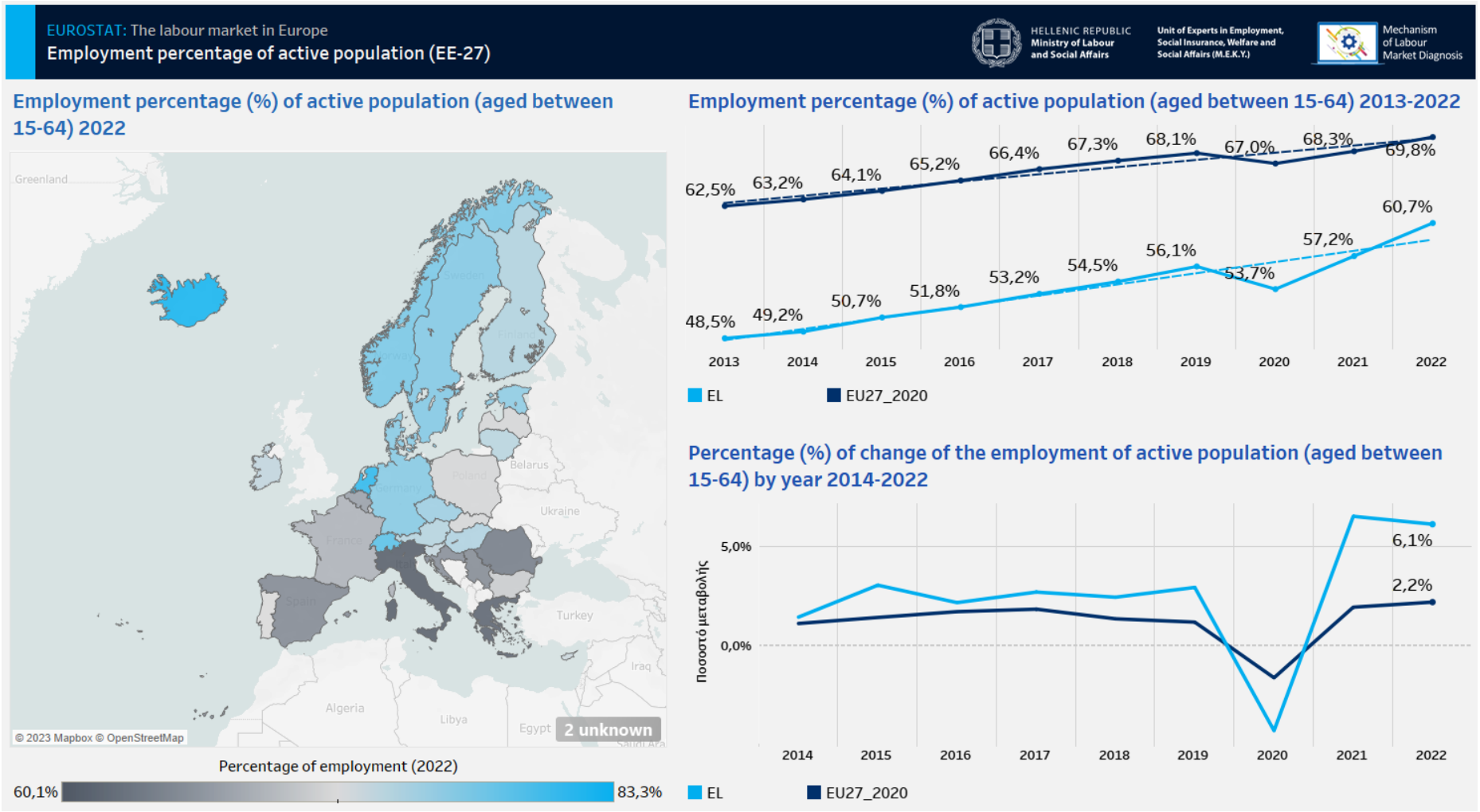
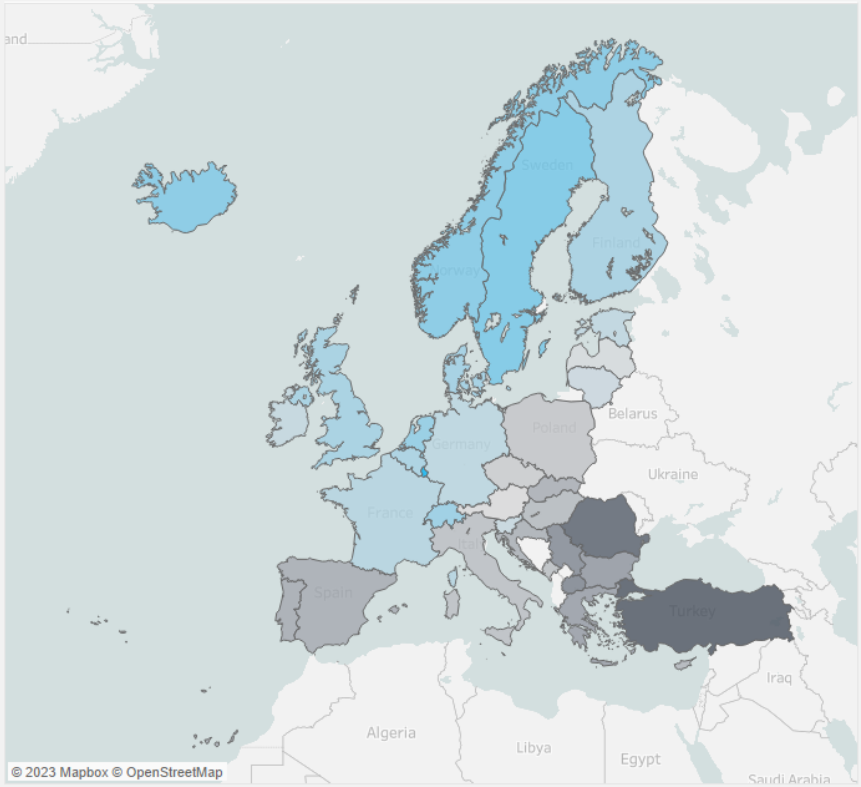


Figure 13. Employment percentage of the active population (EU-27) / Source: EUROSTAT

EUROSTAT: The labour market in Europe
Percentage of high-skill jobs (EU-27)

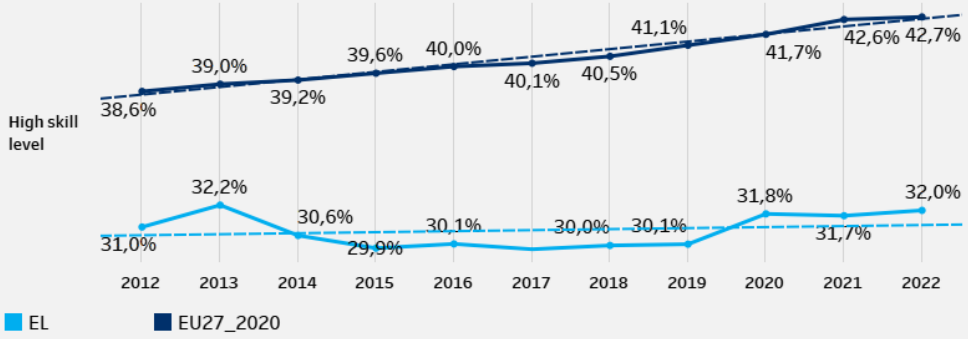
HELLENIC REPUBLIC Ministry of Labour and Social Affairs
Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)
Mechanism of Labour Market Diagnosis

Percentage (%) of jobs with high skill level (2022)



Percentage of jobs (2022)
21,2% — 61,0%

Percentage (%) of jobs with high skill level by year



Percentage (%) of change by year

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
High skill level	EL		-1,1%	-4,6%	-0,2%	2,5%	1,1%	2,8%	2,4%	4,8%	1,0%	6,4%
	EU27_2020		0,8%	1,8%	2,0%	2,4%	1,9%	2,2%	2,5%	-0,4%	3,0%	3,0%
Medium skill level	EL		-6,9%	3,0%	3,1%	1,5%	2,1%	2,6%	1,9%	-2,7%	1,2%	4,4%
	EU27_2020		-1,4%	0,6%	0,4%	0,8%	1,2%	0,6%	0,0%	-3,9%	0,1%	2,8%
Low skill level	EL		-8,3%	7,8%	3,7%	0,2%	6,4%	-4,3%	5,3%	-8,7%	3,0%	8,4%
	EU27_2020		-0,1%	1,4%	0,9%	0,9%	1,2%	-0,3%	-0,4%	-6,6%	1,5%	2,1%

Percentage (%) of change
-8,7% — 8,4%

Figure 14. Percentage of high-skill jobs (EU-27) / Source: EUROSTAT

EUROSTAT: The labour market in Europe
Percentage of high-skill jobs by sector (EU-27)

HELLENIC REPUBLIC Ministry of Labour and Social Affairs | Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.) | Mechanism of Labour Market Diagnosis

Percentage (%) of jobs with high skill level 2021-2022

	EL		EU27_2020	
	2021	2022	2021	2022
Information and communication	63,5%	65,9%	86,0%	86,3%
Professional, scientific and technical activities	78,7%	82,1%	82,9%	83,2%
Education	90,0%	89,0%	80,4%	80,1%
Financial and insurance activities	69,3%	71,2%	71,0%	71,0%
Real estate activities	55,4%	58,7%	66,7%	66,9%
Arts, entertainment and recreation	54,8%	56,9%	63,6%	63,7%
Human health and social work activities	75,4%	73,9%	63,5%	63,3%
Electricity, gas, steam and air conditioning supply	19,2%	35,8%	56,4%	57,5%
Public administration and defence; compulsory social security	30,8%	31,4%	53,6%	53,7%
Manufacturing	21,5%	22,8%	31,7%	31,9%
Other service activities	18,0%	18,3%	32,3%	31,8%
Water supply; sewerage, waste management and remediation activities	7,9%	9,2%	30,1%	30,0%
Wholesale and retail trade; repair of motor vehicles and motorcycles	11,6%	12,1%	26,4%	26,7%
Administrative and support service activities	10,7%	17,8%	21,2%	22,5%
Construction	14,2%	9,0%	21,8%	22,0%
Transportation and storage	19,7%	18,0%	18,4%	18,2%
Accommodation and food service activities	12,4%	11,6%	17,6%	17,0%
Other Sectors		7,9%	10,8%	11,6%
Agriculture, forestry and fishing	0,2%	0,5%	6,2%	6,4%

Percentage (%) of jobs

0,2% — 90,0%

Figure 15. Percentage of high-skill jobs by sector (EU-27) / Source: EUROSTAT

2.4.2. The labour market in Greece

2.4.2.1. Introductory parameters

The population aged 15+ years old has been steadily declining since 2009, reaching 9,044.8 thousand people in the 4th quarter of 2022 (Source: ELSTAT)[12]. The labour force is also following a downward trend after 2009, with some fluctuations especially during the period of the pandemic, and some increases during the last years, reaching 4,350.9 thousand persons at the end of the period, while the economically inactive persons tend to decrease after the pandemic, except during the 4th quarter of 2022, reaching 4,350.9 thousand persons. In the labour force, the part of the employed tends to increase after 2013, reaching 4,135.2 thousand persons at the end of 2022, while the part of the unemployed in the same period tends to decrease, reaching 558.5 thousand persons.

Foreigners make up 3.2% of the working age population, 4.1% of the labour force, 3.7% of the employed and 6.9% of the unemployed. In terms of the gender dimension of these figures, women make up 52% of the working age population, but only 44% of the labour force. Women make up 42% of the employed and 59% of the unemployed. Among the employed 15-74 year-olds, 126.8 thousand or 3.1% are underemployed, which in the case of women amounts to 4.4%. Also, among the unemployed, about 36.8 thousand people are looking for but are not immediately available for work, of whom 57% are women. About 144.1 thousand persons are available for work but are not looking for work, of which 67% are women.

More detailed information is available for all interested parties on the MDAAE website, under the category: The labour market in Greece > Parameters > **Introductory parameters**, where the following interactive tables with analyses and visualisations of labour market data are presented (Source: ELSTAT):

- Population aged 15+ (in thousands) by gender, age and employment status https://mdaae.gr/en/data/plithysmos-tis-ellados-se-chiliades-kata-fylo-ilikia-kai-katastasi-apascholisis/
- Population aged 15+ (in thousands) by gender, nationality and employment status https://mdaae.gr/en/data/plithysmos-tis-ellados-se-chiliades-kata-fylo-ypikootita-kai-katastasi-apascholisis/
- Population ages 15-74 (in thousands) by gender, age, employment status and distinction between underemployed and potential labour force https://mdaae.gr/en/data/plithysmos-ilikias-15-74-eton-se-chiliades-kata-fylo-ilikia-katastasi-apascholisis-kai-diakrisi-se-ypoapascholoumenous-kai-en-dynamei-prostheto-ergatiko-dynamiko/

[12] https://mdaae.gr/en/data_type/megethi-agoras-ergasias/i-agora-ergasias-stin-ellada/eisagogika-megethi/

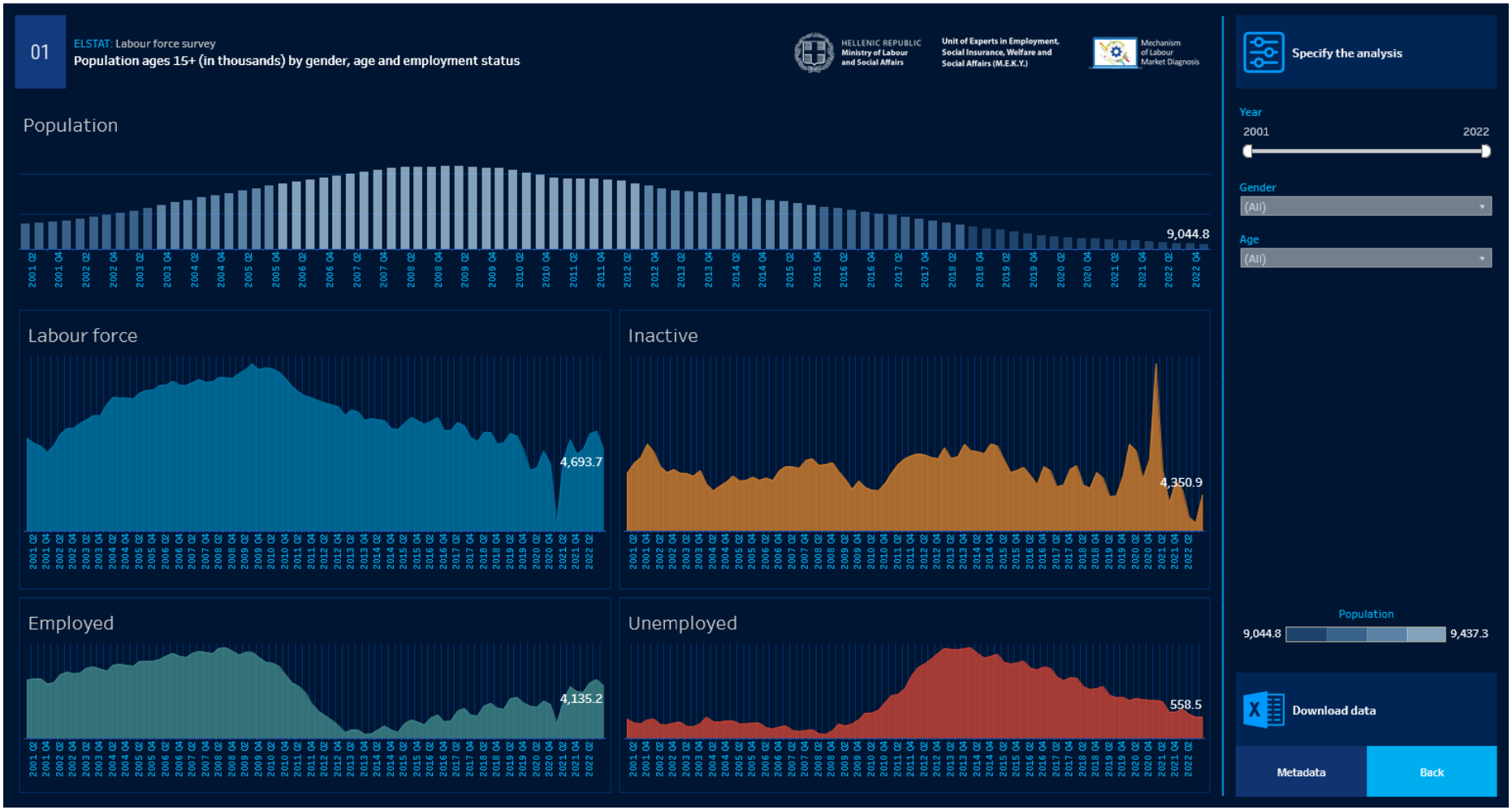


Figure 16. Population aged 15+ (in thousands) by gender, age and employment status / Source: ELSTAT

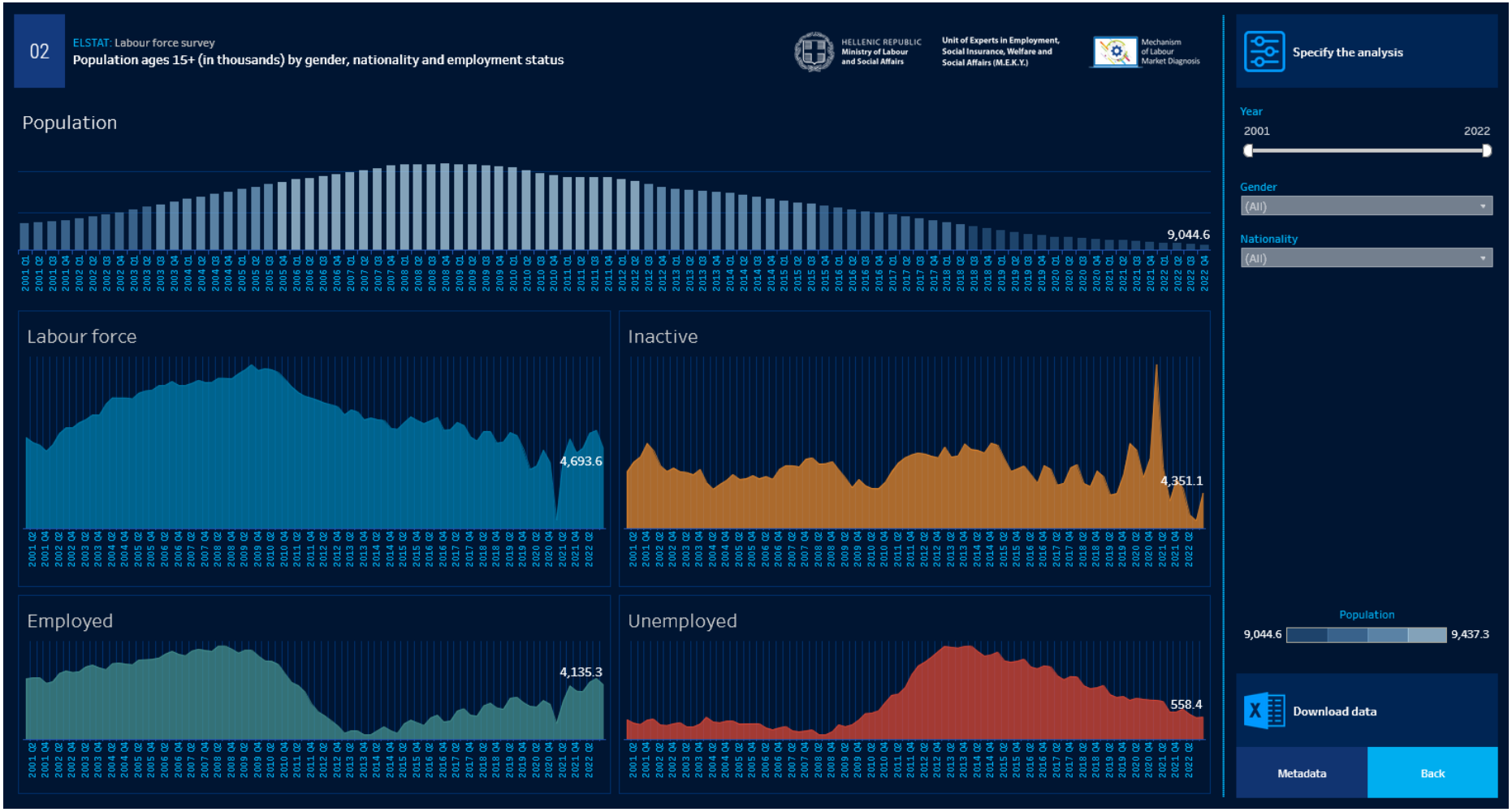


Figure 17. Population aged 15+ (in thousands) by gender, nationality and employment status / Source: ELSTAT

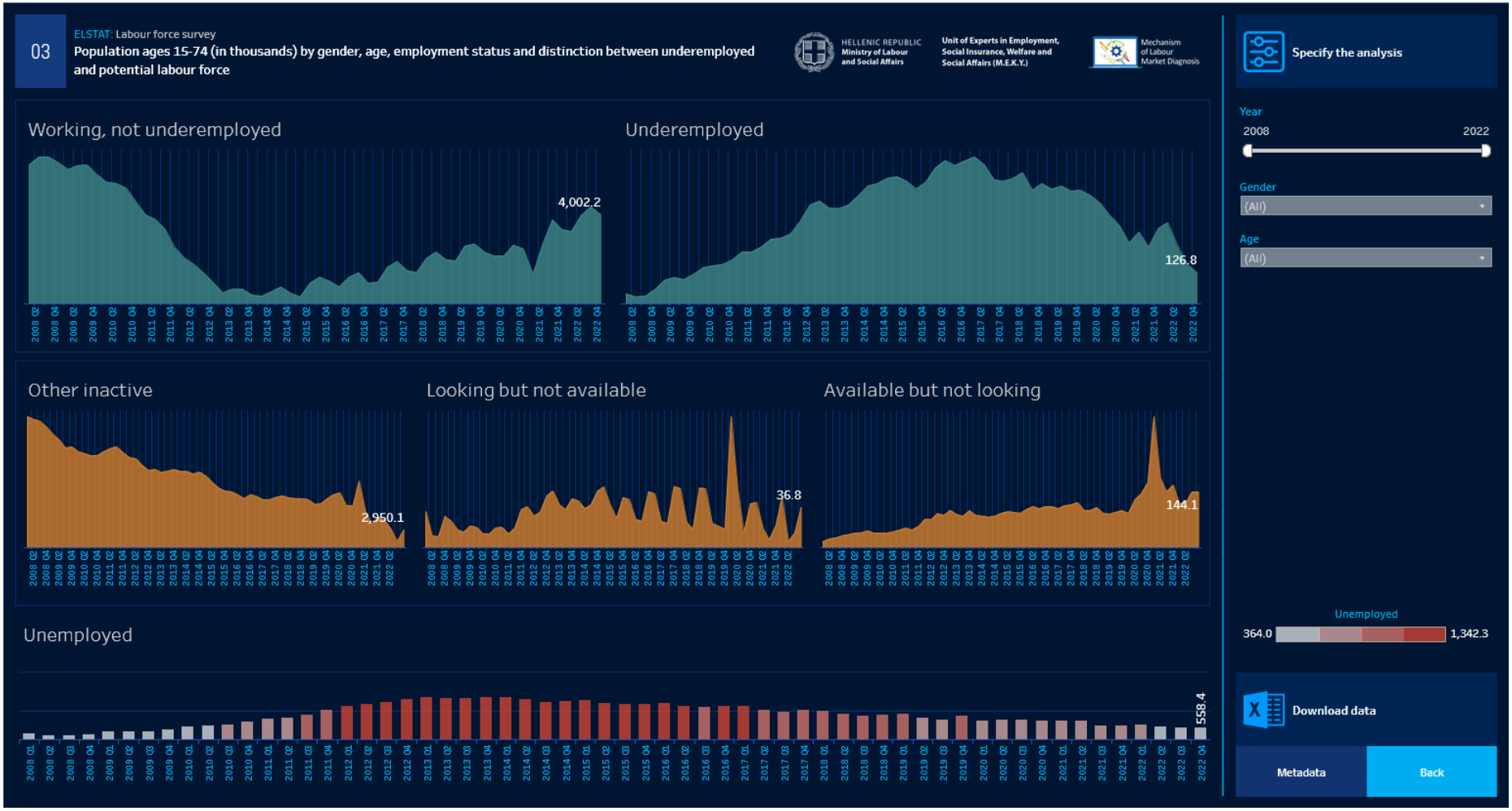


Figure 18. Population ages 15-74 (in thousands) by gender, age, employment status and distinction between underemployed and potential labour force
Source: ELSTAT

2.4.2.2. Employment by occupation

In Greece, in 2022, 59.6% of the employed are working in occupations requiring a medium level of skills, a category in which the number of persons employed increased by 4.4% compared to 2021 (Source: ELSTAT)[13]. Persons employed in jobs requiring a high level of skills increased by 6.3% compared to 2022 and account for 32.0% of total persons employed. Workers in jobs requiring a low skill level make up just 6.7% of the country's labour force and increased by 8.5% from 2021 (Figures 1 & 2).

At regional level, the number of jobs requiring a high level of skills exceeds 32.0% only in Attica (41.3%), where it is close to the average of Europe 27. In the other Regions, the vast majority of jobs require a medium level of skills, with the lowest percentage of jobs requiring a high level of skills being found in the Ionian Islands Region 21.4%).

The most populous occupations for 2022 at the 1st level of classification are Service and sales workers and Professionals, which account for 21.9% and 21.8% of the employed respectively. The most significant increase in employed persons in 2022 compared to 2021 was observed in Professionals (9.8%) with the occupations of Elementary occupations, and Plant and machine operators and assemblers following, with growth rates of 8.5% and 8.0% respectively. The only occupation at the 1st level of classification under pressure in 2022 was that of Technicians and associate professionals, in which the number of persons employed decreased by 3.3% compared to 2021.

At the regional level, in all cases, except for the Region of Attica, most of the employed persons were found in the occupation of Service and sales workers (Medium skilled occupations), while in the Region of Attica most of the employed persons were recorded in the occupation of Professionals (High skilled occupations).

The age group with the most employed is the 50-54 age group, which in 2022 recorded 639,312 employed persons. The age groups with a significant percentage increase in employed persons in 2022 compared to 2021 are those of 15-19 and 20-24 years old, in which the number of employed persons increased by 28.7% and 20.0% respectively. On the opposite side, the age group with the largest losses in employed persons was that of 70-74 year-olds, in which employed persons decreased in 2022 compared to 2021 by 19.2%.

Most people employed in jobs requiring a high level of skills are in the 35-54 age group. Over the period 2015-2022, those employed in jobs requiring a high level of skills have increased significantly in the 50-54, 55-59, 60-64 and 65-69 age groups.

[13] https://mdaae.gr/en/data_type/megethi-agoras-ergasias/i-agora-ergasias-stin-ellada/apascholisi-ana-epangelma/

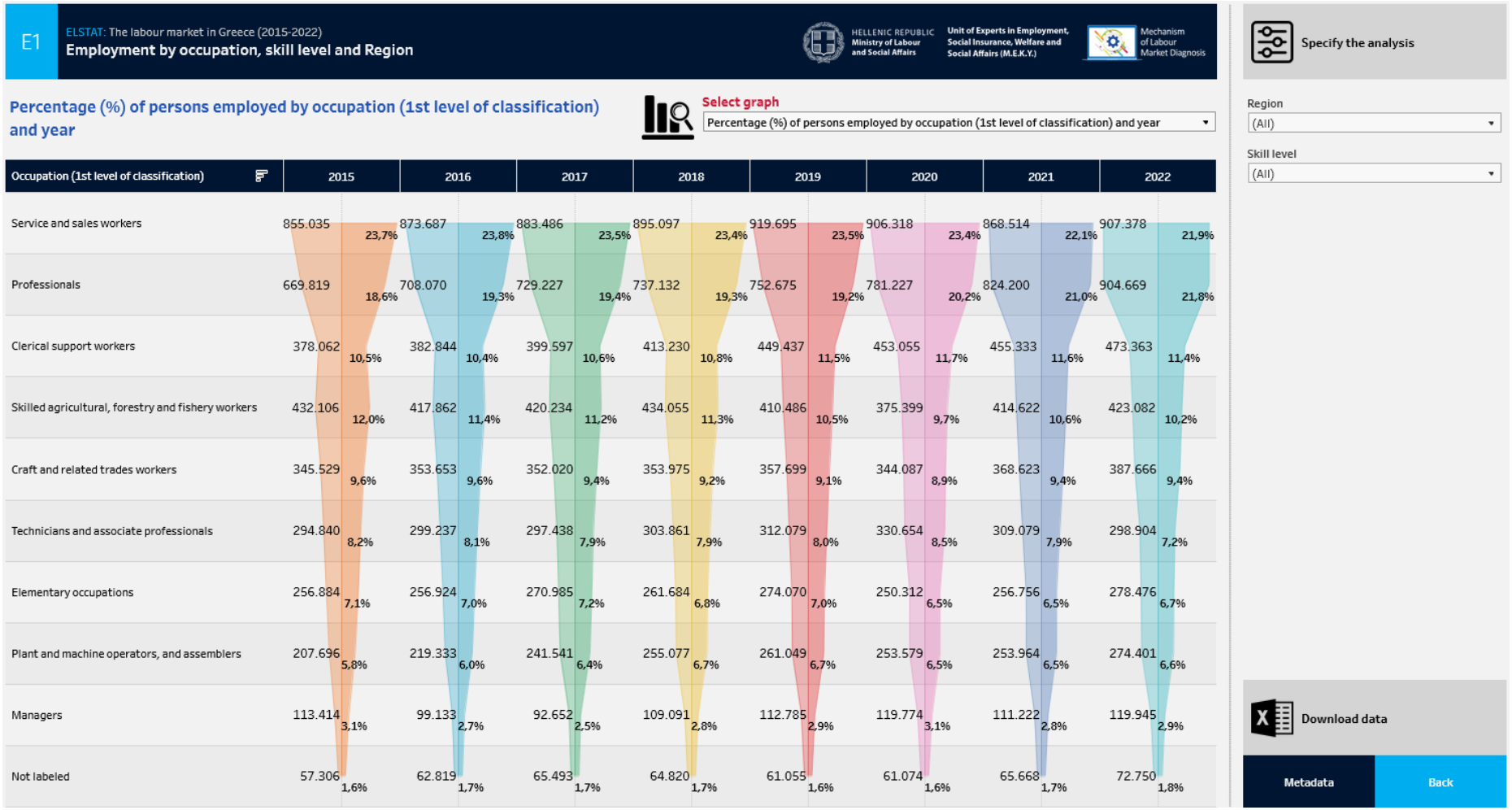
The largest percentage increase (19.3%) in the number of persons employed in jobs requiring a medium level of skills in 2022 was recorded in the 15-19 age group, followed by the 20-24 age group with a percentage increase of 15.2%.

In 2022, employment in jobs requiring a low level of skills increased in all age groups except for the 20-24 age group, where employment decreased by 15.9%, and the 25-29 age group, where employment remained almost unchanged (-1.1% change).

Most persons employed in jobs requiring a low level of skills are concentrated in the 50-54 age group (51,275), followed by the 40-44 and 45-49 age groups, with 42,879 and 42,804 persons employed, respectively.

More detailed information is available for all interested parties on the MDAAE website, under the category: The labour market in Greece > **Employment by occupation**, where the following interactive tables with analyses and data visualisations on the evolution of occupations in the labour market are presented (Source: ELSTAT):

- Employment by occupation, skill level and Region
  https://mdaae.gr/en/data/i-apascholisi-ana-epangelma-epipedo-dexiotiton-kai-perifereia/
- Employment by occupation and age
  https://mdaae.gr/en/data/i-apascholisi-ana-epangelma-kai-ilikia/
- Employment by occupation and gender
  https://mdaae.gr/en/data/i-apascholisi-ana-epangelma-kai-fylo/
- Employment by occupation and level of education
  https://mdaae.gr/en/data/i-apascholisi-ana-epangelma-ekpaideftiko-epipedo-kai-antikeimeno-ekpaidefsis/
- Employment by occupation and full-time/part-time status
  https://mdaae.gr/en/data/i-apascholisi-ana-epangelma-kai-kathestos-ergasias/
- Employment by occupation and occupational status
  https://mdaae.gr/en/data/h-apascholisi-ana-epangelma-kai-thesi/
- Salaried employment by occupation and type of employment contract
  https://mdaae.gr/en/data/h-misthoti-apascholisi-ana-epangelma-kai-eidos-symvasis-ergasias/
- Salaried employment by occupation and extent of overtime work
  https://mdaae.gr/en/data/h-misthoti-apascholisi-ana-epangelma-kai-diarkeia-yperoriakis-ergasias/
- Earnings by occupation and full-time/part-time status
  https://mdaae.gr/en/data/oi-apodoches-ana-epangelma-kai-kathestos-ergasias/



E1

ELSTAT: The labour market in Greece (2015-2022)

Employment by occupation, skill level and Region

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Percentage (%) of persons employed by occupation (1st level of classification) and year

Select graph: Percentage (%) of persons employed by occupation (1st level of classification) and year

Occupation (1st level of classification)	2015	2016	2017	2018	2019	2020	2021	2022
Service and sales workers	855.035 23,7%	873.687 23,8%	883.486 23,5%	895.097 23,4%	919.695 23,5%	906.318 23,4%	868.514 22,1%	907.378 21,9%
Professionals	669.819 18,6%	708.070 19,3%	729.227 19,4%	737.132 19,3%	752.675 19,2%	781.227 20,2%	824.200 21,0%	904.669 21,8%
Clerical support workers	378.062 10,5%	382.844 10,4%	399.597 10,6%	413.230 10,8%	449.437 11,5%	453.055 11,7%	455.333 11,6%	473.363 11,4%
Skilled agricultural, forestry and fishery workers	432.106 12,0%	417.862 11,4%	420.234 11,2%	434.055 11,3%	410.486 10,5%	375.399 9,7%	414.622 10,6%	423.082 10,2%
Craft and related trades workers	345.529 9,6%	353.653 9,6%	352.020 9,4%	353.975 9,2%	357.699 9,1%	344.087 8,9%	368.623 9,4%	387.666 9,4%
Technicians and associate professionals	294.840 8,2%	299.237 8,1%	297.438 7,9%	303.861 7,9%	312.079 8,0%	330.654 8,5%	309.079 7,9%	298.904 7,2%
Elementary occupations	256.884 7,1%	256.924 7,0%	270.985 7,2%	261.684 6,8%	274.070 7,0%	250.312 6,5%	256.756 6,5%	278.476 6,7%
Plant and machine operators, and assemblers	207.696 5,8%	219.333 6,0%	241.541 6,4%	255.077 6,7%	261.049 6,7%	253.579 6,5%	253.964 6,5%	274.401 6,6%
Managers	113.414 3,1%	99.133 2,7%	92.652 2,5%	109.091 2,8%	112.785 2,9%	119.774 3,1%	111.222 2,8%	119.945 2,9%
Not labeled	57.306 1,6%	62.819 1,7%	65.493 1,7%	64.820 1,7%	61.055 1,6%	61.074 1,6%	65.668 1,7%	72.750 1,8%

Specify the analysis

Region: (All)

Skill level: (All)

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Figure 19. Employment by occupation, skill level and Region / Source: ELSTAT

E2

ELSTAT: The labour market in Greece (2015-2022)
Employment by occupation and age

HELLENIC REPUBLIC Ministry of Labour and Social Affairs — Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.) — Mechanism of Labour Market Diagnosis

Persons employed by age

Select graph: Persons employed by age

Age	2015	2016	2017	2018	2019	2020	2021	2022
Total	3.610.693	3.673.559	3.752.674	3.828.021	3.911.030	3.875.479	3.927.980	4.140.633
50-54	460.628	478.664	505.862	538.058	575.881	589.654	624.508	639.312
40-44	590.864	606.239	607.960	620.699	625.769	619.729	610.214	618.137
45-49	543.407	551.523	562.413	552.064	557.613	564.534	565.920	586.961
35-39	536.749	542.516	539.543	533.100	527.451	491.762	465.334	470.408
55-59	295.048	324.527	341.948	356.040	365.888	376.703	418.278	456.861
30-34	479.737	464.399	466.917	456.570	435.005	417.628	394.602	438.632
25-29	335.077	337.148	328.285	337.933	351.304	329.570	341.999	366.807
60-64	166.386	167.477	181.621	210.761	234.294	247.195	262.298	284.447
20-24	128.460	124.840	134.053	132.154	137.726	129.467	127.777	153.313
65-69	46.921	50.566	56.190	62.788	68.483	76.575	85.438	91.597
15-19	11.645	12.977	14.115	13.684	13.689	14.050	11.911	15.324
70-74	8.035	7.733	8.966	9.791	11.529	13.774	14.691	11.872
75+	7.736	4.951	4.802	4.380	6.397	4.838	5.012	6.961

Specify the analysis

Skill level: (All)
Occupation (1st level of classification): (All)
Code (1st level of classification): (All)
Occupation (2nd level of classification): (All)
Code (2nd level of classification): (All)
Occupation (3rd level of classification): (All)
Code (3rd level of classification): (All)

Percentage (%) of change
-20,00% 20,00%

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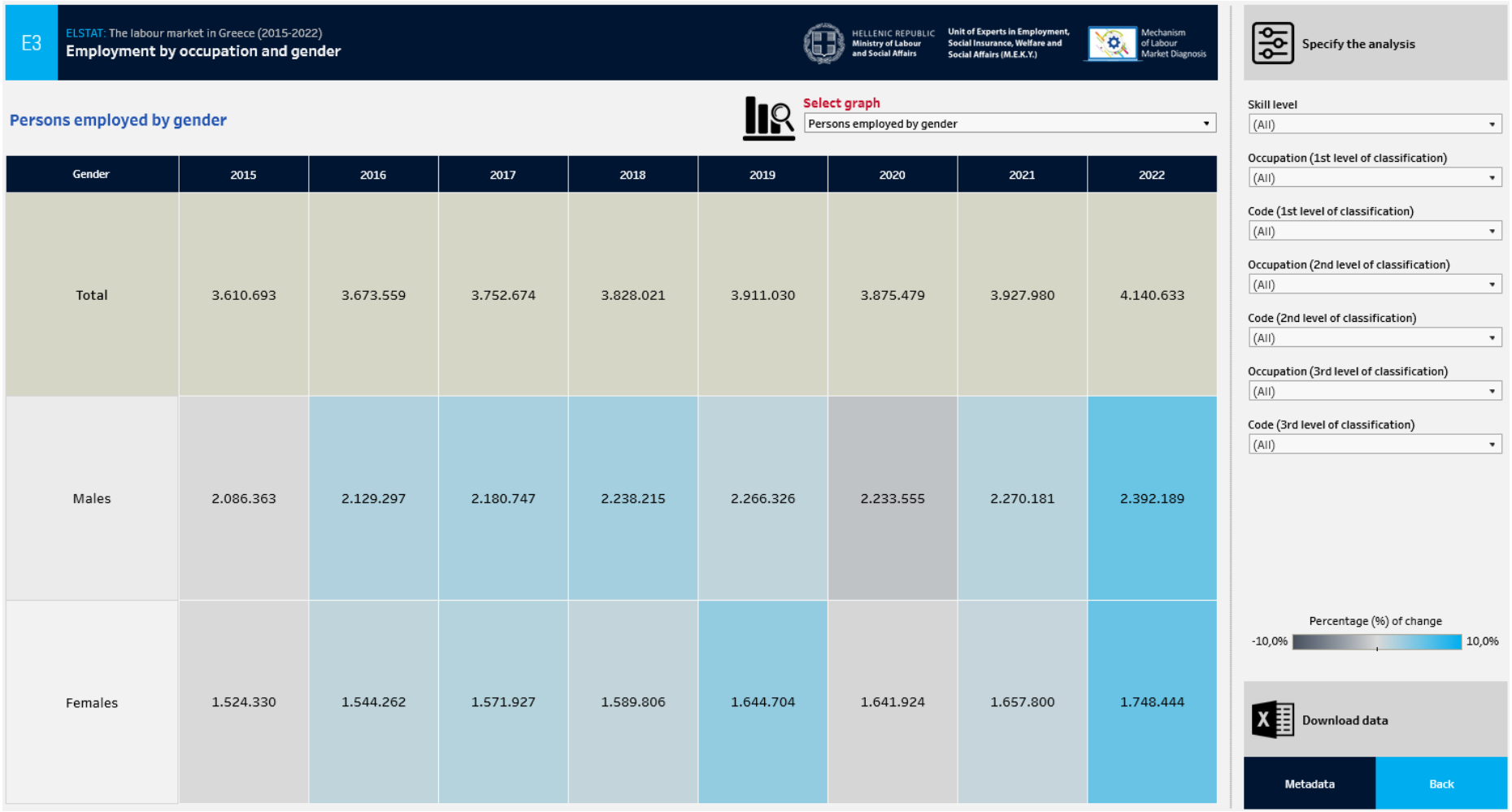
Figure 20. Employment by occupation and age / Source: ELSTAT



Gender	2015	2016	2017	2018	2019	2020	2021	2022
Total	3.610.693	3.673.559	3.752.674	3.828.021	3.911.030	3.875.479	3.927.980	4.140.633
Males	2.086.363	2.129.297	2.180.747	2.238.215	2.266.326	2.233.555	2.270.181	2.392.189
Females	1.524.330	1.544.262	1.571.927	1.589.806	1.644.704	1.641.924	1.657.800	1.748.444

Figure 21. Employment by occupation and gender / Source: ELSTAT

E4

ELSTAT: The labour market in Greece (2015-2022)

Employment by occupation and level of education

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Persons employed by level of education

Select graph: Persons employed by level of education

Level of education	2015	2016	2017	2018	2019	2020	2021	2022
Total	3.610.693	3.673.559	3.752.674	3.828.021	3.911.030	3.875.479	3.927.980	4.140.633
Secondary education degree	1.238.378	1.272.185	1.297.688	1.314.131	1.353.944	1.342.313	1.341.299	1.465.929
Tertiary education degree	1.085.302	1.120.063	1.158.112	1.185.364	1.069.572	1.042.859	1.242.172	1.291.503
Post-secondary vocational training	332.170	343.671	363.725	377.446	390.593	417.711	384.557	387.739
Master's degree	135.154	166.794	181.504	216.364	366.396	411.118	299.569	333.604
Elementary education degree	449.131	412.919	388.216	386.211	376.128	326.029	326.546	326.637
Finished senior class of middle education	352.965	343.015	348.850	336.544	341.499	326.382	325.433	324.934
Have not finished elementary education	9.284	6.961	7.985	7.130	7.311	4.739	8.405	10.288
Have not attended school	8.309	7.950	6.593	4.832	5.587	4.327	0	0

Specify the analysis

Skill level: (All)

Occupation (1st level of classification): (All)

Code (1st level of classification): (All)

Occupation (2nd level of classification): (All)

Code (2nd level of classification): (All)

Occupation (3rd level of classification): (All)

Code (3rd level of classification): (All)

Percentage (%) of change

-20,0% 20,0%

Download data

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Figure 22. Employment by occupation and level of education / Source: ELSTAT

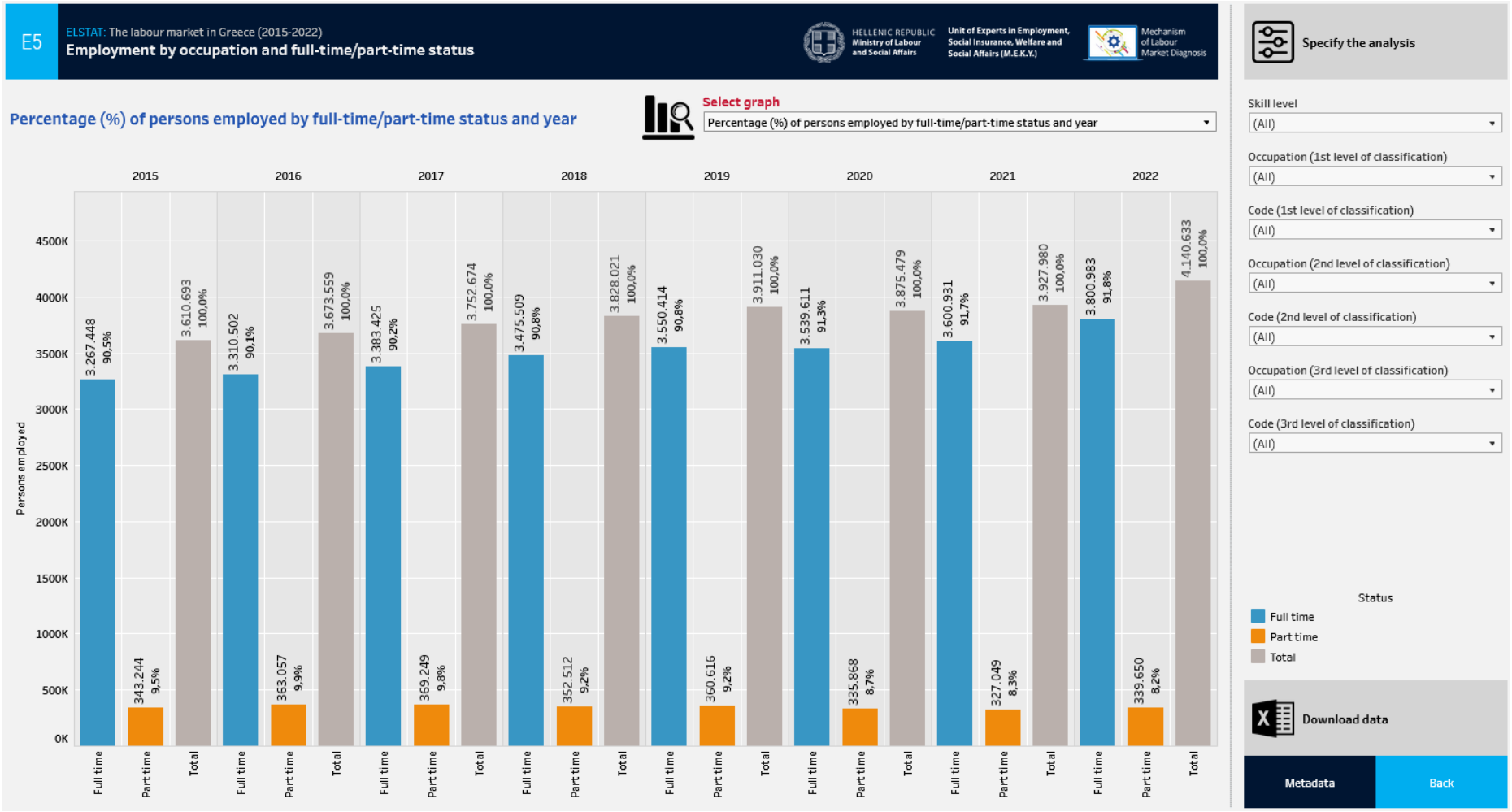

Figure 23. Employment by occupation and full-time/part-time status / Source: ELSTAT

E7

ELSTAT: The labour market in Greece (2015-2022)

Employment by occupation and occupational status

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Persons employed by occupational status

Select graph: Persons employed by occupational status

Occupational status	2015	2016	2017	2018	2019	2020	2021	2022
Total	3.610.693	3.673.559	3.752.674	3.828.021	3.911.030	3.875.479	3.927.980	4.140.633
Salaried	2.348.528	2.421.229	2.474.150	2.546.279	2.663.522	2.640.876	2.677.916	2.884.217
Self-employed without staff	855.894	836.915	856.786	850.047	834.760	817.953	820.882	810.513
Self-employed with staff	248.366	271.740	274.371	291.607	289.312	300.074	310.015	318.001
Assistant in family business	157.904	143.675	147.367	140.089	123.436	116.577	119.168	127.902

Specify the analysis

Skill level: (All)

Occupation (1st level of classification): (All)

Code (1st level of classification): (All)

Occupation (2nd level of classification): (All)

Code (2nd level of classification): (All)

Occupation (3rd level of classification): (All)

Code (3rd level of classification): (All)

Percentage (%) change

-5,0% 5,0%

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Figure 24. Employment by occupation and occupational status / Source: ELSTAT

Type of employment contract	2015	2016	2017	2018	2019	2020	2021	2022
Total	2.348.528	2.421.229	2.474.150	2.546.279	2.663.522	2.640.876	2.677.916	2.884.217
Permanent job	2.067.893	2.149.658	2.191.485	2.258.834	2.330.558	2.374.134	2.406.594	2.592.575
Temporary job	280.636	271.571	282.665	287.444	332.964	266.742	271.322	291.642

Figure 25. Salaried employment by occupation and type of employment contract / Source: ELSTAT

E9

ELSTAT: The labour market in Greece (2015-2022)

Salaried employment by occupation and extent of overtime work

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Employees by extent of overtime work

Select graph: Employees by extent of overtime work

Extent of overtime work	2015	2016	2017	2018	2019	2020	2021	2022
Total	2.348.528	2.421.229	2.474.150	2.546.279	2.663.522	2.640.876	2.677.916	2.884.217
0 hours	2.205.769	2.272.858	2.340.583	2.413.980	2.547.174	2.525.020	2.559.184	2.755.110
6-10 hours	56.914	62.155	57.207	57.761	51.446	54.061	58.769	57.516
1-5 hours	63.866	57.074	52.450	49.779	45.865	40.616	39.307	51.437
>11 hours	21.980	29.142	23.910	24.759	19.037	21.179	20.656	20.154

Specify the analysis

Skill level: (All)

Occupation (1st level of classification): (All)

Code (1st level of classification): (All)

Occupation (2nd level of classification): (All)

Code (2nd level of classification): (All)

Occupation (3rd level of classification): (All)

Code (3rd level of classification): (All)

Percentage (%) of change

-20,0% 20,0%

Download data

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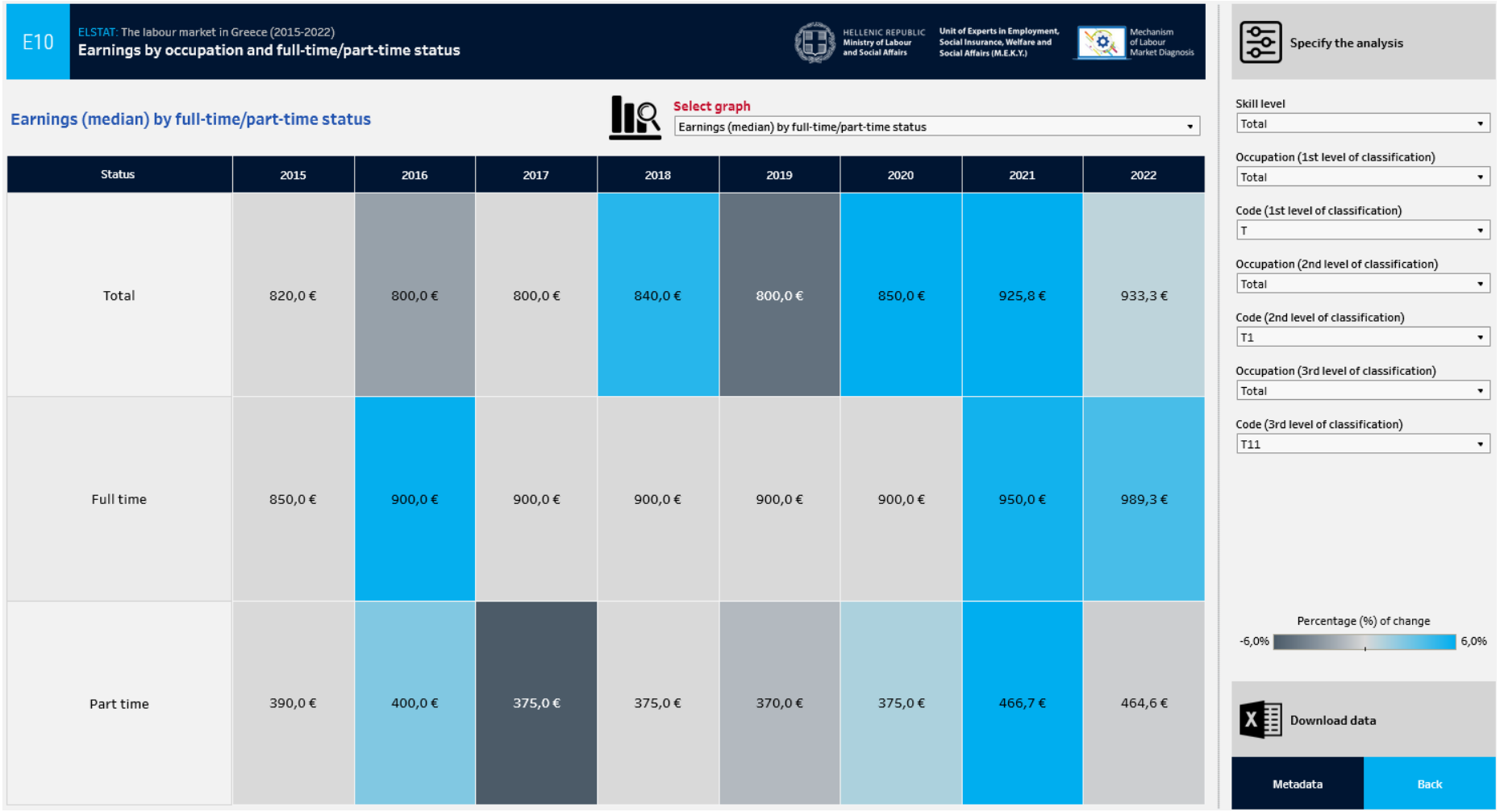
Figure 26. Salaried employment by occupation and extent of overtime work / Source: ELSTAT



Status	2015	2016	2017	2018	2019	2020	2021	2022
Total	820,0 €	800,0 €	800,0 €	840,0 €	800,0 €	850,0 €	925,8 €	933,3 €
Full time	850,0 €	900,0 €	900,0 €	900,0 €	900,0 €	900,0 €	950,0 €	989,3 €
Part time	390,0 €	400,0 €	375,0 €	375,0 €	370,0 €	375,0 €	466,7 €	464,6 €

Figure 27. Earnings by occupation and full-time/part-time status / Source: ELSTAT

2.4.2.3. Employment by sector

In the largest Regions in terms of population (Attica and Central Macedonia) it is observed that the largest sector at the 1st level of classification, in terms of persons employed, for 2022 is the sector of Wholesale and retail trade; repair of motor vehicles and motorcycles, which is also the largest in terms of persons employed for the country as a whole (Source: ELSTAT)[14]. In Attica, the second largest sector in terms of persons employed is Public administration and defence; compulsory social security, while in Central Macedonia the second largest sector is that of Manufacturing.

In Regions with a strong tourism, such as the South Aegean and Ionian Islands Regions, the sector that is the largest in terms of employment is Accommodation and food service activities.

Finally, it is noteworthy that the largest sector, in terms of persons employed, in 8 of the 13 Regions of the country is the sector Agriculture, forestry and fishing.

According to official ELSTAT data, the largest sectors at the 1st level of classification, in terms of persons employed, in 2022 are, in order: Wholesale and retail trade; repair of motor vehicles and motorcycles, Agriculture, forestry and fishing, and Manufacturing, which gather: 716,670, 461,435 and 412,879 persons employed, respectively.

The most significant annual increase (72.8%) in employment was recorded in the Water supply; sewerage, waste management and remediation activities sector, followed by the Real estate activities sector with an increase of 59.9%.

On the other hand, Electricity, gas, steam and air conditioning supply decreased by 8.2%.

In the period 2015-2022 the sectors in which there is a significant increase in employment are: Real estate activities (change 85.4%), Activities of extraterritorial organisations and bodies (change 74.4%) and Water supply; sewerage, waste management and remediation activities (change 61.8%).

On the contrary, the sectors in which the number of persons employed decreased significantly in the period 2015-2022 are: Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use (change -39.3%), and Financial and insurance activities (change -16.3%).

The largest sectors at the 2nd level of classification, in terms of persons employed, for 2022 are: Retail trade, except of motor vehicles and motorcycles, and Crop and animal production, hunting and related service activities, which account for 11.9% and 10.6% of total employment, respectively.

The sectors at the 2nd level of classification, where the number of persons employed increased significantly in 2022 compared to 2021, are: Manufacture of computer, electronic and optical

[14] https://mdaae.gr/en/data_type/megethi-agoras-ergasias/i-agora-ergasias-stin-ellada/apasxolhsh-ana-klado/

products (96.3% change rate), Libraries, archives, museums and other cultural activities (80.3% change rate) and Scientific research and development (78.7% change rate).

On the contrary, the sectors at the 2nd level of classification, in which the number of persons employed decreased significantly in 2022 compared to 2021, are: Civil engineering (-59.7% rate of change), Air transport (-51.4% rate of change) and Repair and installation of machinery and equipment (-47.8% rate of change).

The largest sectors at the 3rd level of classification, in terms of persons employed, for 2022 are: Growing of non-perennial crops, and Administration of the State and the economic and social policy of the community, in which the number of persons employed is 204,307 and 181,813 respectively.

The sectors (with more than 10,000 persons employed) at the 3rd level of classification, with the largest increase in persons employed in 2022 compared to 2021 are: Wholesale on a fee or contract basis (rate of change 89.8%), Waste collection (rate of change 78.2%) and Manufacture of basic pharmaceutical products (rate of change 65.6%).

On the contrary, the sectors at the 3rd level of classification (with more than 10,000 persons employed), where the number of persons employed in 2022 decreased significantly compared to those in 2021 are: Retail sale via stalls and markets (-43.1% change rate), Retail sale of food, beverages and tobacco in specialized stores (-31.1% change rate) and Printing and service activities related to printing (-23.1% change rate).

More detailed information is available for all interested parties on the MDAAE website, under the category: The labour market in Greece > **Employment by sector**, where the following interactive tables with analyses and visualisations of labour market data are presented (Source: ELSTAT):

- Employment by sector and Region
  https://mdaae.gr/en/data/i-apascholisi-ana-klado-kai-perifereia/
- Employment by sector and age
  https://mdaae.gr/en/data/i-apascholisi-ana-klado-kai-ilikia/
- Employment by sector and gender
  https://mdaae.gr/en/data/i-apascholisi-ana-klado-kai-fylo/
- Employment by sector and level of education
  https://mdaae.gr/en/data/i-apascholisi-ana-klado-ekpaideftiko-epipedo-kai-antikeimeno-ekpaidefsis/
- Employment by sector and full-time/part-time status
  https://mdaae.gr/en/data/i-apascholisi-ana-klado-kai-kathestos-ergasias/
- Employment by sector and type of employment contract
  https://mdaae.gr/en/data/h-misthoti-apascholisi-ana-klado-kai-eidos-symvasis-ergasias/
- Earnings by sector and full-time/part-time status
  https://mdaae.gr/en/data/oi-apodoches-ana-klado-kai-kathestos-ergasias/

K1

ELSTAT: The labour market in Greece (2015-2022)

Employment by sector and Region

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Persons employed by sector (1st level of classification)

Select graph: Persons employed by sector (1st level of classification)

Code (1st level of classification)	Sector (1st level of classification)	2015	2016	2017	2018	2019	2020	2021	2022
Total		3,610,693	3,673,559	3,752,674	3,828,021	3,911,030	3,875,479	3,927,980	4,140,633
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	660,818	657,914	679,219	688,526	691,888	713,717	696,843	716,670
A	Agriculture, forestry and fishing	465,703	454,520	453,359	469,611	453,624	412,008	446,017	461,435
C	Manufacturing	334,491	347,678	358,211	357,764	377,064	371,149	390,008	412,879
I	Accommodation and food service activities	325,539	341,177	350,692	361,726	381,856	343,635	324,468	376,684
O	Public administration and defence; compulsory social security	312,687	331,289	330,612	336,688	341,493	350,519	383,860	373,618
P	Education	293,967	295,089	295,774	303,197	320,912	323,860	312,117	344,383
Q	Human health and social work activities	214,204	218,374	231,566	242,520	248,395	268,980	283,031	288,496

Specify the analysis

Highlight sector: Highlight Sector (1st level of classification)

Highlight code: Highlight Code (1st level of classification)

Region: (All)

Percentage (%) of change

-30.0% 30.0%

Download data

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Figure 28. Employment by sector and Region / Source: ELSTAT

K2

ELSTAT: The labour market in Greece (2015-2022)

Employment by sector and age

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Persons employed by sector (1st level of classification) and age

Select graph: Persons employed by sector (1st level of classification) and age

Code (1st level of classification)	Sector (1st level of classification)	Age	2015	2016	2017	2018	2019	2020	2021	2022
Total			3,610,693	3,673,559	3,752,674	3,828,021	3,911,030	3,875,479	3,927,981	4,140,633
G	Subtotal		660,818	657,914	679,219	688,526	691,888	713,717	696,843	716,670
	Wholesale and retail trade; repair of motor vehicles and motorcycles	50-54	72,918	75,456	72,378	77,558	82,235	92,471	98,300	107,986
		40-44	116,237	110,628	114,340	112,366	118,231	127,056	115,474	106,661
		45-49	91,872	88,124	91,181	93,984	97,427	110,730	103,547	102,689
		30-34	91,961	97,242	104,318	99,460	94,350	92,152	90,207	97,080
		35-39	101,588	100,474	106,841	103,449	100,094	101,299	87,337	83,527
		55-59	42,186	47,244	49,089	58,827	53,952	54,683	56,906	66,782
		25-29	79,238	79,064	74,211	72,031	76,489	65,643	64,668	66,271
		60-64	25,259	20,238	23,305	29,896	29,149	32,897	39,654	38,848
		20-24	28,801	27,554	28,751	26,624	26,180	24,345	24,651	28,806

Specify the analysis

Highlight sector: Highlight Sector (1st level of classification)

Highlight code: Highlight Code (1st level of classification)

Age: (All)

Percentage (%) of change: -30.0% 30.0%

Download data

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Figure 29. Employment by sector and age / Source: ELSTAT

K3

ELSTAT: The labour market in Greece (2015-2022)

Employment by sector and gender

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Persons employed by sector (1st level of classification) and gender

Select graph: Persons employed by sector (1st level of classification) and gender

Code (1st level of classification)	Sector (1st level of classification)	Gender	2015	2016	2017	2018	2019	2020	2021	2022
Total			3,610,693	3,673,559	3,752,674	3,828,021	3,911,030	3,875,479	3,927,980	4,140,633
G	Subtotal		660,818	657,914	679,219	688,526	691,888	713,717	696,843	716,670
	Wholesale and retail trade; repair of motor vehicles and motorcycles	Males	378,021	374,063	393,080	401,885	395,998	406,392	411,331	417,214
		Females	282,797	283,851	286,139	286,641	295,890	307,325	285,512	299,456
A	Subtotal		465,703	454,520	453,359	469,611	453,624	412,008	446,017	461,435
	Agriculture, forestry and fishing	Males	277,122	272,882	272,733	282,987	279,036	252,432	276,199	290,943
		Females	188,581	181,637	180,626	186,624	174,588	159,576	169,817	170,492
C	Subtotal		334,491	347,678	358,211	357,764	377,064	371,149	390,008	412,879
	Manufacturing	Males	233,182	242,555	252,669	259,251	272,869	268,401	274,582	297,445
		Females	101,309	105,123	105,542	98,513	104,196	102,748	115,427	115,434

Specify the analysis

Highlight sector: Highlight Sector (1st level of classification)

Highlight code: Highlight Code (1st level of classification)

Gender: (All)

Percentage (%) of change

-15.0% 15.0%

Download data

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Figure 30. Employment by sector and gender / Source: ELSTAT

K4

ELSTAT: The labour market in Greece (2015-2022)

Employment by sector and level of education

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Persons employed by sector (1st level of classification) and level of education

Select graph: Persons employed by sector (1st level of classification) and level of education

Code (1st level of classification)	Sector (1st level of classification)	Level of education	2015	2016	2017	2018	2019	2020	2021	2022
Total			3,610,693	3,673,559	3,752,674	3,828,021	3,911,030	3,875,479	3,927,980	4,140,633
G	Subtotal		660,818	657,914	679,219	688,526	691,888	713,717	696,843	716,670
	Wholesale and retail trade; repair of motor vehicles and motorcycles	Secondary education degree	315,318	318,855	322,255	329,786	331,107	337,688	337,892	359,630
		Tertiary education degree	133,297	141,308	153,731	158,857	140,848	139,429	161,167	158,855
		Post-secondary vocational training	70,487	73,472	76,950	82,198	86,830	95,957	78,977	86,249
		Finished senior class of middle education	68,995	59,849	59,795	54,629	54,855	57,588	56,308	49,558
		Elementary education degree	57,736	49,416	45,606	45,447	41,442	39,786	33,930	30,845
		Master's degree	9,035	11,200	16,387	14,282	33,407	40,607	26,561	29,355

Specify the analysis

Highlight sector: Highlight Sector (1st level of classification)

Highlight code: Highlight Code (1st level of classification)

Level of education: (All)

Percentage (%) of change

-15.0% 15.0%

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Figure 31. Employment by sector and level of education / Source: ELSTAT

K5

ELSTAT: The labour market in Greece (2015-2022)

Employment by sector and full-time/part-time status

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Persons employed by sector (1st level of classification) and full-time/part-time status

Select graph: Persons employed by sector (1st level of classification) and full-time/part-time status

Code (1st level of classification)	Sector (1st level of classification)	Status	2015	2016	2017	2018	2019	2020	2021	2022
Total			3,610,693	3,673,559	3,752,674	3,828,021	3,911,030	3,875,479	3,927,980	4,140,633
G	Subtotal		660,818	657,914	679,219	688,526	691,888	713,717	696,843	716,670
	Wholesale and retail trade; repair of motor vehicles and motorcycles	Full time	591,702	587,649	606,504	609,279	613,538	644,821	641,337	665,913
		Part time	69,116	70,265	72,715	79,247	78,350	68,896	55,506	50,756
A	Subtotal		465,703	454,520	453,359	469,611	453,624	412,008	446,017	461,435
	Agriculture, forestry and fishing	Full time	421,437	413,362	407,948	430,629	416,567	375,532	402,449	414,038
		Part time	44,266	41,157	45,411	38,983	37,057	36,476	43,567	47,397
C	Subtotal		334,491	347,678	358,211	357,764	377,064	371,149	390,008	412,879
	Manufacturing	Full time	314,022	324,709	336,905	337,055	357,685	354,106	371,753	398,779
		Part time	20,469	22,969	21,306	20,710	19,379	17,043	18,255	14,100

Specify the analysis

Highlight sector: Highlight Sector (1st level of classification)

Highlight code: Highlight Code (1st level of classification)

Status: (All)

Percentage (%) of change: -15.0% 15.0%

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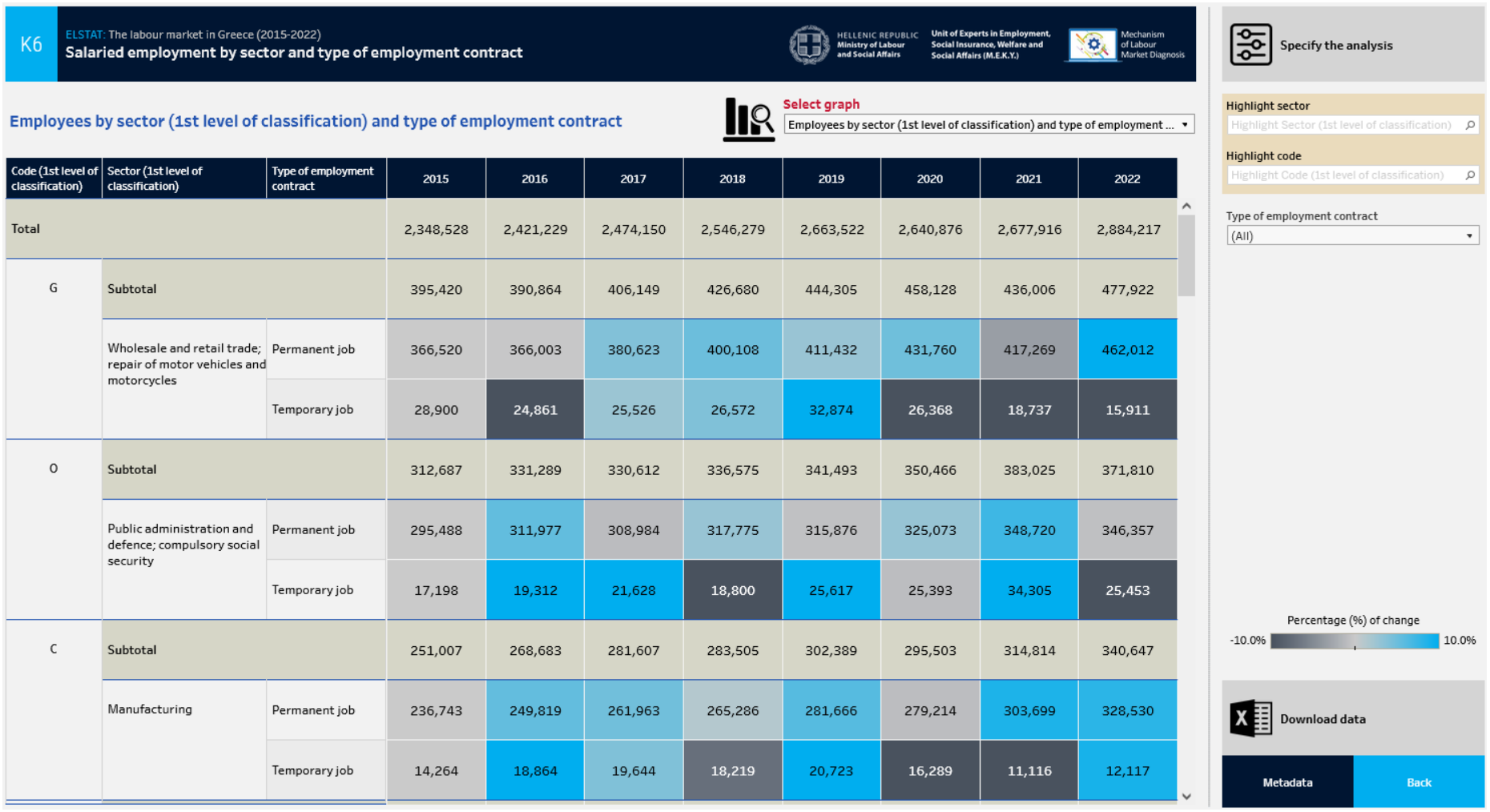
Figure 32. Employment by sector and full-time/part-time status / Source: ELSTAT



K6

ELSTAT: The labour market in Greece (2015-2022)

Salaried employment by sector and type of employment contract

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Employees by sector (1st level of classification) and type of employment contract

Select graph: Employees by sector (1st level of classification) and type of employment ...

Code (1st level of classification)	Sector (1st level of classification)	Type of employment contract	2015	2016	2017	2018	2019	2020	2021	2022
Total			2,348,528	2,421,229	2,474,150	2,546,279	2,663,522	2,640,876	2,677,916	2,884,217
G	Subtotal		395,420	390,864	406,149	426,680	444,305	458,128	436,006	477,922
	Wholesale and retail trade; repair of motor vehicles and motorcycles	Permanent job	366,520	366,003	380,623	400,108	411,432	431,760	417,269	462,012
		Temporary job	28,900	24,861	25,526	26,572	32,874	26,368	18,737	15,911
O	Subtotal		312,687	331,289	330,612	336,575	341,493	350,466	383,025	371,810
	Public administration and defence; compulsory social security	Permanent job	295,488	311,977	308,984	317,775	315,876	325,073	348,720	346,357
		Temporary job	17,198	19,312	21,628	18,800	25,617	25,393	34,305	25,453
C	Subtotal		251,007	268,683	281,607	283,505	302,389	295,503	314,814	340,647
	Manufacturing	Permanent job	236,743	249,819	261,963	265,286	281,666	279,214	303,699	328,530
		Temporary job	14,264	18,864	19,644	18,219	20,723	16,289	11,116	12,117

Specify the analysis

Highlight sector: Highlight Sector (1st level of classification)

Highlight code: Highlight Code (1st level of classification)

Type of employment contract: (All)

Percentage (%) of change

-10.0% 10.0%

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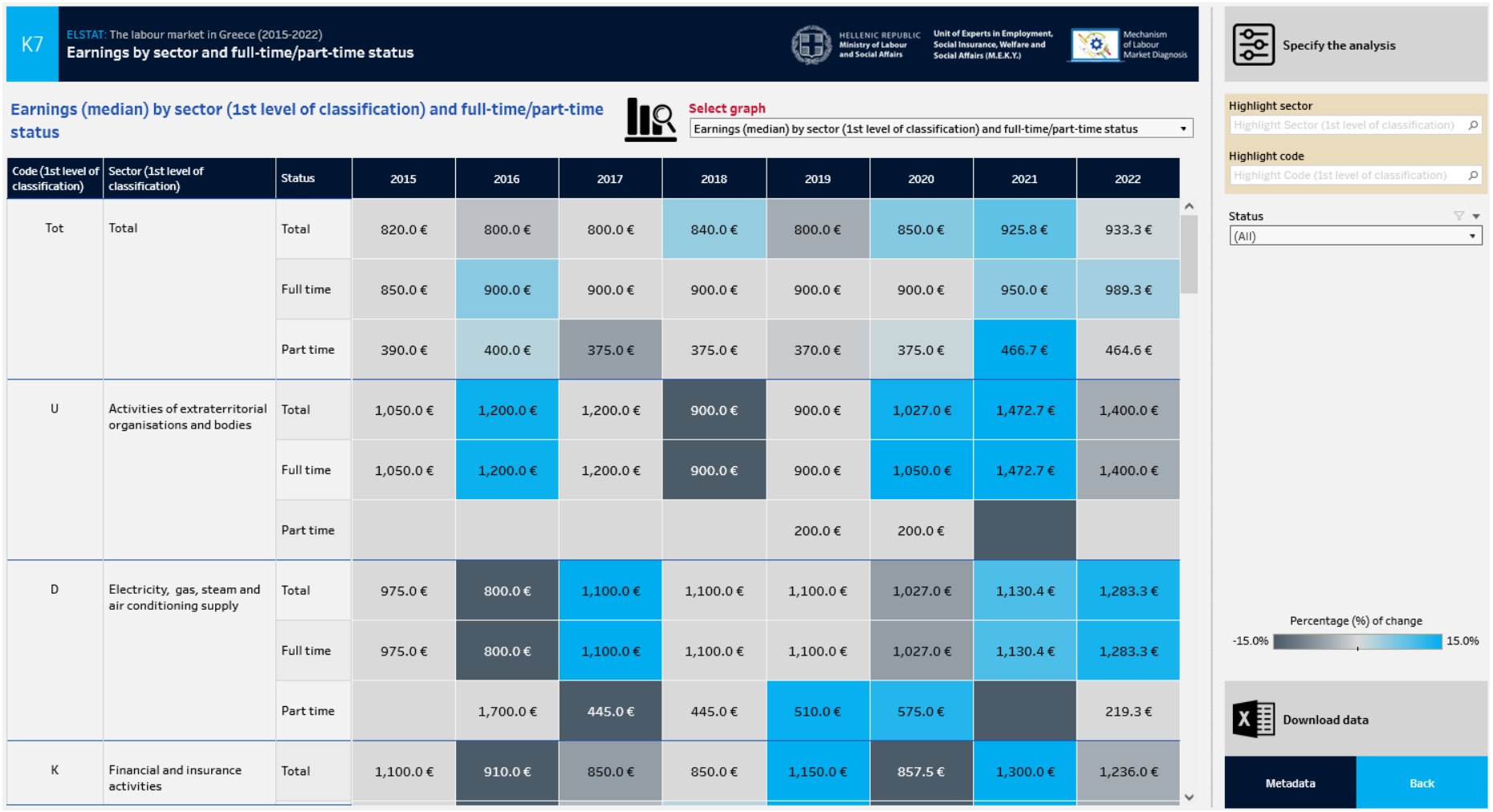
Figure 33. Salaried employment by sector and type of employment contract / Source: ELSTAT



K7

ELSTAT: The labour market in Greece (2015-2022)

Earnings by sector and full-time/part-time status

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Earnings (median) by sector (1st level of classification) and full-time/part-time status

Select graph: Earnings (median) by sector (1st level of classification) and full-time/part-time status

Code (1st level of classification)	Sector (1st level of classification)	Status	2015	2016	2017	2018	2019	2020	2021	2022
Tot	Total	Total	820.0 €	800.0 €	800.0 €	840.0 €	800.0 €	850.0 €	925.8 €	933.3 €
		Full time	850.0 €	900.0 €	900.0 €	900.0 €	900.0 €	900.0 €	950.0 €	989.3 €
		Part time	390.0 €	400.0 €	375.0 €	375.0 €	370.0 €	375.0 €	466.7 €	464.6 €
U	Activities of extraterritorial organisations and bodies	Total	1,050.0 €	1,200.0 €	1,200.0 €	900.0 €	900.0 €	1,027.0 €	1,472.7 €	1,400.0 €
		Full time	1,050.0 €	1,200.0 €	1,200.0 €	900.0 €	900.0 €	1,050.0 €	1,472.7 €	1,400.0 €
		Part time					200.0 €	200.0 €		
D	Electricity, gas, steam and air conditioning supply	Total	975.0 €	800.0 €	1,100.0 €	1,100.0 €	1,100.0 €	1,027.0 €	1,130.4 €	1,283.3 €
		Full time	975.0 €	800.0 €	1,100.0 €	1,100.0 €	1,100.0 €	1,027.0 €	1,130.4 €	1,283.3 €
		Part time		1,700.0 €	445.0 €	445.0 €	510.0 €	575.0 €		219.3 €
K	Financial and insurance activities	Total	1,100.0 €	910.0 €	850.0 €	850.0 €	1,150.0 €	857.5 €	1,300.0 €	1,236.0 €

Specify the analysis

Highlight sector: Highlight Sector (1st level of classification)

Highlight code: Highlight Code (1st level of classification)

Status: (All)

Percentage (%) of change: -15.0% 15.0%

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Figure 34. Salaries by sector and full-time/part-time status / Source: ELSTAT

2.4.2.4. Employment by occupation and sector

According to official ELSTAT data, the 1st level of classification Wholesale and retail trade; repair of motor vehicles and motorcycles sector records the largest number of persons employed over time in the period 2015-2022, with an average of 688,199 jobs per year[15].

Specifically, in 2022 the Wholesale and retail trade sector shows an increase of 2.8% compared to 2021 with 716,670 persons employed, the majority of which are recorded in the 1st level of classification occupation Service and sales workers with 424.772 jobs and 59.3% of the total, followed by Craft and related trades workers and Clerical support workers with 77,289 and 75,238 jobs respectively. For the same year, this is followed by Agriculture, forestry and fishing sector with 461,435 persons employed (11.0% of all persons employed), Manufacturing with 412,879 persons employed and Accommodation and food service activities with 376,684 persons employed.

Regarding employment by sector at the 1st level of classification and occupation at the 2nd level of classification, the majority of those employed in 2022 are employed as Sales workers with 414.042 persons employed (57.8% of the total in the Wholesale and retail trade; repair of motor vehicles and motorcycles sector), followed by Market-oriented skilled agricultural workers in the Agriculture, forestry and fishing sector (399,022) and Food processing, wood working, garment and other craft and related trades workers (58,583 jobs) in the Manufacturing sector.

In terms of employment by sector at the 1st level of classification and occupation at the 3rd level of classification, the majority of employment in 2022 is recorded in the Wholesale and retail trade; repair of motor vehicles and motorcycles for Shop salespersons with 346.317 persons employed (48% of the total), followed by Market gardeners and crop growers in the sector of Agriculture, forestry and fishing (273,558 jobs) and Food processing or related trades workers (40,420 jobs) in Manufacturing.

For the same period 2015-2022, in terms of persons employed by occupation at the 1st level of classification and by sector at the 1st level of classification, workers in Service and sales workers is the occupation (1st level of classification) in which the largest number of persons employed is recorded over time (888,651 jobs on average per year).

More specifically, in 2022, workers in Service and sales workers increased by 4.5% compared to 2021 (907,378 jobs), with the majority of those employed in the 1st level of classification sector Wholesale and retail trade; repair of motor vehicles and motorcycles (46.8% of all those employed in this occupation). The second-ranked occupation is Professionals while the Education sector accounted for 290,030 employees (30.1% of all employees in this occupation).

Regarding employment by occupation at the 2nd level of classification and by sector at the 1st level of classification, the majority of employees in 2022 are recorded in the occupation of Sales

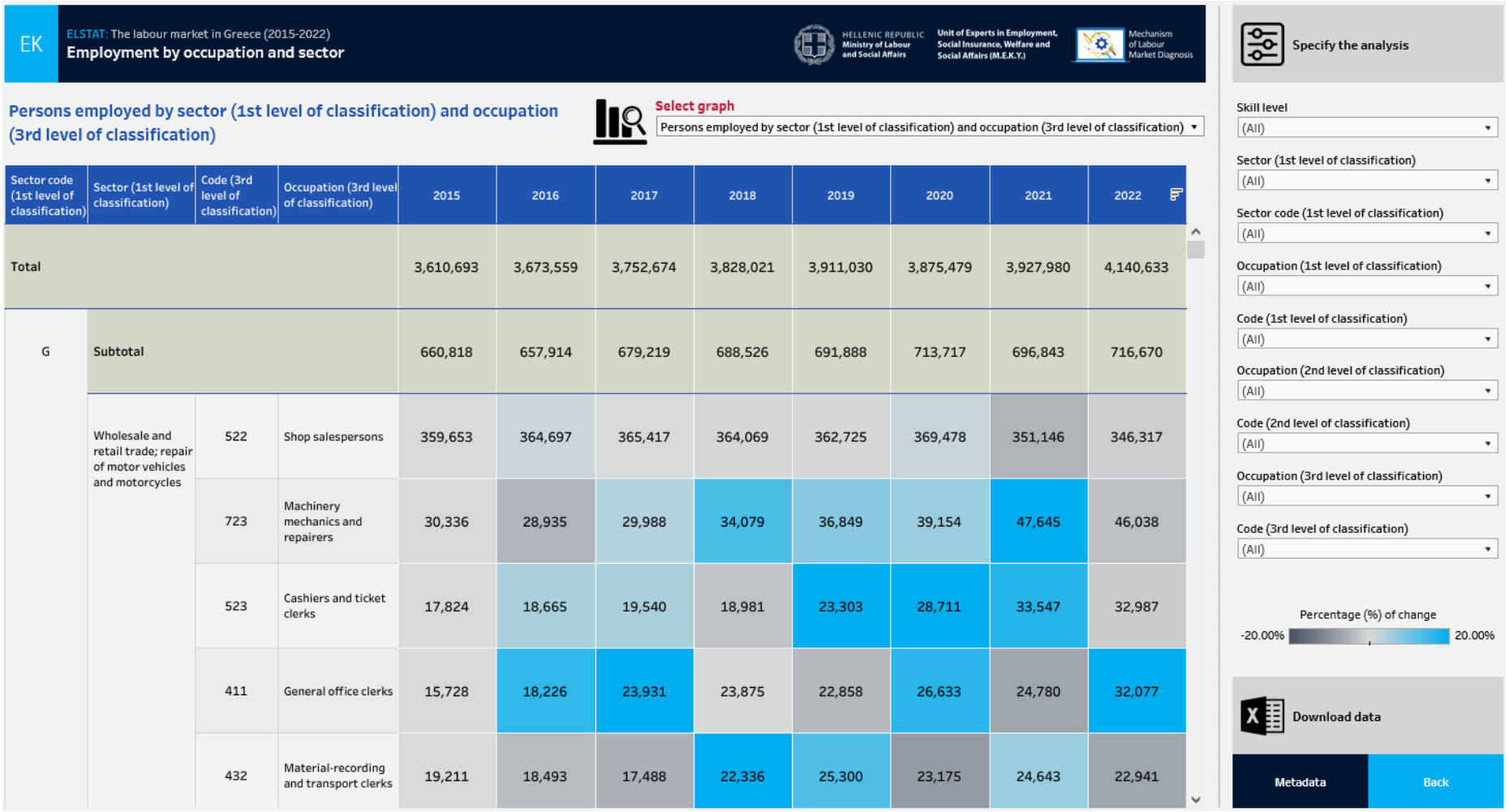
[15] https://mdaae.gr/en/data/i-apascholisi-ana-epangelma-kai-klado/

workers in the Wholesale and retail trade; repair of motor vehicles and motorcycles sector with 414,042 employees (82.1% of all Sales workers). This is followed by the occupation of Market-oriented skilled agricultural workers while the Agriculture, forestry and fishing sector (399,022 jobs) accounted for the vast majority of those employed (98.1% of the total occupation).

Finally, looking at employment by occupation at the 3rd level of classification and by sector at the 1st level of classification, the majority of those employed in 2022 are recorded in the occupation of Shop salespersons and specifically in the sector of Wholesale and retail trade; repair of motor vehicles and motorcycles with 346.317 persons employed (86.8% of the total number of Shop salespersons), followed by Market gardeners and crop growers in Agriculture, forestry and fishing with 273,558 jobs (97.4% of the total number of jobs) and General office clerks in Public administration and defence; compulsory social security with 78,501 jobs (32.8% of the total number of jobs).

More detailed information is available for all interested parties on the MDAAE website, under the category: The labour market in Greece > **Employment by occupation and sector**, where the following interactive table with analyses and visualisations of labour market data is presented (Source: ELSTAT):

- Employment by occupation and sector
  https://mdaae.gr/en/data/i-apascholisi-ana-epangelma-kai-klado/



Sector code (1st level of classification)	Sector (1st level of classification)	Code (3rd level of classification)	Occupation (3rd level of classification)	2015	2016	2017	2018	2019	2020	2021	2022
Total				3,610,693	3,673,559	3,752,674	3,828,021	3,911,030	3,875,479	3,927,980	4,140,633
G	Subtotal			660,818	657,914	679,219	688,526	691,888	713,717	696,843	716,670
	Wholesale and retail trade; repair of motor vehicles and motorcycles	522	Shop salespersons	359,653	364,697	365,417	364,069	362,725	369,478	351,146	346,317
		723	Machinery mechanics and repairers	30,336	28,935	29,988	34,079	36,849	39,154	47,645	46,038
		523	Cashiers and ticket clerks	17,824	18,665	19,540	18,981	23,303	28,711	33,547	32,987
		411	General office clerks	15,728	18,226	23,931	23,875	22,858	26,633	24,780	32,077
		432	Material-recording and transport clerks	19,211	18,493	17,488	22,336	25,300	23,175	24,643	22,941

Figure 35. Employment by occupation and sector / Source: ELSTAT

2.4.2.5. Unemployment by previous occupation and sector

Turning to the characteristics of the unemployed, we find that, in terms of age groups, the largest is that of unemployed 25-29 year-olds with 94,499 people (16.1% of the total unemployed), followed by the 40-44 age group with 74.748 persons (12.7% of the total) and the 35-39 age group 70,844 persons (12%) (Source: ELSTAT)[16]. The smallest share of the unemployed are the 65-69 year-olds with 9,096 persons (1.5%), the 15-19 year-olds with 14,220 persons (2.4%) and the 60-64 year-olds with 30,524 persons (5.2%).

As regards the evolution of unemployment by age group, between 2021 and 2022, when total unemployment decreased by 13.2% to 588,188 persons, the largest decrease in the number of unemployed was recorded in the age group 30-34 years (-18.7%), the group 55-59 years (-17.7%) and the group 25-29 years (17.1%). In contrast, there was an increase in the number of unemployed persons aged 15-19 years (+23.7%) and in the number of unemployed persons aged 65-69 years (+6.7%). There are significant differences between the unemployed in terms of their previous occupation/employment status. Most of the unemployed are people who have never worked (126,680), while another 78,368 unemployed stopped working more than 8 years ago. Among the unemployed who have worked in the last 8 years, most of them are from the occupational category of workers in Service and sales workers (108,491), followed by the occupational category of Elementary occupations (75,111) and Clerical support workers (60,178). The lowest number of unemployed came from Managers (4,607) and Skilled agricultural, forestry and fishery workers (5,180).

The vast majority of the unemployed have as their highest educational qualification the completion of secondary education (249,570 persons or 42.4%), followed by those completed tertiary education (131,109 persons or 22.3%). The unemployed who have not finished elementary education (4,163 persons) and those with only an elementary education degree (57,043 persons) constitute 0.7% and 9.7% of the total unemployed, respectively.

In terms of the skill level of the jobs from which the unemployed come, we find that most (237,715 people) held medium-skilled jobs, followed by low-skilled jobs (75,111) and high-skilled jobs (64,482). Given that most of the employed people hold medium-skilled jobs, followed by high-skilled job holders and far fewer low-skilled job holders, it can be seen that unemployment affects workers in low-skilled jobs more severely than those in high-skilled jobs. It is also worth noting that over the last two years unemployment has fallen more rapidly among those in high-skilled jobs (-27%) than among those in medium (11.5%) or low (10.7%) skilled jobs.

The sectors of economic activity at the 1st level of classification from which most of the unemployed come are Accommodation and food service activities (92,445 unemployed), Wholesale and retail trade; repair of motor vehicles and motorcycles (54.585) and Manufacturing (39,593). Relatively few people are unemployed in Real estate activities, Mining and quarrying, and

[16] https://mdaae.gr/en/data_type/megethi-agoras-ergasias/i-agora-ergasias-stin-ellada/h-statistikh-anergia-ana-epaggelma/

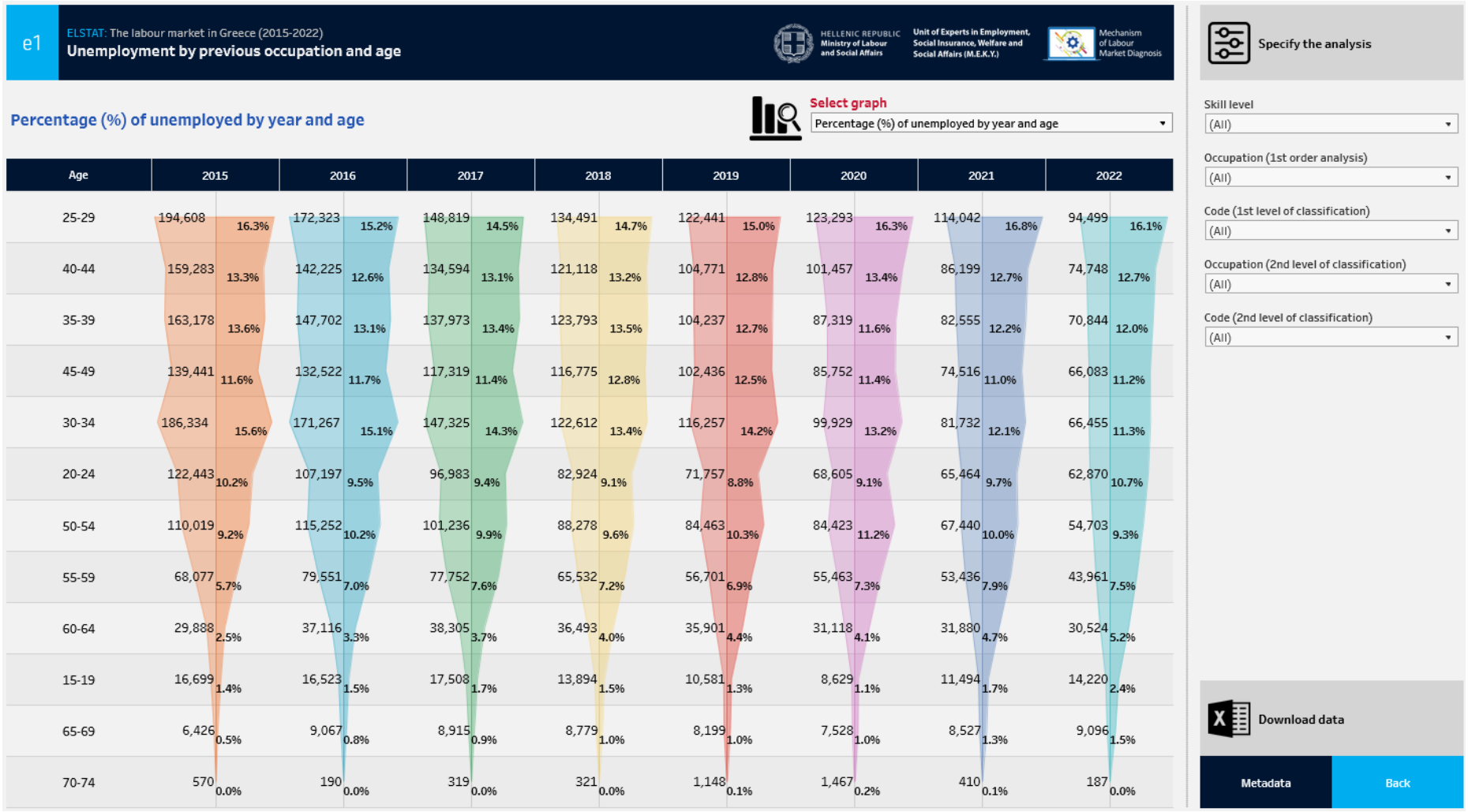
Electricity, gas, steam and air conditioning supply (a total of 2,079 people). It is worth noting that over the past year the largest decrease in unemployed persons was caused by the Education (-50.7%), Wholesale and retail trade; repair of motor vehicles and motorcycles (-28.2%) and Agriculture, forestry and fishing (-28.1%) sectors. The largest increase in unemployment was caused by Transportation and storage (40.4%), Human health and social work activities (32.6%) and Manufacturing (32.3%).

More detailed information is available for all interested parties on the MDAAE website, under the category: The labour market in Greece > **Unemployment by previous occupation**, where the following interactive tables with analyses and visualisations of labour market data are presented (Source: ELSTAT):

- Unemployment by previous occupation and age
  https://mdaae.gr/en/data/i-statistiki-anergia-ana-epangelma-kai-ilikia/
- Unemployment by previous occupation and gender
  https://mdaae.gr/en/data/i-statistiki-anergia-ana-epangelma-kai-fylo/
- Unemployment by previous occupation and level of education
  https://mdaae.gr/en/data/i-statistiki-anergia-ana-epangelma-kai-ekpaideftiko-epipedo/

More detailed information is available for all interested parties on the MDAAE website, under the category: The labour market in Greece > **Unemployment by previous sector**, where the following interactive tables with analyses and visualisations of labour market data are presented (Source: ELSTAT):

- Unemployment by previous sector and age
  https://mdaae.gr/en/data/i-statistiki-anergia-ana-klado-kai-ilikia/
- Unemployment by previous sector and gender
  https://mdaae.gr/en/data/i-statistiki-anergia-ana-klado-kai-fulo/
- Unemployment by previous sector and level of education
  https://mdaae.gr/en/data/i-statistiki-anergia-ana-klado-kai-ekpaideutiko-epipedo/



Age	2015	2016	2017	2018	2019	2020	2021	2022
25-29	194,608 16.3%	172,323 15.2%	148,819 14.5%	134,491 14.7%	122,441 15.0%	123,293 16.3%	114,042 16.8%	94,499 16.1%
40-44	159,283 13.3%	142,225 12.6%	134,594 13.1%	121,118 13.2%	104,771 12.8%	101,457 13.4%	86,199 12.7%	74,748 12.7%
35-39	163,178 13.6%	147,702 13.1%	137,973 13.4%	123,793 13.5%	104,237 12.7%	87,319 11.6%	82,555 12.2%	70,844 12.0%
45-49	139,441 11.6%	132,522 11.7%	117,319 11.4%	116,775 12.8%	102,436 12.5%	85,752 11.4%	74,516 11.0%	66,083 11.2%
30-34	186,334 15.6%	171,267 15.1%	147,325 14.3%	122,612 13.4%	116,257 14.2%	99,929 13.2%	81,732 12.1%	66,455 11.3%
20-24	122,443 10.2%	107,197 9.5%	96,983 9.4%	82,924 9.1%	71,757 8.8%	68,605 9.1%	65,464 9.7%	62,870 10.7%
50-54	110,019 9.2%	115,252 10.2%	101,236 9.9%	88,278 9.6%	84,463 10.3%	84,423 11.2%	67,440 10.0%	54,703 9.3%
55-59	68,077 5.7%	79,551 7.0%	77,752 7.6%	65,532 7.2%	56,701 6.9%	55,463 7.3%	53,436 7.9%	43,961 7.5%
60-64	29,888 2.5%	37,116 3.3%	38,305 3.7%	36,493 4.0%	35,901 4.4%	31,118 4.1%	31,880 4.7%	30,524 5.2%
15-19	16,699 1.4%	16,523 1.5%	17,508 1.7%	13,894 1.5%	10,581 1.3%	8,629 1.1%	11,494 1.7%	14,220 2.4%
65-69	6,426 0.5%	9,067 0.8%	8,915 0.9%	8,779 1.0%	8,199 1.0%	7,528 1.0%	8,527 1.3%	9,096 1.5%
70-74	570 0.0%	190 0.0%	319 0.0%	321 0.0%	1,148 0.1%	1,467 0.2%	410 0.1%	187 0.0%

Figure 36. Unemployment by previous occupation and age / Source: ELSTAT

Gender	2015	2016	2017	2018	2019	2020	2021	2022
Total	1,196,966	1,130,934	1,027,048	915,007	818,891	754,982	677,695	588,188
Females	618,163	603,404	554,264	508,483	450,456	405,085	386,846	343,356
Males	578,802	527,531	472,784	406,524	368,436	349,897	290,849	244,832

Figure 37. Unemployment by previous occupation and gender / Source: ELSTAT

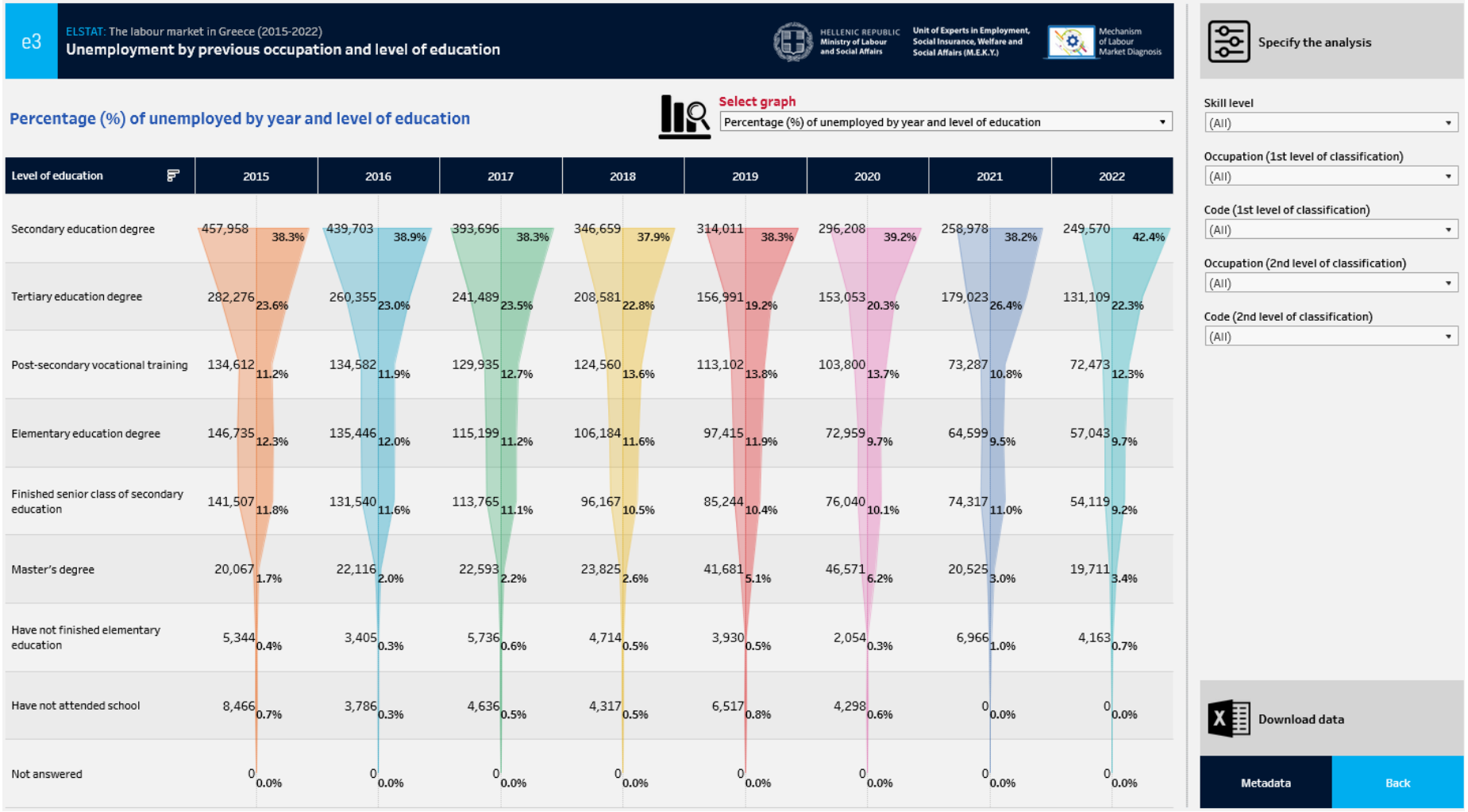


Figure 38. Unemployment by previous occupation and level of education / Source: ELSTAT

k1

ELSTAT: The labour market in Greece (2015-2022)

Unemployment by previous sector and age

HELLENIC REPUBLIC Ministry of Labour and Social Affairs | Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.) | Mechanism of Labour Market Diagnosis

Unemployed by age

Select graph: Unemployed by age

Age	2015	2016	2017	2018	2019	2020	2021	2022
Total	1,196,966	1,130,934	1,027,048	915,007	818,891	754,982	677,695	588,188
25-29	194,608	172,323	148,819	134,491	122,441	123,293	114,042	94,499
40-44	159,283	142,225	134,594	121,118	104,771	101,457	86,199	74,748
35-39	163,178	147,702	137,973	123,793	104,237	87,319	82,555	70,844
30-34	186,334	171,267	147,325	122,612	116,257	99,929	81,732	66,455
45-49	139,441	132,522	117,319	116,775	102,436	85,752	74,516	66,083
20-24	122,443	107,197	96,983	82,924	71,757	68,605	65,464	62,870
50-54	110,019	115,252	101,236	88,278	84,463	84,423	67,440	54,703
55-59	68,077	79,551	77,752	65,532	56,701	55,463	53,436	43,961
60-64	29,888	37,116	38,305	36,493	35,901	31,118	31,880	30,524
15-19	16,699	16,523	17,508	13,894	10,581	8,629	11,494	14,220
65-69	6,426	9,067	8,915	8,779	8,199	7,528	8,527	9,096
70-74	570	190	319	321	1,148	1,467	410	187

Specify the analysis

Age: (All)

Sector (1st level of classification): (All)

Code (1st level of classification): (All)

Sector (2nd level of classification): (All)

Code (2nd level of classification): (All)

Percentage (%) of change: -15.00% 15.00%

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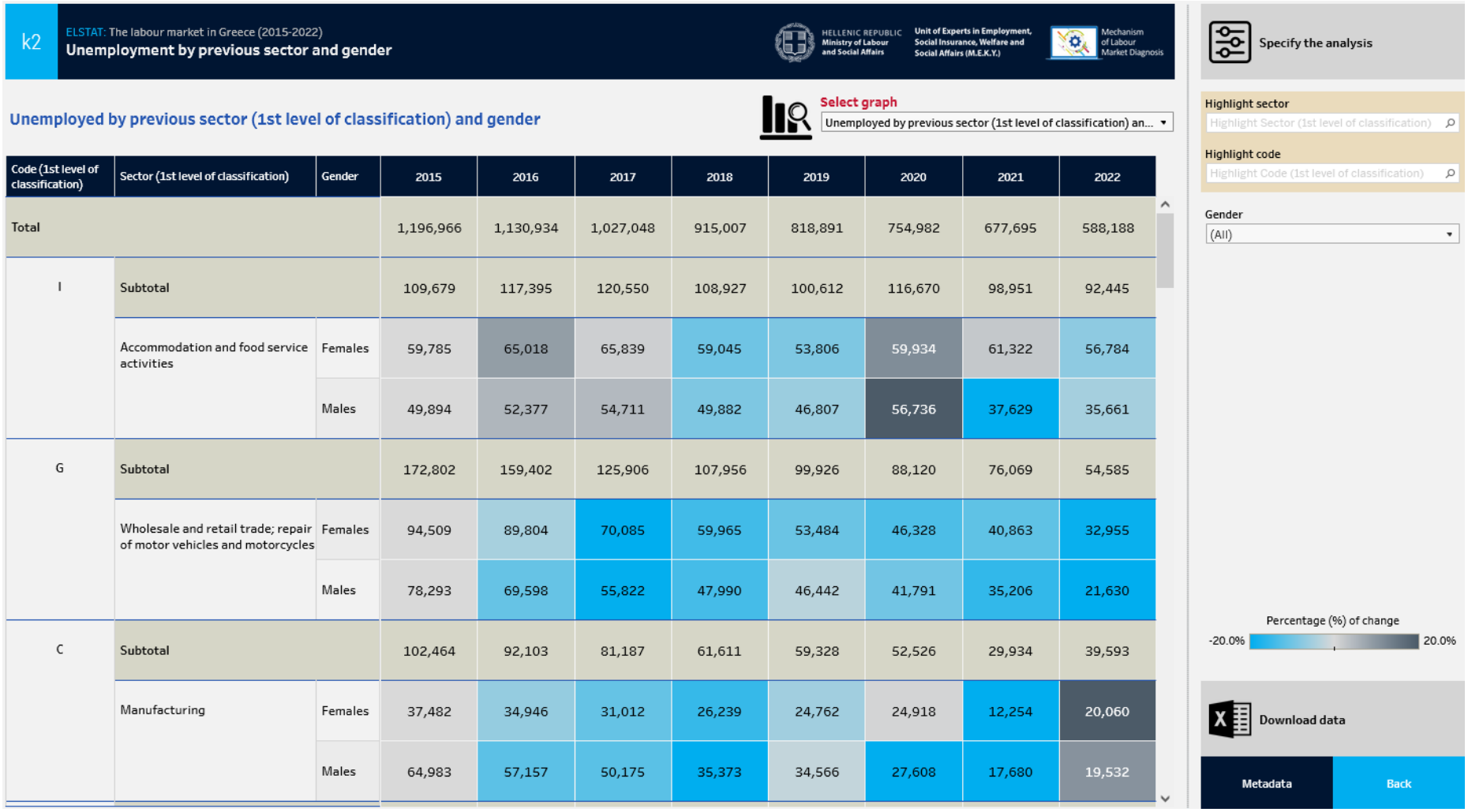
Figure 39. Unemployment by previous sector and age / Source: ELSTAT



k2

ELSTAT: The labour market in Greece (2015-2022)

Unemployment by previous sector and gender

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Unemployed by previous sector (1st level of classification) and gender

Select graph: Unemployed by previous sector (1st level of classification) an...

Code (1st level of classification)	Sector (1st level of classification)	Gender	2015	2016	2017	2018	2019	2020	2021	2022
Total			1,196,966	1,130,934	1,027,048	915,007	818,891	754,982	677,695	588,188
I	Subtotal		109,679	117,395	120,550	108,927	100,612	116,670	98,951	92,445
	Accommodation and food service activities	Females	59,785	65,018	65,839	59,045	53,806	59,934	61,322	56,784
		Males	49,894	52,377	54,711	49,882	46,807	56,736	37,629	35,661
G	Subtotal		172,802	159,402	125,906	107,956	99,926	88,120	76,069	54,585
	Wholesale and retail trade; repair of motor vehicles and motorcycles	Females	94,509	89,804	70,085	59,965	53,484	46,328	40,863	32,955
		Males	78,293	69,598	55,822	47,990	46,442	41,791	35,206	21,630
C	Subtotal		102,464	92,103	81,187	61,611	59,328	52,526	29,934	39,593
	Manufacturing	Females	37,482	34,946	31,012	26,239	24,762	24,918	12,254	20,060
		Males	64,983	57,157	50,175	35,373	34,566	27,608	17,680	19,532

Specify the analysis

Highlight sector: Highlight Sector (1st level of classification)

Highlight code: Highlight Code (1st level of classification)

Gender: (All)

Percentage (%) of change

-20.0% 20.0%

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Figure 40. Unemployment by previous sector and gender / Source: ELSTAT

2.4.3. Salaried employment in Greece

As shown by the data of ERGANI[17], in 2022 there was an increase in private sector employment by 72,847 jobs, as a result of a positive balance of hires - dismissals / voluntary separations.

Looking at the period 2018-2022 for the whole country, it is observed that 2022 recorded the smallest balance of hires - dismissals / voluntary separations of the period 2018-2022, while the largest was recorded in 2018 (141,003).

The highest balance for 2022 was recorded in employment posts requiring a medium level of skills. The largest percentage decrease (change of -37.0%) in the balance was recorded in the occupation at the 1st level of classification, Clerks, which is the occupation with the largest number of jobs.

In 2022, the balance of hires - dismissals/ voluntary separations in jobs requiring a high level of skills was, with little change, almost the same as in 2021. The occupation at the 1st level of classification in which the payroll employment balance in 2022 had the largest increase (53.1%) over 2021 is Professionals, while the largest percentage decrease in the same year was reflected in the occupation Technicians and associate professionals.

In 2022, a significantly positive balance (over 2,000 jobs) of hires - dismissals / voluntary separations, in jobs requiring a high level of skills, was recorded at the 1st level of classification in the sectors of Professional, scientific and technical activities, Education, Human health and social work activities, and Information and communication.

Similarly, a significantly positive balance (more than 2,000 jobs) of hires - dismissals / voluntary separations, in jobs requiring a medium level of skills, was recorded at the 1st level of classification in the sectors of Administrative and support service activities, Wholesale and retail trade; repair of motor vehicles and motorcycles, Construction, Human health and social work activities, Manufacturing and Information and communication.

Finally, in the occupation at the 1st level of classification in Elementary occupations, the jobs requiring a low level of skills, i.e., the total number of jobs in this occupation, decreased to 10,375 in 2022, i.e., by 53.9% compared to the previous year. A significantly positive balance (more than 2,000 jobs) of hires - dismissals / voluntary separations in jobs requiring a low level of skills was reflected in only two sectors at the 1st level of classification, namely Administrative and support service activities and Manufacturing.

More detailed information is available for all interested parties on the MDAAE website, under the category: Salaried employment > **Salaried employment by occupation** where the following

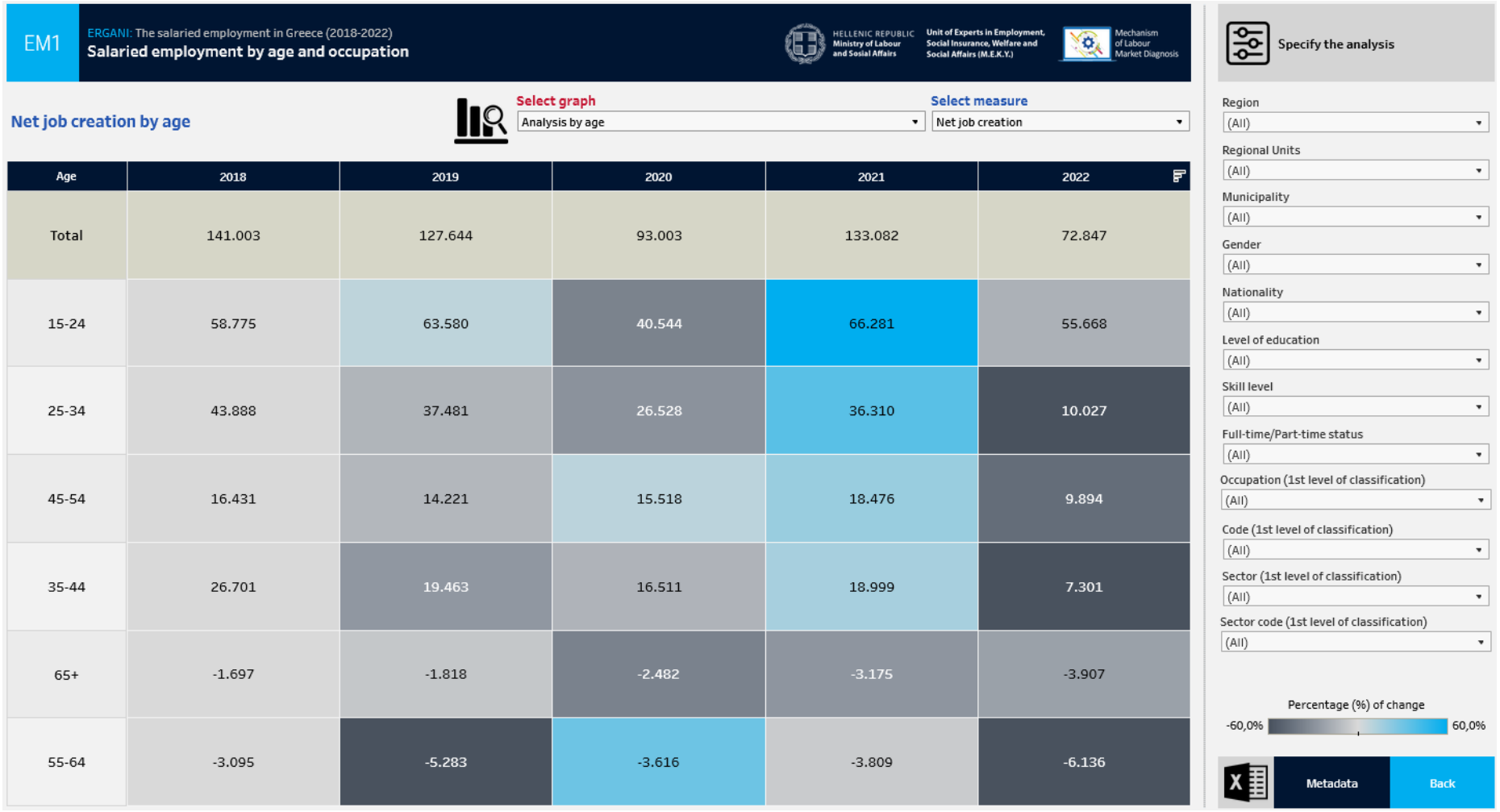
[17] https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-epipedo-dexiotiton-kai-epangelma/

interactive tables with analyses and data visualisations of the salaried labour are presented (Source: ERGANI):

- Salaried employment by age and occupation
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-ilikia-kai-epangelma/
- Salaried employment by gender and occupation
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-fylo-kai-epangelma/
- Salaried employment by nationality and occupation
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-ethnikotita-kai-epangelma/
- Salaried employment by level of education and occupation
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-ekpaideftiko-epipedo-kai-epangelma/
- Salaried employment by skill level and occupation
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-epipedo-dexiotiton-kai-epangelma/
- Salaried employment by full-time/part-time status and occupation
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-kathestos-ergasias-kai-epangelma/

More detailed information is available for anyone interested in the category: Salaried employment > **Salaried employment by sector**, where the following interactive tables with analyses and visualisations of data on salaried labour are presented (Source: ERGANI):

- Salaried employment by age and sector
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-ilikia-kai-klado/
- Salaried employment by gender and sector
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-fylo-kai-klado/
- Salaried employment by nationality and sector
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-ethnikotita-kai-klado/
- Salaried employment by level of education and sector
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-ekpaideftiko-epipedo-kai-klado/
- Salaried employment by skill level and sector
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-epipedo-dexiotiton-kai-klado/
- Salaried employment by full-time/part-time status and occupation
  https://mdaae.gr/en/data/i-misthoti-apascholisi-ana-kathestos-ergasias-kai-klado/



Age	2018	2019	2020	2021	2022
Total	141.003	127.644	93.003	133.082	72.847
15-24	58.775	63.580	40.544	66.281	55.668
25-34	43.888	37.481	26.528	36.310	10.027
45-54	16.431	14.221	15.518	18.476	9.894
35-44	26.701	19.463	16.511	18.999	7.301
65+	-1.697	-1.818	-2.482	-3.175	-3.907
55-64	-3.095	-5.283	-3.616	-3.809	-6.136

Figure 41. Salaried employment by age and occupation / Source: ERGANI

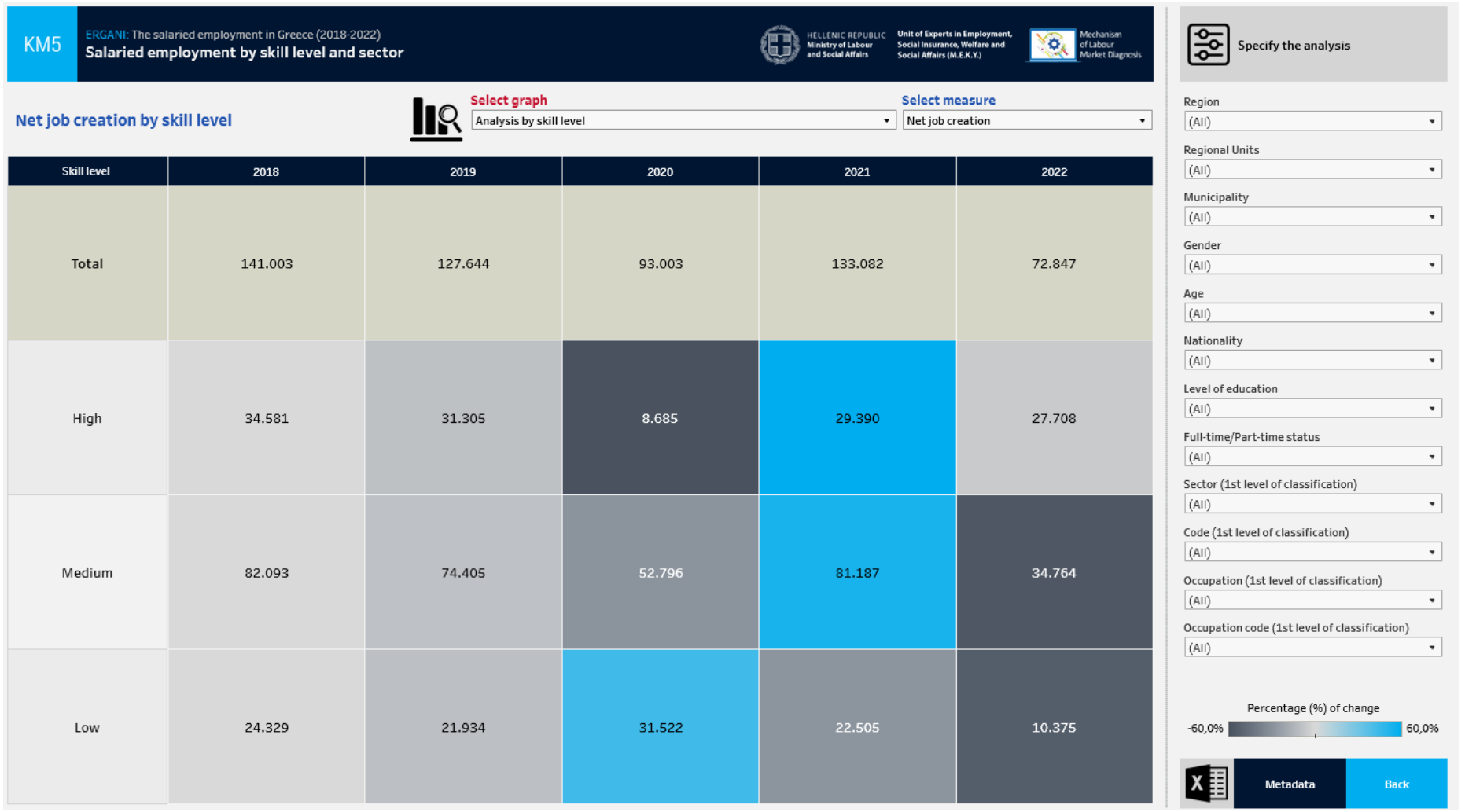


Figure 42. Salaried employment by skill level and sector / Source: ERGANI

2.4.4. Registered unemployment

Registered unemployment in the first month of 2022 was 1,112,582 people, while in the last month it was 1,084,488, with an average of 1,002,705 people and a standard deviation of 83,597 (Source: DYPA)[18]. The seasonality of unemployment is strong and proportional to the economic activity (especially tourism), showing the lowest level in September (889,486 persons) and the highest in January (1,112,582 persons). The main characteristic of unemployment is its gender dimension: while women make up 44.4% of the country's labour force, they accounted for at least 60% of the unemployed (maximum 70.2%, in February 2022). Beyond gender, unemployment is also strongly differentiated by the age of the registered unemployed. The most populous age groups are those of 25-34 and 35-44 years old, each of which concentrates around 212 thousand people, while the smallest age group is that of young people aged 15-24 years old, where around 49 thousand people are concentrated. About half of the unemployed are single and half are married. In terms of the highest completed level of education, at the end of the period under review, the majority of the registered unemployed were secondary school graduates (428,744 persons), followed by primary compulsory education graduates (293,818 persons), tertiary education graduates (160,379 persons) and post-secondary education graduates (87,889 persons). In addition, 9,329 registered unemployed persons have a Master's degree and 722 have a PhD. In contrast to the rest of the registered unemployed, tertiary education unemployed graduates show an increase during the summer months, possibly due to the interruption of educational activities while many of the secondary school graduates take up employment and due to their limited relevance to the tourist activities of this period.

About half of the unemployed come from the occupational categories (at the first/single-digit level of occupational analysis) Service and sales workers (294,011 or 27.1%), and Elementary occupations (276,326 or 25.5%). 17.0% of the unemployed were Clerical support workers and 10.0% were Professionals. If we look at the occupational origin of the unemployed in more detail (at the third/three-digit level of analysis), we find that the majority of the unemployed are General office clerks (134,004), Domestic, hotel or office cleaners or helpers (103,655), Shop salespersons (91,614), and Waiters and bartenders (78,463). The next occupational categories of origin of the unemployed are Cooks, Manufacturing Labourers, and Mining and construction labourers (46,068, 45,731, and 43,064, respectively).

Geographically, the registered unemployed are concentrated in the Regions of Attica, Central Macedonia and Crete (336,061, 201,043 and 82,092, respectively), while the lowest concentration is in the North Aegean, Western Macedonia and Epirus (17,339, 27,332 and 29,560, respectively). In more detail, at the level of the Regional Unit (R.U.) the registered unemployed are concentrated in the R.U. of Thessaloniki, the Central Sector of Athens and the Western Sector of Athens (124,164, 98,072 and 48,598, respectively) and the lowest concentration is in the R.U. of Ithaca, Kea-Kythnos and Andros (266, 328 and 785, respectively). At the municipal level, most registered unemployed

[18] https://mdaae.gr/en/data_type/megethi-agoras-ergasias/anergia/

persons are in the Municipalities of Athens, Thessaloniki, Patra, Heraklion, Rhodes and Corfu (68,639, 37,318, 28,919, 28,519, 25,625 and 19.014, respectively), while the lowest concentration of registered unemployed people is found in the Municipalities of Agathonisi, Agios Efstratios, Anafi, Gavdos, Sikinos and Kimolos (5, 13, 16, 18, 20 and 40, respectively).

The duration of registered unemployment period is perhaps the most critical dimension of unemployment, being closely linked to the difficulty of reintegration into work. About half (52.6%) of the registered unemployed at the end of 2022 were unemployed for less than 12 months, while 12.9% were unemployed for 12-24 months, 17.9% for 25-60 months and 16.5% of the registered unemployed were unemployed for more than 60 months.

Apart from the above characteristics of the registered unemployed, it is possible to identify the analytical occupations sought by the registered unemployed, differentiated according to the educational level of the unemployed.

More detailed information is available for all interested parties on the MDAAE website, under the category: **Registered unemployment** where the following interactive tables with analyses and data visualisations on registered unemployment are presented (Source: DYPA):

- Registered unemployed in 2022 (monthly)
  https://mdaae.gr/en/data/engegrammenoi-anergoi-to-2022-miniaia/
- Registered unemployed by gender
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-fylo/
- Registered unemployed by age
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-ilikia/
- Registered unemployed by marital status
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-oikogeneiaki-katastasi/
- Registered unemployed by level of education
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-ekpaideftiko-epipedo-2/
- Registered unemployed by preferred occupation (1st level of classification)
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-epangelma-pros-anazitisi-1o-epipedo-analysis/
- Registered unemployed by preferred occupation (2nd level of classification)
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-epangelma-pros-anazitisi-2o-epipedo-analysis/
- Registered unemployed by preferred occupation (3rd level of classification)
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-epangelma-pros-anazitisi-3o-epipedo-analysis/
- Registered unemployed by Region
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-perifereia/
- Registered unemployed by Regional Unit
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-perifereiaki-enotita/

- Registered unemployed by Municipality
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-dimo/
- Registered unemployed by months of unemployment
  https://mdaae.gr/en/data/engegrammenoi-anergoi-ana-mines-anergias/

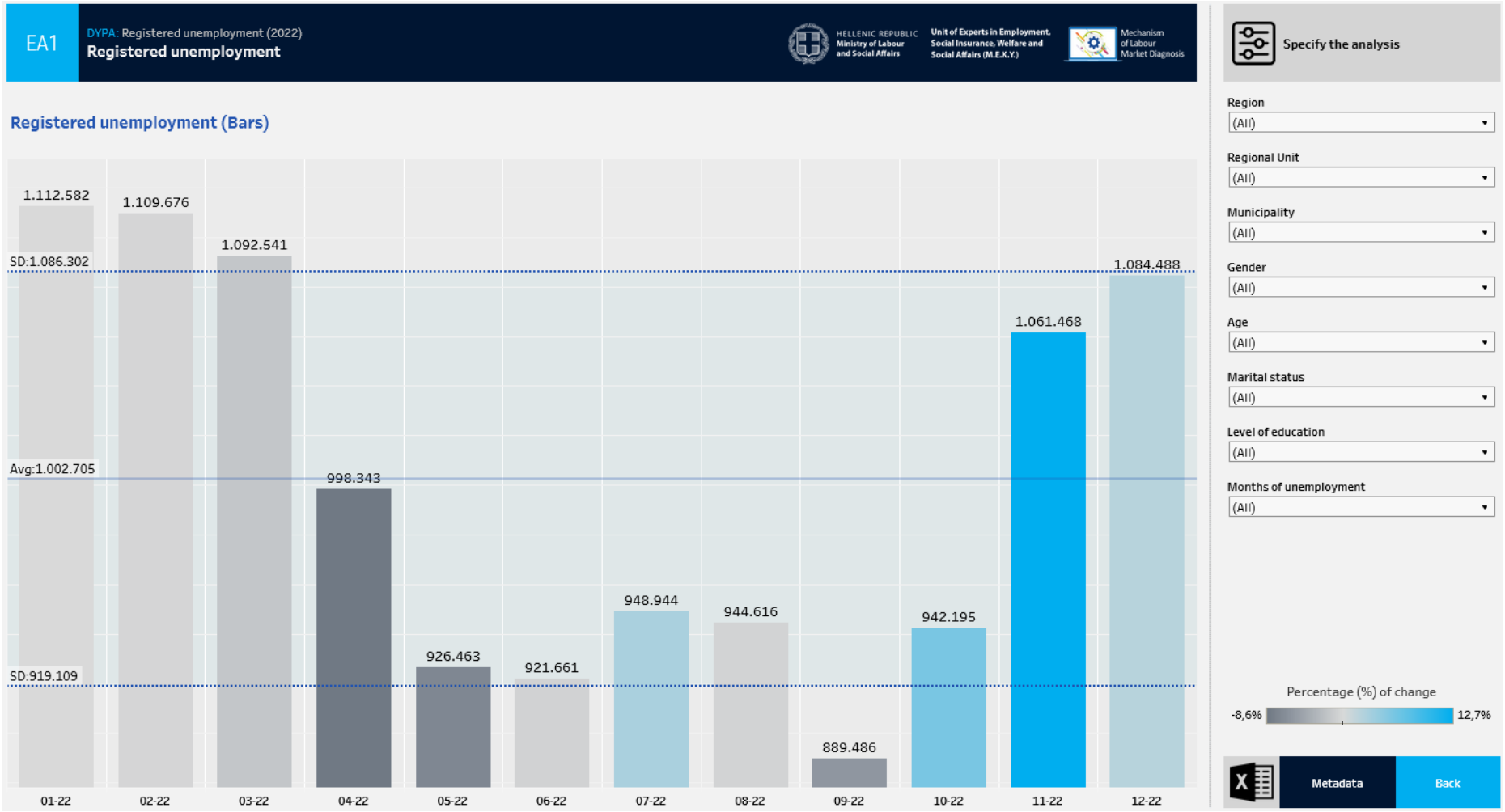


Figure 43. Registered unemployed in 2022 (monthly) / Source: DYPA

EA2

DYPA: Registered unemployment (2022)

Registered unemployment by gender (Graph)

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Registered unemployment by gender (Table)

Select graph: Registered unemployment by gender (Table)

Gender	01-22	02-22	03-22	04-22	05-22	06-22	07-22	08-22	09-22	10-22	11-22	12-22
Total	1.112.582	1.109.676	1.092.541	998.343	926.463	921.661	948.944	944.616	889.486	942.195	1.061.468	1.084.488
Female	706.732	707.220	699.155	644.920	604.805	612.108	637.842	636.391	586.799	614.705	678.989	689.735
Male	405.850	402.456	393.386	353.423	321.658	309.553	311.102	308.225	302.687	327.490	382.479	394.753

Specify the analysis

Region: (All)

Regional Unit: (All)

Municipality: (All)

Age: (All)

Marital status: (All)

Level of education: (All)

Months of unemployment: (All)

Percentage (%) of change

-15,0% 15,0%

Metadata Back

Figure 44. Registered unemployed by gender / Source: DYPA

2.5. Labour market trends

Following the analysis of labour market variables, the analysis of labour market trends is important to support planning[19].

In order to identify and better understand the relevant data, the following categories of data are presented on the MDAAE website in the thematic section **Labour market trends**, by publication source:

- **Dynamism of occupations and sectors (Employment)** (Source: ELSTAT) https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/dynamismos-epangelmaton-kai-kladon/
- **Dynamism of salaried employment** (Source: ERGANI) https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/dynamismos/
- **Continuous increase of employment** (Source: ELSTAT) https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/diachroniki-afxisi-tis-apascholisis/
- **Analysis of supply - demand for salaried employment** (Source: DYPA - ERGANI) https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/analysi-prosforas-zitisis-misthotis-ergasias/
- **Occupational guide** (Source: ELSTAT) https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/odigos-epangelmaton/
- **Underemployment** (Source: ELSTAT - ERGANI) https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/eteroapascholisi/

[19] https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/

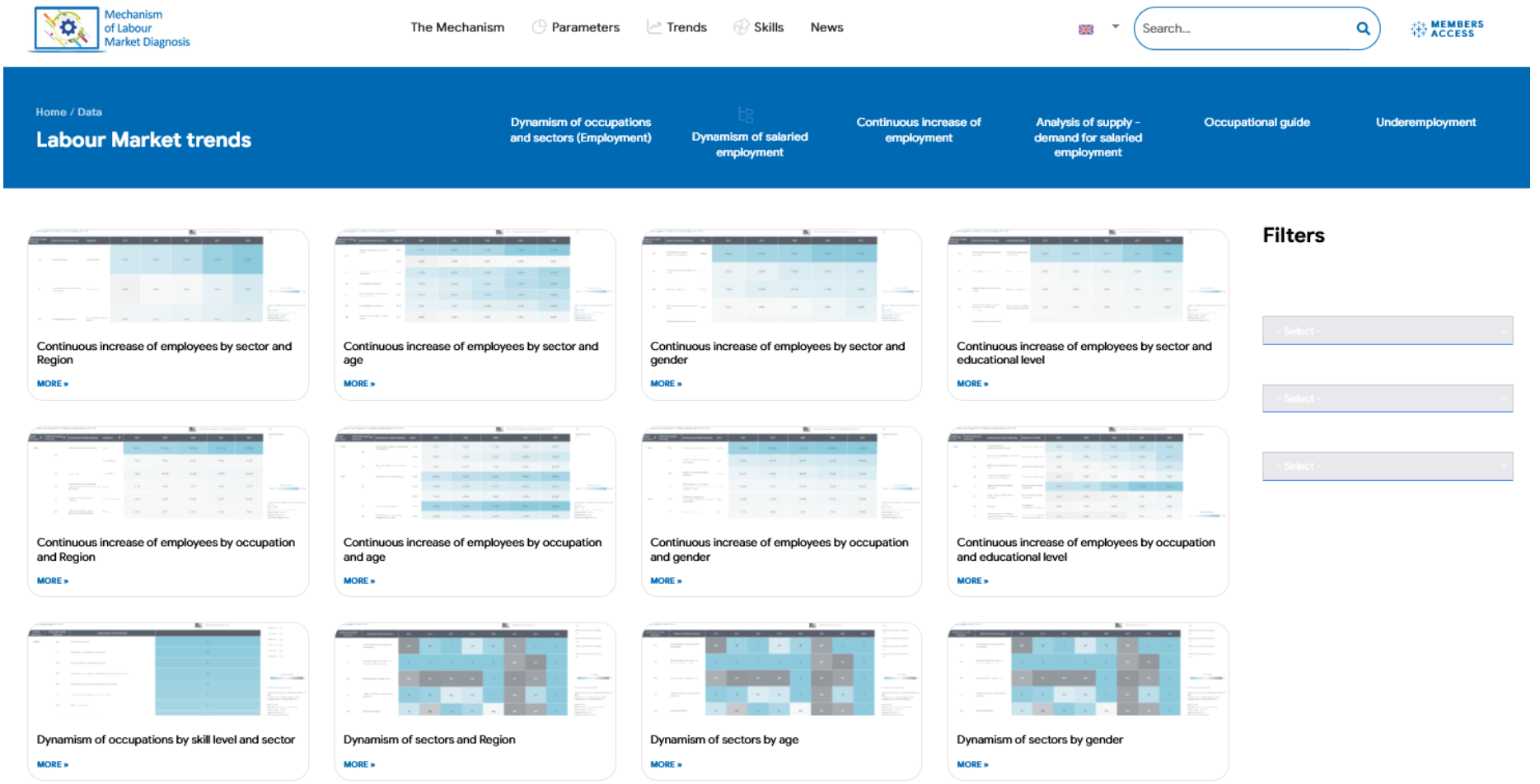


Figure 45. MDAAE website, Labour market trends

2.5.1. Dynamism of occupations and sectors

The most dynamic occupations (Total employment) by skill level in 2022[20] are:

High level of skills	**Medium level of skills**	**Low level of skills**
Nursing and midwifery professionals	Secretaries (general)	Agricultural, forestry and fishery labourers
Secondary education teachers	Waiters and bartenders	Other elementary workers
Life science professionals	Mixed crop and animal producers	Domestic, hotel and office cleaners and helpers
Sports and fitness workers	Car, van and motorcycle drivers	Mining and construction labourers
Business services and administration managers	Other sales workers	Food preparation assistants
Finance professionals	Food and related products machine operators	Refuse workers
Other teaching professionals	Other stationary plant and machine operators	Vehicle, window, laundry and other hand cleaning workers
Medical and pharmaceutical technicians	Sheet and structural metal workers, moulders and welders, and related workers	Transport and storage labourers
Sales, marketing and public relations professionals	Building frame and related trades workers	Manufacturing labourers
Regulatory government associate professionals	Cooks	

The most dynamic occupations by skill level are expected to show some variation by gender. For high-skill occupations, the most dynamic occupations are the same for men and women, with variations in the rest of the ranking. The 3 most dynamic for men are professional Nursing and

[20] https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/dynamismos-epangelmaton-kai-kladon/

midwifery professionals, Secondary education teachers, and Life science professionals, while for women it is professional Nursing and midwifery professionals, Other teaching professionals, and Medical and pharmaceutical technicians. In terms of medium-skill occupations, the 3 most dynamic for men are Car, van and motorcycle drivers, Mixed crop and animal producers, and Other sales workers, while for women it is Secretaries (general), Waiters and bartenders and Other stationary plant and machine operators. In terms of low-skilled occupations, the 3 most dynamic for men are Other elementary workers, Mining and construction labourers, and Agricultural, forestry and fishery labourers, while for women they are unskilled workers in the Transport and storage labourers, Domestic, hotel and office cleaners and helpers, and Food preparation assistants.

Going into greater detail in the analysis of dynamic occupations by skill level, in terms of educational level, may lead to a significantly differentiated ranking of their dynamism. However, we find that the most dynamic high-skill occupations show no significant variation but marginal changes in the dynamism ranking when the educational level (postgraduate degree, higher education degree and post-secondary vocational training) is taken into account. Thus, the most dynamic high-skill occupations for post-graduate degree holders are Secondary education teachers, Life science professionals, and Primary school and early childhood teachers. As regards to the higher education degree holders, the most dynamic high-skill occupations are Nursing and midwifery professionals, Sports and fitness workers, and Secondary education teachers. For those with post-secondary vocational training, the most dynamic high-skill occupations are professional Nursing and midwifery professionals, Finance professionals, and Primary school and early childhood teachers.

The ranking of the most dynamic middle-skill occupations shows greater variation when the educational level of the workers involved (post-secondary vocational training and secondary education) is taken into account. Thus, the most dynamic middle-skill occupations for graduates of post-secondary vocational training are Cashiers and ticket clerks, Hairdressers, beauticians and related workers, and Cooks. For those with a secondary education degree, the most dynamic middle-skill occupations are Car, van and motorcycle drivers, Waiters and bartenders, and Other sales workers. Also, low-skill occupations show differences in the ranking between them in terms of educational level (i.e., secondary school leavers and upper secondary school leavers). The most dynamic low-skilled occupations for secondary school leavers are unskilled workers in the Mining and construction labourers, Other elementary workers, and Refuse workers. For upper secondary school leavers, the most dynamic low-skill occupations are Food preparation assistants, Other elementary workers, and Agricultural, forestry and fishery labourers.

The dynamism of occupations by skill level varies considerably depending on the sector in which they are practised. Thus, focusing on some sectors of economic activity, we find that in the Public administration and defence; compulsory social security the most dynamic high-skill occupations are Regulatory government associate professionals, Administrative and specialised secretaries, and Architects, planners, surveyors and designers, while the most dynamic medium-skilled occupations are General office clerks, Secretaries (general), and Heavy truck and bus drivers, and

the most dynamic low-skilled occupations are Refuse workers, and Domestic, hotel and office cleaners and helpers. In Human health and social work activities, the most dynamic high-skill occupations are Nursing and midwifery professionals, Medical and pharmaceutical technicians, and Medical doctors, while the most dynamic medium-skill occupations are Secretaries (general), Waiters and bartenders, and General office clerks, and the most dynamic low-skill occupation is Domestic, hotel and office cleaners and helpers. In Accommodation and food service activities, the most dynamic high-skill occupations are Hotel and restaurant managers, and Artistic, cultural and culinary associate professionals, while medium-skilled occupations are Waiters and bartenders, Other sales workers, and Cooks, and the most dynamic low-skilled occupations are Domestic, hotel and office cleaners and helpers, Food preparation assistants, and Other elementary workers. In Construction, the most dynamic high-skill occupations are Manufacturing, mining, construction and distribution managers, Mining, manufacturing and construction supervisors, and Physical and engineering science technicians, while medium-skill occupations are Electrical equipment installers and repairers, Building frame and related trades workers, and Painters, building structure cleaners and related trades workers, and the dynamic low-skill occupation is Mining and construction labourers. In Manufacturing, the most dynamic high-skill occupations are Physical and engineering science technicians, Financial and mathematical associate professionals, and Mining, manufacturing and construction supervisors, while medium-skill occupations are Food and related products machine operators, Other stationary plant and machine operators, and Sheet and structural metal workers, moulders and welders, and related workers, and the most dynamic low-skilled occupations are Other elementary workers, Manufacturing labourers, and Transport and storage labourers. In Wholesale and retail trade; repair of motor vehicles and motorcycles, the most dynamic high-skilled occupations are Sales and purchasing agents and brokers, Other health professionals, and Sales, marketing and development managers, while medium-skilled occupations are General office clerks, Car, van and motorcycle drivers, and Secretaries (general), and the most dynamic low-skilled occupations are Transport and storage labourers, and Domestic, hotel and office cleaners and helpers.

More detailed information is available for all interested parties in the category: Labour market trends > **Dynamism of occupations and sectors (Employment)**, where the following interactive tables with analyses and visualisations of labour market data are presented (Source: ELSTAT):

- Dynamism of occupations by skill level and Region
  https://mdaae.gr/en/data/dinamismos-epangelmaton-ana-epipedo-dexiotiton-kai-perifereia/
- Dynamism of occupations by skill level and age
  https://mdaae.gr/en/data/dinamismos-epangelmaton-ana-epipedo-dexiotiton-kai-ilikia/
- Dynamism occupations by skill level and gender
  https://mdaae.gr/en/data/dinamismos-epangelmaton-ana-epipedo-dexiotiton-kai-fylo/
- Dynamism of occupations by skill level and educational level
  https://mdaae.gr/en/data/dynamismos-epangelmaton-ana-epipedo-dexiotiton-kai-ekpaideftiko-epipedo/

- Dynamism of occupations by skill level and sector
  https://mdaae.gr/en/data/dynamismos-epangelmaton-ana-epipedo-dexiotiton-kai-klado/

- Dynamism of sectors by Region
  https://mdaae.gr/en/data/dinamismos-kladon-ana-perifereia/
- Dynamism of sectors by age
  https://mdaae.gr/en/data/dinamismos-kladon-ana-ilikia/
- Dynamism of sectors by gender
  https://mdaae.gr/en/data/dinamismos-kladon-ana-fylo/
- Dynamism of sectors by educational level
  https://mdaae.gr/en/data/dynamismos-kladon-ana-ekpaideftiko-epipedo/

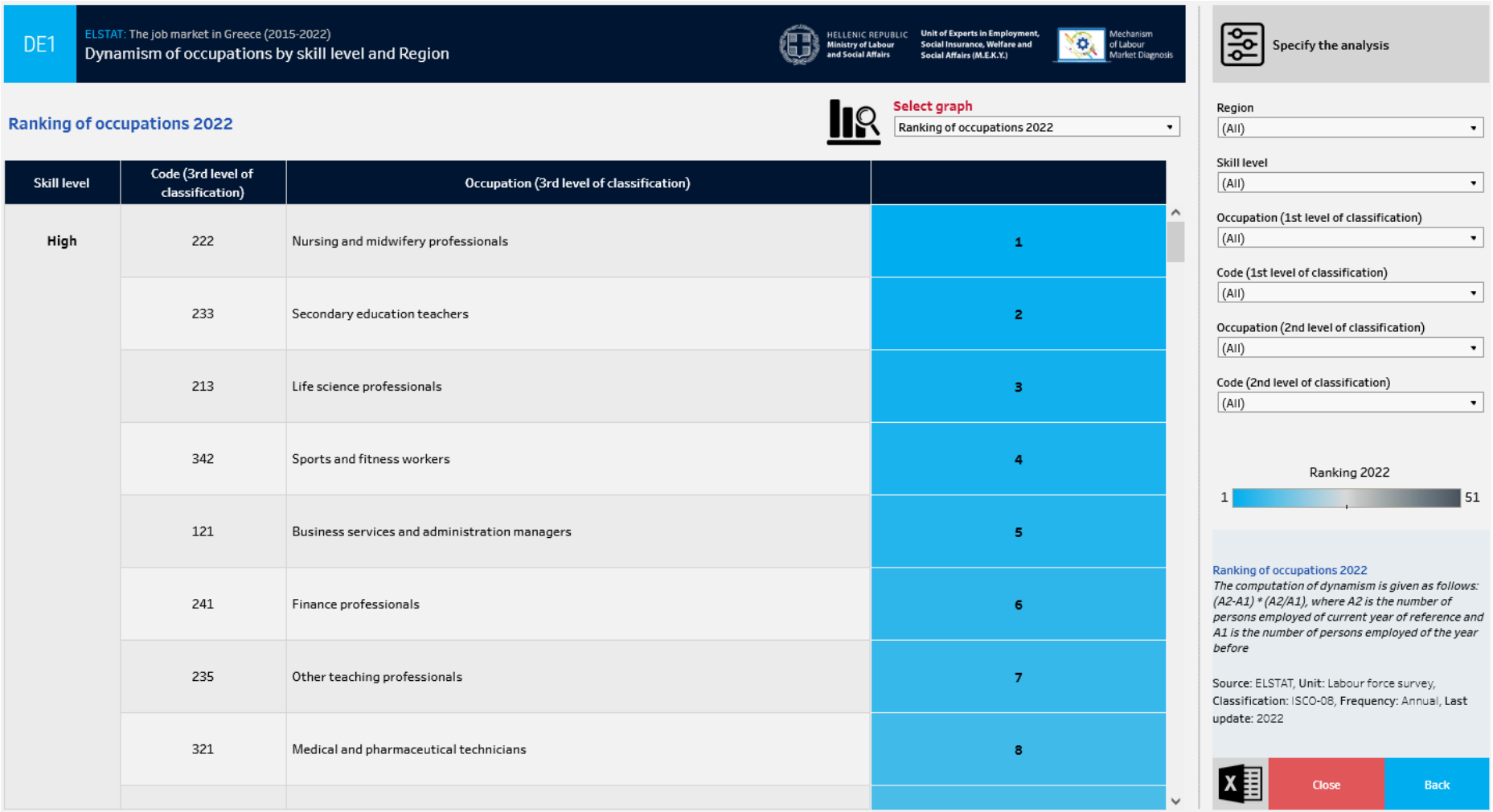


Figure 46. Dynamism of occupations by skill level and Region / Source: ELSTAT

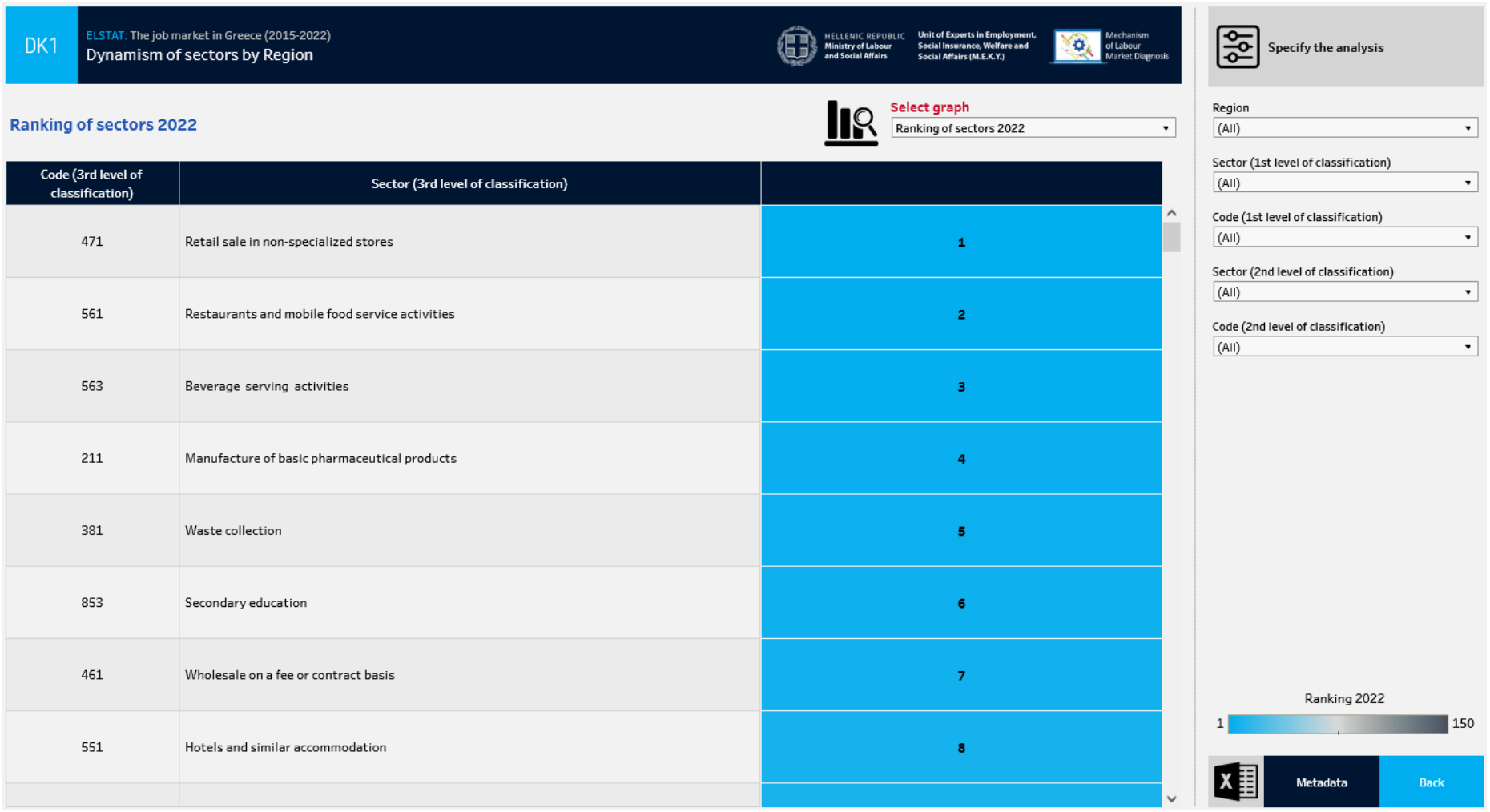


Figure 47. Dynamism of sectors by Region / Source: ELSTAT

2.5.2. Dynamism of salaried employment

According to the ERGANI annual data[21] on the number of employed staff under a private law contract, 82,159 new jobs were created in 2022. At the regional level, the Regions based on new jobs in 2022 are, in descending order, as follows: Attica (23,831 new jobs), South Aegean (20,345 new jobs), Crete (16,809 new jobs), Central Macedonia (8,950 new jobs) and Ionian Islands (6,573 new jobs).

Regarding the main sectors, at the 2nd level of analysis, the first in terms of new jobs is the Accommodation sector with 32,366 new jobs, followed by the Wholesale trade, except for motor vehicles and motorcycles sector with 7,275 new jobs, Computer programming, consultancy and related activities with 4,538 new jobs, Human health activities with 3,205 new jobs, and finally, Storage and support activities for transportation with 3,139 new jobs.

More specifically, the sectors at the 4th level of analysis that generate the most new jobs are, in descending order, the following: Hotels and similar accommodation with 29,772 new jobs, Primary education with 4,016 new jobs, Computer programming activities with 3,359 new jobs, Call centre activities with 3,007 new jobs and holiday and Other short-stay accommodation with 2,616 new jobs.

Regarding the occupations, the following results by skill level are noted:

For the high-skill level, the top 3 occupations at the 2nd level of analysis are Physicists, mathematicians and related professionals with 5,138 new jobs, Teaching assistants with 2,925 new jobs and Technologists and technical assistants in physical and engineering sciences and related occupations with 2,537 new jobs. At the 4th level of detail, the first is Computer designers, analysts and programmers with 4,466 new jobs, the second is Teaching assistants with 2,236 new jobs and the third is Accounting assistants with 1,359 new jobs.

For the medium-skill level, the top 3 occupations at the 2nd level of analysis are Personal service workers with 21,532 new jobs, Clerical support workers with 19,817 new jobs and Transport drivers and mobile equipment operators with 3,511 new jobs. At the 4th level of detail, the first is Other clerical support workers with 18,235 new jobs, the second is Waiters with 6,728 new jobs and the third is Caretakers, housekeepers and chamberlains etc. with 6,551 new jobs.

Finally, for the low-skill level, the top 3 occupations at the 2nd level of analysis are: Street or market salespersons or domestic helpers with 4,493 new jobs, Agricultural, fishery or related labourers with 1,953 new jobs and Mining, construction, manufacturing or transport labourers with 654 new jobs. At the 4th level of detail, the first is Office, hotel and other premises cleaners with 4,752 new jobs, the second is Agricultural and livestock labourers with 1,662 new jobs and the third is Doormen or security guards with 1,226 new jobs.

[21] https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/dynamismos/

More detailed information is available for all interested parties on the MDAAE website, under the category: Labour market trends > **Dynamism of salaried employment**, where the following interactive table with analyses and data visualisations on the salaried labour market is presented (Source: ERGANI):

- Salaried employment dynamics of private sector 2022
  https://mdaae.gr/en/data/dynamismos-misthotis-apascholisis-idiotikou-dikaiou-2022/

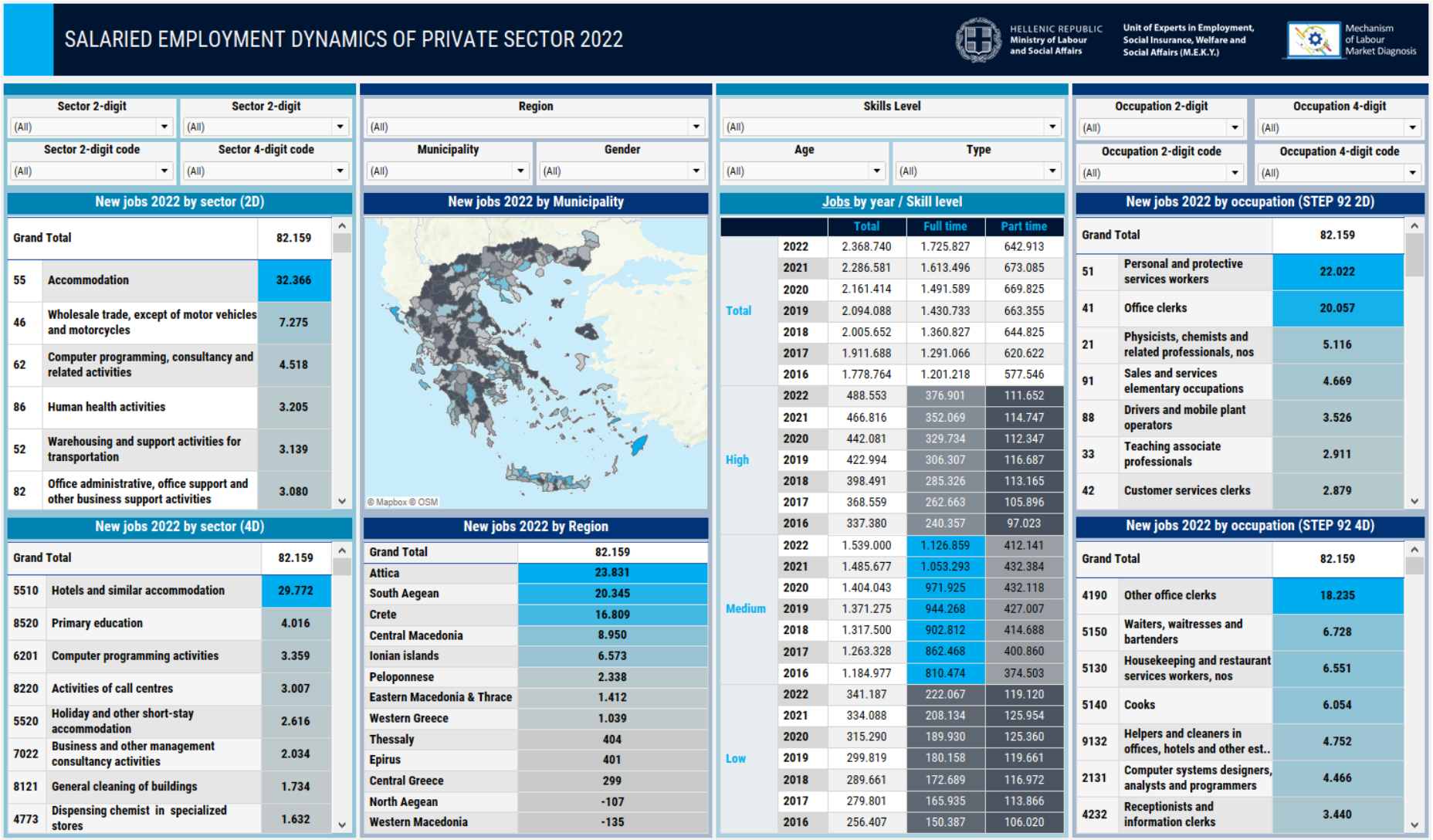


Figure 48. Salaried employment dynamics of private sector 2022 / Source: ERGANI

2.5.3. Continuous increase of employees

For the period 2018-2022, the occupations that record a continuous increase in employment (three-year, four-year and five-year continuous increase) are presented for the whole country, by skill level, occupation (3rd level of classification) and Region (Source: ELSTAT)[22].

In more detail, the occupations with the largest continuous growth in jobs requiring a medium level of skills for 5 consecutive years are: General office clerks in the Region of Attica, with 131,844 employees in 2022, exceeding the previous high of 2021 (128,196), Animal producers in the Region of Western Greece with 14.900 employees in 2022, exceeding the previous high of 2021 (13.278), Electronics and telecommunications installers and repairers for the Region of Attica with 11,301 employees in 2022, exceeding the previous high of 2021 (9,539), General office clerks in the Region of Western Greece with 9,134 employees in 2022, exceeding the previous high of 2021 (8,657), Cashiers and ticket clerks in the Region of Central Macedonia with 8,269 employees in 2022, exceeding the previous high of 2021 (8,022) and finally, Car, van and motorcycle drivers in the Region of Epirus with 3,565 employees in 2022, exceeding the previous high of 2021 (3,250).

The profession that has the highest continuous growth in jobs requiring a high level of skills for 5 consecutive years is Nursing and midwifery professionals in the Region of Attica with 22,160 employees in 2022, exceeding the previous high of 2021 (10,923 employees).

The occupations with the largest continuous increase of jobs requiring a medium level of skills for 4 consecutive years are: General office clerks in the Region of Attica, Cashiers and ticket clerks in the Region of Attica, Animal producers in the Region of Western Greece, Electronics and telecommunications installers and repairers for the Region of Attica, General office clerks in the Region of Western Greece, Cashiers and ticket clerks in the Region of Central Macedonia, Food processing and related trades workers in the Region of Thessaly, Building frame and related trades workers in the Region of Central Macedonia, and lastly Car, van and motorcycle drivers in the Region of Epirus.

The occupations with the highest continuous job growth that require a high level of skills for 4 consecutive years are: Primary school and early childhood teachers in the Region of Attica and Central Greece, Nursing and midwifery professionals in the Region of Attica and Other health care professionals in the Region of Attica.

The occupations requiring a medium level of skills with the highest continuous job growth for 3 consecutive years are: General office clerks in the Region of Attica, Shop salespersons in the Regions of Central Macedonia and Western Greece, Cashiers and ticket clerks in the Region of Attica, Mixed crop and animal producers in the Region of Crete, Animal producers in the Region of Western Greece, Electronics and telecommunications installers and repairers in the Region of Attica, Cooks in the Region of Central Macedonia, Sheet and structural metal workers, moulders and welders, and related workers in the Region of Attica, Food processing and related trades workers in the Region

[22] https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/diachroniki-afxisi-tis-apascholisis/

of Thessaly, General office clerks in the Region of Western Greece, Cashiers and ticket clerks in the Region of Central Macedonia, Car, van and motorcycle drivers in the Region of Thessaly, General office clerks in the Region of South Aegean, Building frame and related trades workers in the Region of Central Macedonia, Other sales workers in the Region of Central Macedonia, and finally Car, van and motorcycle drivers in the Region of Epirus.

The occupations with the highest continuous job growth requiring a high level of skills for 3 consecutive years are: Finance professionals in the Region of Attica, Primary school and early childhood teachers in the Region of Attica, Nursing and midwifery professionals in the Region of Attica, Software and applications developers and analysts in the Region of Attica, Other health professionals in the Region of Attica, Nursing and midwifery professionals in the Region of Attica, Sports and fitness workers in the Region of Attica, Financial and mathematical associate professionals in the Region of Central Macedonia, Sales, marketing and development managers in the Region of Attica, Secondary education teachers in the Region of Eastern Macedonia and Thrace, Primary school and early childhood teachers in the Region of Central Greece and finally Nursing and midwifery professionals in the Region of Crete.

Finally, the occupations that require a low level of skills with the highest continuous job growth for 3 consecutive years are: Manufacturing labourers in the Region of Attica, and Domestic, hotel and office cleaners and helpers in the Region of Western Greece.

More detailed information is available for all interested parties on the MDAAE website, under the category: Labour market trends > **Continuous increase of employees**, where the following interactive tables with analyses and visualisations of labour market data are presented (Source: ELSTAT):

- Continuous increase of employees by occupation, skill level and Region
  https://mdaae.gr/en/data/diachroniki-afxisi-tis-apascholisis-ana-epangelma-kai-perifereia/
- Continuous increase of employees by occupation, skill level and age
  https://mdaae.gr/en/data/diachroniki-afxisi-tis-apascholisis-ana-epangelma-kai-ilikia/
- Continuous increase of employees by occupation, skill level and gender
  https://mdaae.gr/en/data/diachroniki-afxisi-tis-apascholisis-ana-epangelma-kai-fylo/
- Continuous increase of employees by occupation, skill level and educational level
  https://mdaae.gr/en/data/diachroniki-afxisi-tis-apascholisis-ana-epangelma-kai-ekpaideftiko-epipedo/

- Continuous increase of employees by sector and Region
  https://mdaae.gr/en/data/diachroniki-afxisi-tis-apascholisis-ana-klado-kai-perifereia/
- Continuous increase of employees by sector and age
  https://mdaae.gr/en/data/diachroniki-afxisi-tis-apascholisis-ana-klado-kai-ilikia/

- Continuous increase of employees by sector and gender
  https://mdaae.gr/en/data/diachroniki-afxisi-tis-apascholisis-ana-klado-kai-fylo/
- Continuous increase of employees by sector and educational level
  https://mdaae.gr/en/data/diachroniki-afxisi-tis-apascholisis-ana-klado-kai-ekpaideftiko-epipedo/

de1

ELSTAT: The job market in Greece (2015-2022)

Continuous increase of employees by occupation and Region

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Occupations with continuous increase in employees for 5 years

Select graph: Occupations with continuous increase in employees for 5 years

Skill level	Code (3rd level of classification)	Occupation (3rd level of classification)	Region	2018	2019	2020	2021	2022
Medium	411	General office clerks	Attica	99.297	101.026	109.126	128.196	131.844
			Western Greece	5.285	7.817	8.304	8.657	9.134
	612	Animal producers	Western Greece	9.261	10.157	11.271	13.278	14.900
	742	Electronics and telecommunications installers and repairers	Attica	5.193	6.232	6.717	9.539	11.301
	523	Cashiers and ticket clerks	Central Macedonia	3.985	4.424	6.688	8.022	8.269
	832	Car, van and motorcycle drivers	Epirus	2.393	2.521	2.529	3.260	3.565
High	222	Nursing and midwifery professionals	Attica	4.094	5.146	5.911	10.923	22.160

Specify the analysis

Region: (All)

Skill level: (All)

Employees: 2.393 — 131.844

Occupations with continuous increase in employees for 5 years
Source: ELSTAT
Unit: Labour force survey
Clasification: ISCO-08
Frequency: Annual
Last update: 2022

Close | Back

Figure 49. Continuous increase of employees by occupation, skill level and Region / Source: ELSTAT

de2

ELSTAT: The job market in Greece (2015-2022)

Continuous increase of employees by occupation and age

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Occupations with continuous increase in employees for 5 years

Select graph: Occupations with continuous increase in employees for 5 years

Skill level	Code (3rd level of classification)	Occupation (3rd level of classification)	Age	2018	2019	2020	2021	2022
Medium	411	General office clerks	50-54	30.022	37.405	39.633	44.483	48.892
			55-59	17.084	21.534	22.176	24.910	26.373
			60-64	7.180	9.208	9.801	11.208	13.494
	522	Shop salespersons	50-54	48.032	49.827	57.855	62.314	63.268
	541	Protective services workers	50-54	11.298	13.164	14.214	17.841	18.444
	412	Secretaries (general)	45-49	4.636	6.662	7.681	9.466	10.881
High	234	Primary school and early childhood teachers	55-59	8.248	11.457	15.177	22.896	24.219
			35-39	9.385	9.679	11.564	13.565	14.801
	226	Other health professionals	40-44	5.819	6.324	7.788	9.262	10.720

Specify the analysis

Age: (All)

Skill level: (All)

Employees

4.000 — 63.268

Occupations with continuous increase in employees for 5 years
Source: ELSTAT
Unit: Labour force survey
Clasification: ISCO-08
Frequency: Annual
Last update: 2022

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Figure 50. Continuous increase of employees by occupation, skill level and age / Source: ELSTAT

de3

ELSTAT: The job market in Greece (2015-2022)

Continuous increase of employees by occupation and gender

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Occupations with continuous increase in employees for 5 years

Select graph: Occupations with continuous increase in employees for 5 years

Skill level	Code (3rd level of classification)	Occupation (3rd level of classification)	Gender	2018	2019	2020	2021	2022
Medium	411	General office clerks	Females	110.899	119.245	123.512	130.465	131.818
	711	Building frame and related trades workers	Males	41.397	43.219	47.898	53.378	59.500
	523	Cashiers and ticket clerks	Females	21.471	25.425	30.098	37.229	40.195
	532	Personal care workers in health services	Females	10.678	11.361	14.337	17.424	19.356
High	132	Manufacturing, mining, construction, and distribution managers	Males	11.682	12.020	12.704	13.232	14.748
	222	Nursing and midwifery professionals	Males	2.182	2.446	2.742	7.126	14.070
	312	Mining, manufacturing and construction supervisors	Males	3.082	3.115	3.846	8.180	9.536

Specify the analysis

Gender: (All)

Skill level: (All)

Employees: 2.182 — 131.818

Occupations with continuous increase in employees for 5 years
Source: ELSTAT
Unit: Labour force survey
Clasification: ISCO-08
Frequency: Annual
Last update: 2022

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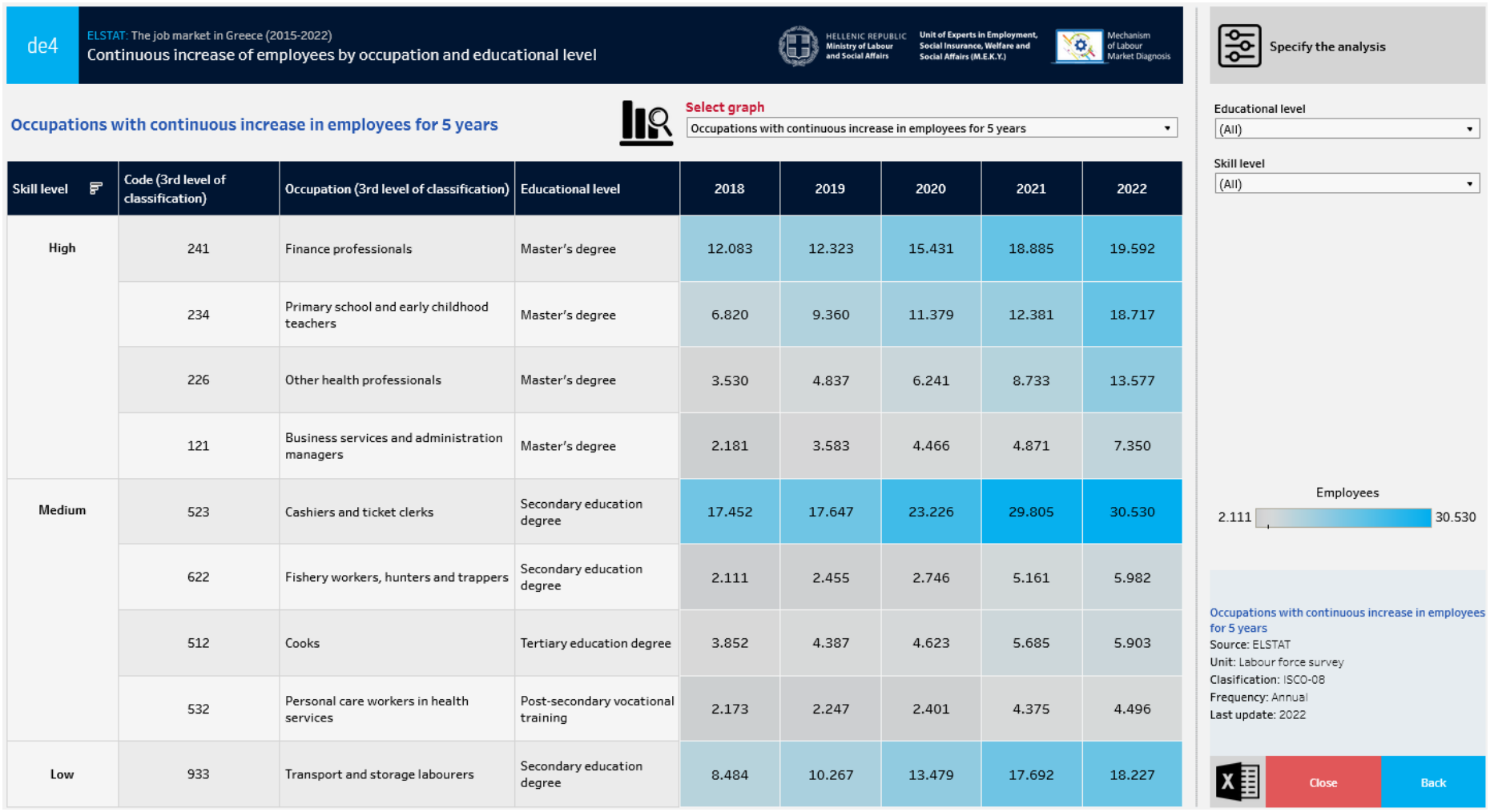
Figure 51. Continuous increase of employees by occupation, skill level and gender / Source: ELSTAT



de4

ELSTAT: The job market in Greece (2015-2022)

Continuous increase of employees by occupation and educational level

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Occupations with continuous increase in employees for 5 years

Select graph: Occupations with continuous increase in employees for 5 years

Skill level	Code (3rd level of classification)	Occupation (3rd level of classification)	Educational level	2018	2019	2020	2021	2022
High	241	Finance professionals	Master's degree	12.083	12.323	15.431	18.885	19.592
	234	Primary school and early childhood teachers	Master's degree	6.820	9.360	11.379	12.381	18.717
	226	Other health professionals	Master's degree	3.530	4.837	6.241	8.733	13.577
	121	Business services and administration managers	Master's degree	2.181	3.583	4.466	4.871	7.350
Medium	523	Cashiers and ticket clerks	Secondary education degree	17.452	17.647	23.226	29.805	30.530
	622	Fishery workers, hunters and trappers	Secondary education degree	2.111	2.455	2.746	5.161	5.982
	512	Cooks	Tertiary education degree	3.852	4.387	4.623	5.685	5.903
	532	Personal care workers in health services	Post-secondary vocational training	2.173	2.247	2.401	4.375	4.496
Low	933	Transport and storage labourers	Secondary education degree	8.484	10.267	13.479	17.692	18.227

Specify the analysis

Educational level: (All)

Skill level: (All)

Employees

2.111 — 30.530

Occupations with continuous increase in employees for 5 years
Source: ELSTAT
Unit: Labour force survey
Clasification: ISCO-08
Frequency: Annual
Last update: 2022

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Figure 52. Continuous increase of employees by occupation, skill level and education level / Source: ELSTAT

dk1

ELSTAT: The job market in Greece (2015-2022)

Continuous increase of employees by sector and Region

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Specify the analysis

Sectors with continuous increase in employees for 5 years

Select graph

Sectors with continuous increase in employees for 5 years

Region

(All)

Code (3rd level of classification)	Sector (3rd level of classification)	Region	2018	2019	2020	2021	2022
014	Animal production	Western Greece	8.418	8.960	10.022	13.908	15.850
471	Retail sale in non-specialized stores	Peloponnese	3.192	4.005	4.318	5.925	7.840
853	Secondary education	Eastern Macedonia & Thrace	4.915	5.146	5.550	6.257	7.028

Employees

3.192 — 15.850

Sectors with continuous increase in employees for 5 years
Source: ELSTAT
Unit: Labour force survey
Classification: Nace Rev. 2
Frequency: Annual
Last update: 2022

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Figure 53. Continuous increase of employees by sector and Region / Source: ELSTAT

dk2

ELSTAT: The job market in Greece (2015-2022)

Continuous increase of employees by sector and age

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Sectors with continuous increase in employees for 5 years

Select graph: Sectors with continuous increase in employees for 5 years

Code (3rd level of classification)	Sector (3rd level of classification)	Age	2018	2019	2020	2021	2022
842	Provision of services to the community as a whole	45-49	23.701	24.873	25.185	32.963	33.778
		60-64	2.320	3.278	3.853	4.186	4.241
471	Retail sale in non-specialized stores	45-49	14.498	16.633	16.802	21.610	25.865
852	Primary education	55-59	10.856	12.296	16.354	22.460	24.520
841	Administration of the State and the economic and social policy of the community	60-64	10.743	13.374	17.775	19.576	19.885
853	Secondary education	60-64	8.908	9.037	10.996	11.497	16.092
464	Wholesale of household goods	45-49	2.690	2.987	6.039	6.391	6.850
869	Other human health activities	40-44	2.236	2.600	4.381	4.804	5.544

Specify the analysis

Age: (All)

Employees

2.236 — 33.778

Sectors with continuous increase in employees for 5 years
Source: ELSTAT
Unit: Labour force survey
Classification: Nace Rev. 2
Frequency: Annual
Last update: 2022

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Figure 54. Continuous increase of employees by sector and age / Source: ELSTAT

dk3

ELSTAT: The job market in Greece (2015-2022)

Continuous increase of employees by sector and gender

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Specify the analysis

Sectors with continuous increase in employees for 5 years

Select graph

Sectors with continuous increase in employees for 5 years

Gender

(All)

Code (3rd level of classification)	Sector (3rd level of classification)	Gender	2018	2019	2020	2021	2022
452	Maintenance and repair of motor vehicles	Males	40.459	43.160	44.907	53.287	54.394
869	Other human health activities	Females	10.577	12.605	19.192	19.324	21.091
854	Higher education	Females	11.583	16.008	16.152	16.550	18.860
161	Sawmilling and planing of wood	Males	3.545	3.849	4.370	9.065	13.090
620	Computer programming, consultancy and related activities	Females	6.075	7.562	8.314	9.368	11.534

Employees

3.545 54.394

Sectors with continuous increase in employees for 5 years
Source: ELSTAT
Unit: Labour force survey
Classification: Nace Rev. 2
Frequency: Annual
Last update: 2022

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Figure 55. Continuous increase of employees by sector and gender / Source: ELSTAT

dk4

ELSTAT: The job market in Greece (2015-2022)

Continuous increase of employees by sector and educational level

HELLENIC REPUBLIC Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Specify the analysis

Sectors with continuous increase in employees for 5 years

Select graph: Sectors with continuous increase in employees for 5 years

Educational level: (All)

Code (3rd level of classification)	Sector (3rd level of classification)	Educational level	2018	2019	2020	2021	2022
471	Retail sale in non-specialized stores	Secondary education degree	48.179	52.918	53.274	70.807	84.453
852	Primary education	Master's degree	6.173	8.919	10.752	11.536	15.822
842	Provision of services to the community as a whole	Master's degree	5.126	5.954	6.800	9.469	10.518
475	Retail sale of other household equipment in specialized stores	Post-secondary vocational training	5.722	6.105	7.048	7.453	9.416
620	Computer programming, consultancy and related activities	Secondary education degree	2.646	3.146	3.443	3.541	5.405

Employees

2.646 — 84.453

Sectors with continuous increase in employees for 5 years
Source: ELSTAT
Unit: Labour force survey
Classification: Nace Rev. 2
Frequency: Annual
Last update: 2022

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Figure 56. Continuous increase of employees by sector and educational level / Source: ELSTAT

2.5.4. Supply - demand analysis for salaried employment

For the labour supply-demand analysis, the data taken into account concern private-law paid employment and come from ERGANI (Annual Staff Statements), as well as the unemployment register of DYPA's Comprehensive Information System OPS (Source: DYPA - ERGANI)[23] for 2022. The analysis is based on the formula: Registered Unemployed / (Registered Unemployed + Employed under private employment contract), and the codification of occupations is a synthesis of STEP-92 (ERGANI) and ESCO (DYPA).

For the country as a whole[24], the 10 occupations with the highest probability of finding jobs in positions requiring a high level of skills for 2022, based on the supply-demand hierarchy, are:

1. Medical doctors
2. Software or applications developers or analysts
3. Administration professionals
4. Supervisors / task managers
5. Sales or purchasing agents or brokers
6. Nursing or midwifery professionals
7. Professional Nurses or midwives
8. Vocational education teachers
9. Accountants
10. Financial or mathematical associate professionals.

For the country as a whole, the 10 occupations with the highest probability of finding jobs in positions requiring a medium level of skills in 2022, based on the supply-demand hierarchy, are:

1. Metal processing or finishing plant operators
2. Earthmoving or related plant operators
3. Bus or tram drivers
4. Rental service representatives
5. Car, taxi or van drivers
6. Assemblers
7. Rubber, plastic or paper products machine operators
8. Motor vehicle mechanics or repairers
9. Building or related electricians.

For the country as a whole, the occupations with the highest probability of finding jobs in low-skill jobs in 2022, based on the supply-demand hierarchy, are:

[23] https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/analysi-prosforas-zitisis-misthotis-ergasias/

[24] The analysis is also available for the regional and local levels.

1. Freight handlers
2. Messengers, package deliverers or luggage porters
3. Street vendors (excluding food vendors)
4. Manufacturing labourers
5. Fast-food workers
6. Garbage or recycling collectors
7. Domestic cleaners or helpers
8. Mixed crop or livestock farm labourers
9. Civil engineering labourers.

More detailed information is available for all interested parties on the MDAAE website, under the category: Labour market trends > **Supply - demand analysis for salaried employment**, through the following interactive table with analyses and visualisations of data on the employees' market, updated monthly (Source: DYPA - ERGANI):

- Supply - demand analysis for salaried employment
  https://mdaae.gr/en/data/analysi-prosforas-zitisis-misthotis-ergasias/

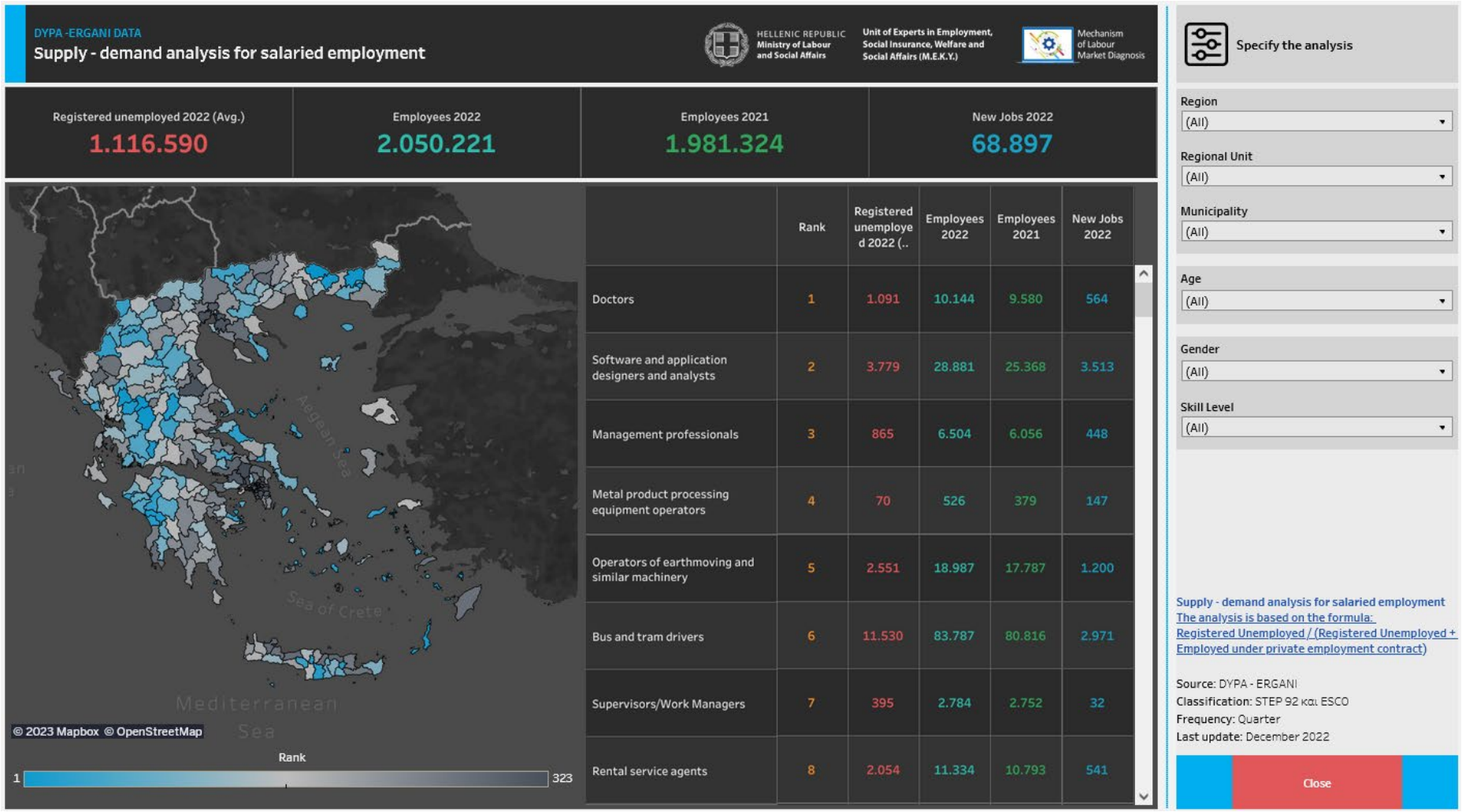


Figure 57. Supply - demand analysis for salaried employment / Source: DPA - ERGANI

2.5.5. Occupational guide

The Occupational guide is a digital interactive tool for data analysis and visualization, which shows the key figures of the labour market by occupation in a three-digit analysis (ISCO-08 classification) for the year 2022 (Source: ELSTAT)[25].

Interested parties can identify for each occupation the critical labour market indicators, such as the dynamism of the occupation according to the new jobs created, a ranking table of skills, knowledge and competences required, the percentage of persons employed by gender, age, level of education and educational field, the percentage of persons employed by position, sector, employment status, type of contract and duration of overtime work.

In addition, the percentage (%) of employed persons per Region is depicted at a spatial level, as is the dynamism of the selected occupation, the number of employed persons it involves, their median wage per employment status (full-time and part-time) for the years 2011-2022.

More detailed information is available for all interested parties on the MDAAE website, under the category: Labour market trends > **Occupational guide**, where the following interactive table with analyses and visualisations of labour market data is presented (Source: ELSTAT):

- Occupational guide
  https://mdaae.gr/en/data/odigos-epangelmaton/

[25] https://mdaae.gr/en/data_type/taseis-tis-agoras-ergasias/odigos-epangelmaton/

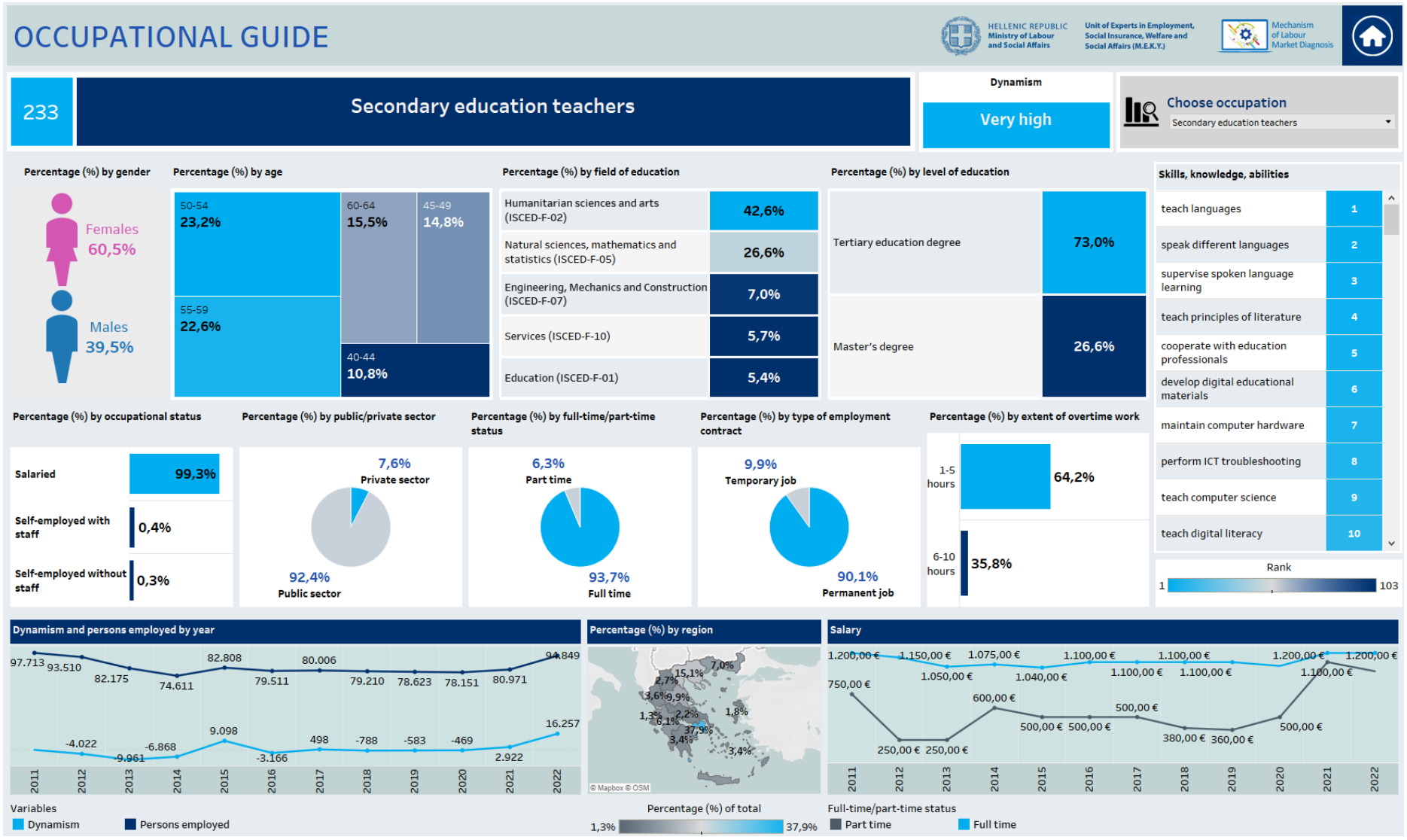


Figure 58. Occupational guide / Source: ELSTAT

2.5.6. Underemployment

For the years (2015-2022), for the total employed, graduates of higher education and above employed in occupations/positions requiring a high level of skills constitute less than 70% of all graduates of higher education and above (max 69.6% in 2015, min 65.6% in 2021) (Source: ELSTAT)[26]. Employees who are graduates of higher education and work in jobs requiring a high level of skills are consistently less than 65% of all graduates of higher education and above (max 64.7% in 2020, min 59.0% in 2018) (Source: ERGANI)[27].

The analysis of the data shows that 42.3% of graduates of higher education institutions (HEI and TEI) are recruited in lower-skilled jobs than they possess in 2022, a rate that decreases significantly as the level of education increases (Master's degree holders: 25.0% in 2022 and PhD holders: 10.6% in 2022).

More detailed information is available for all interested parties on the MDAAE website, under the category: Labour market trends > **Underemployment**, through the following interactive tables with analyses and visualisations of labour market data (Source: ELSTAT, ERGANI)

- Comparative analysis of education and skill level (Employment) https://mdaae.gr/en/data/sygkritiki-analysi-ekpaidefsis-kai-epipedou-dexiotiton-apascholisi/
- Comparative analysis of education and skill level (Salaried employment) https://mdaae.gr/en/data/sygkritiki-analysi-ekpaidefsis-kai-epipedou-dexiotiton-misthoti-apascholisi/

[26] https://mdaae.gr/en/data/sygkritiki-analysi-ekpaidefsis-kai-epipedou-dexiotiton-apascholisi/

[27] https://mdaae.gr/en/data/sygkritiki-analysi-ekpaidefsis-kai-epipedou-dexiotiton-misthoti-apascholisi/

ELSTAT: The labour market in Greece (2015-2022)
Employment of graduates of tertiary education and above

HELLENIC REPUBLIC
Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

Employment by educational and skill level

Educational level	Skill level	2015	2016	2017	2018	2019	2020	2021	2022
Total		1.220.456 100,0%	1.286.858 100,0%	1.339.616 100,0%	1.401.728 100,0%	1.435.968 100,0%	1.453.978 100,0%	1.541.740 100,0%	1.625.107 100,0%
Master's and tertiary education degree	High	849.726 69,6%	875.446 68,0%	891.977 66,6%	926.448 66,1%	945.732 65,9%	989.627 68,1%	1.011.215 65,6%	1.069.114 65,8%
	Medium	328.361 26,9%	360.839 28,0%	389.851 29,1%	423.786 30,2%	444.442 31,0%	422.764 29,1%	478.750 31,1%	499.506 30,7%
	Low	14.538 1,2%	18.588 1,4%	21.551 1,6%	16.799 1,2%	15.821 1,1%	11.324 0,8%	18.117 1,2%	19.866 1,2%
	Not labeled	27.831 2,3%	31.985 2,5%	36.238 2,7%	34.694 2,5%	29.972 2,1%	30.263 2,1%	33.658 2,2%	36.621 2,3%

Figure 59. Comparative analysis of education and skill level (Employment) / Source: ELSTAT

Ergani data: Salaried Employment in Greece (2018-2022)
Education Level: Tertiary

HELLENIC REPUBLIC
Ministry of Labour and Social Affairs

Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs (M.E.K.Y.)

Mechanism of Labour Market Diagnosis

% of Hirings per skills level

Educational level	Skill level	2018	2019	2020	2021	2022
Tertiary	High	59,0%	59,7%	64,7%	61,0%	60,7%
	Low	2,7%	2,5%	2,1%	2,3%	2,1%
	Medium	38,3%	37,8%	33,2%	36,7%	37,2%
	Undefinied	0,0%	0,0%		0,0%	

Figure 60. Comparative analysis of education and skill level (Salaried employment) / Source: ERGANI

2.6. Skills

The skills required by the labour market, now and in the future, especially technical skills, are not easy to identify, as research in Greece and Europe shows. For this reason, within the framework of the MDAAE, an innovative tool has been developed to identify the cutting-edge skills among the 13,500 skills defined by the European Classification of Knowledge, Skills, Competences ESCO[28]. This tool and the corresponding methodology were presented and widely accepted at the international conference of the European Union Public Employment Services Network (PES Network Conference 2023)[29]. The cutting-edge skills, in the field of paid employment, are prioritised on the basis of their link to new jobs, earnings (median 2014-2022), total employment and the sectoral diffusion of the related occupations, by Region, Regional Unit and Municipality, by age, gender, skill level and time, for each of the 613 economic activity sectors, at a fourth level of classification in NACE Rev. 2. The results of this analysis are validated through quantitative business surveys and qualitative foresight panels.

As a first step, the cutting-edge skills for businesses in the sectors of Telecommunications (61), Computer programming, consultancy and related activities (62), Information service activities (63) and Scientific research and development (72) were identified and are listed below:

[28] https://mdaae.gr/en/data_type/dexiotites/

[29] Following the presentation at the international conference, detailed presentations of the methodology were requested by and carried out for the Public Employment Services of Germany, Slovenia and Bulgaria. https://mdaae.gr/en/news/empowering-the-workforce-bridging-the-skills-gap-pes-network-stakeholder-conference-2023/

Digital Skills

Cutting-edge skills for jobs requiring a high level of skills

Skills	Description
Creating data models	Use of specific techniques and methodologies to analyse the data requirements of an organisation's business processes in order to create models for these data, such as conceptual, logical and physical models. These models have specific structure and format.
Definition of technical requirements	Definition of the technical properties of goods, materials, methods, processes, procedures, services, systems, software and functions, identifying and responding to the specific needs to be met in accordance with customer requirements.
Conducting system tests	Selecting, conducting and monitoring tests of software or computer equipment to detect system faults both within the embedded system modules and within the interconnected components and the system as a whole. Organisation of tests, such as installation, security and user interface tests.
Information systems design	Define the architecture, composition, components, building blocks, interfaces and data for the integrated information systems (hardware, software and network), based on the system requirements and specifications.
Solving ICT systems problems	Identification of possible malfunction of the component. Monitoring, recording and communicating about incidents. Deploying appropriate resources with minimal disruption to operations, and appropriate diagnostic tools.
Provision of cost-benefit analysis reports	Preparation, drafting and submission of reports with allocated cost analysis in the business's proposal and budget plans. Analysing in advance the economic or social costs and benefits of a project or investment within a given time period.
Process design	Identify the workflow and resource requirements for a specific process, using a variety of tools such as process simulation software, flowchart models and scale models.

Skills	Description
Management of staff	Managing employees working in teams or individually to maximise their performance and contribution. Planning their tasks and activities, providing instructions, incentives and guidance to employees to achieve business objectives. Monitoring and measuring how the employee undertakes their duties and how these activities are performed. Identify areas for improvement and make recommendations to achieve this. Guiding a group of individuals to achieve their objectives and maintain effective working relationships among staff members.
Practising technical communication skills	Explain in a clear and concise manner the technical details to non-technician customers, stakeholders or other interested parties.
Database management	Apply database design patterns and models, define data dependencies, use query languages and database management systems (DBMS) to develop and manage databases.
Provision of technical documentation	Preparation of documentation for existing and future products or services, describing their function and composition in a way that can be understood by the general public without a technical background, in accordance with defined requirements and standards. Constant updated documentation.
Integration of system components	Selection and use of integration techniques and tools to design and implement the integration of hardware and software modules and components in a system. Apply specific testing techniques to ensure integrity during system integration.
Use of object-oriented programming	Use of specialised ICT tools to create computer code based on the concept of an "object" which is an abstract type of data embedded in a set of "methods" that operate on the data. Use of programming languages that support this method, such as JAVA and C++.
Alignment of the software with the system architecture	Alignment of the design system and technical specifications with the software architecture to ensure integration and interoperability between the system parts.
Carrying out of resource planning	Estimation of the expected values in terms of time, human and financial resources necessary to achieve the project objectives.
Database schema design	Design a database schema following the rules of the relational database management system (RDBMS) to create a logically organized set of objects, such as tables, columns and processes.

Skills	Description
Enterprise architecture design	Analysing the structure of the business and providing a logical organisation of business processes and information infrastructure. Applying principles and practices that help organisations implement their strategies, respond to disruptions and achieve their goals.
Setting standards for data exchange	Define and maintain templates for converting data from source profiles to the necessary resulting profile data structure.
Application of ICT systems theory	Application of the principles of ICT systems theory in order to explain and document system characteristics that can be universally applied to other systems.
Acquisition of necessary hardware and software	Acquisition of hardware, software or network components corresponding to other components of the system for their expansion and for carrying out the necessary activities.
ICT knowledge assessment	Evaluation of the indirect knowledge of the experts' expertise in an ICT system so that it is explicitly identified for further analysis and use.
Analysis of corporate requirements	Study the needs and expectations of customers for a product or service in order to identify and resolve inconsistencies and possible disagreements among parties involved.
Carrying out of feasibility study	Evaluate and assess the potential of a project, project, proposal or new idea. Carrying out a standardised study based on extensive research and investigation to support the decision-making process.
Provision of consultancy services in the ICT sector	Providing advice on appropriate ICT solutions, selecting alternatives and optimising decisions, while taking into account the potential risks, benefits and overall impact on professional customers.
ICT system analysis	Study of the activity and performance of information systems in order to model their use and weaknesses, determine their purpose, architecture and services, and discover functions and processes to implement them in the most efficient way.
Managing the transition from legacy systems to newer ICT systems	Managing the transition from legacy systems to newer ICT systems.
Identifying weak points in ICT systems	Analysis of the system and network architecture, hardware and software components and data in order to identify weak and vulnerable points to intrusions or attacks.

Skills	Description
Monitoring system performance	Measurement of the system reliability and performance before, during and after integration of the components and during operation and maintenance. Selection and use of performance monitoring tools and techniques, such as specific software.
Interaction with users to gather requirements	Communicate with users to identify and collect their requirements. Define all relevant user requirements and document them in an understandable and logical way for further analysis and refinement.
Translation of requirements into a visual design	Development of the visual design according to specific specifications and requirements, based on the analysis of the field and the target audience. Create visual representation of ideas, such as logos, graphic websites, digital games and layouts.
ICT project management	Planning, organising, controlling and documenting processes and resources, such as human capital, equipment and skills, to achieve specific objectives related to ICT systems, services or products, within specific constraints such as scope, time, quality and budget.
Ensuring compliance with legal requirements	Ensuring compliance with established and applicable standards and legal requirements, such as specifications, policies, standards or laws, for the purpose that organisations seek to achieve in their efforts.
Use of markup languages	Use programming languages that can be syntactically separated from text to add annotations to a document, specify the format and process file types, such as HTML.
Developing business relationships	Establish a positive, long-term relationship between organisations and interested third parties, such as suppliers, distributors, shareholders and other interested parties, in order to inform them about the organisation and its objectives.

In addition, the following skills were suggested by the businesses:

- **Crisis management**
- **Data analysis**
- **Use of agile methodologies**

Cutting-edge skills for jobs requiring a medium level of skills

Skills	Description
Communication with customers	Responding and communicating with customers in the most efficient and appropriate manner to enable them to access the desired products or services or offer any other assistance they may need.
Use of different communication channels	Using different types of communication channels, such as verbal, handwritten, digital and telephone communication, to structure and exchange ideas or information.
Conducting an internet survey	Conducting efficient internet research to gather relevant information and share it with third parties.
Use of software for data retention	Use of specialised applications and software to collect and preserve digital information.
Record keeping of customer communication	Recording the details of enquiries, comments and complaints received from customers and the actions to be taken.
Converting keywords to full texts	Draft emails, letters and other written documents based on keywords or key concepts that describe the content. The appropriate format and language style is chosen according to the type of document.
Preparation of customer correspondence	Draft and issue correspondence to customers to provide updates on outstanding accounts, commercial communications, apology letters or emails.
Application of grammar and spelling rules (text editing)	Apply the rules of spelling and grammar and ensure consistency in all texts.
Contact the customer service department	Communicate with the customer service department with structured procedures, monitor the operation of the service and transfer information to customers in real time.
Routing of mail to departments in the business	Classification of incoming mail, selection of emails and priority packages and their distribution to the various departments of the business.
Processing of customer orders	Handling customer orders. Receiving the customer's order and defining a list of requirements, work process and schedule. Execution of work according to schedule.
Digital file management	Creating and maintaining computer files and databases, incorporating the latest developments in electronic information storage technology.

Skills	Description
Organisation of business documents	Gathering documents from the photocopier, correspondence or the business' every day work.
Maintenance of internal communication systems	Maintain an effective system of internal communication between staff and department managers.
Compilation of corporate emails	Preparing, compiling and writing messages with the appropriate information and in the appropriate language for internal or external communication.
Completion of forms	Timely completion of forms of different nature with accurate and legible information.
Carrying out daily office work	Planning, preparing and executing activities that must be performed daily in offices, such as sending mails, receiving supplies, keeping managers and employees informed, and ensuring the smooth operation.
Processing of instructions to staff	Processing of usually verbal instructions given by managers and instructions on actions to be taken. Taking notes, asking questions and taking action on the instructions passed on.
Use of office application software	Ability to work with basic office applications at a competent level. Document creation and basic formatting, inserting pagination, creating headers or footers and inserting graphics, creating automatic electronic tables of contents and merging letter types from a database. Creating automatic calculation spreadsheets, creating images and sorting and filtering data tables.
Mail handling	Handling of correspondence, taking into account privacy, security and the specifications of different types of correspondence.
Respect for data protection principles	Ensuring that access to personal or institutional data complies with the legal and ethical framework governing such access.
Dissemination of internal information	Communicating internal information using the various communication channels available to a business.
Issue of sales invoices	Preparation of the invoice for the goods sold or services provided, which will contain the individual prices, the total charge and the terms and conditions. Complete processing of orders received by telephone, fax and internet and calculation of the customer's final invoice.

Skills	Description
Data processing	Entering information into a data storage system and data retrieval system through processes such as scanning, typing or electronic data transmission to process large volumes of data.
Use of office systems	Appropriate and timely use of office systems used in business premises, depending on the objective, to collect messages, store customer information or plan the agenda. Includes managing systems such as customer relationship management systems, vendor management systems, storage systems and voice mail systems.
Telephone communication	Communicate by phone, make and receive calls in a timely, professional and polite manner.

Green Skills

Skills	Description
Comprehension of environmental issues	Understanding environmental issues such as climate change, biodiversity loss and resource depletion.
Understanding the principles of sustainability	Understanding of the principles of sustainability and its application at work.
Ability to use green technologies	Familiarity with green technologies such as renewable energy systems, energy efficient appliances and sustainable materials.
Data analysis skill	Employees should be able to collect and analyse data related to environmental performance and make recommendations for improvement.
Cooperation skills	Employees must be able to work with colleagues, various stakeholders and customers to develop sustainable solutions.
Encouraging others to adopt environmentally friendly behaviours	Providing information and promoting environmentally friendly behaviours on social networks and at work.
Adopting ways to reduce pollution	Implement measures to reduce air pollution, noise pollution, light pollution, water pollution or environmental pollution, for example by using public transport, avoiding waste in the natural environment and reducing unnecessary light and noise emissions, especially at night.
Adopting ways to reduce the negative impacts of consumption	Implement principles, policies and regulations aimed at environmental sustainability, including the reduction of waste and energy and water consumption, reuse and recycling of products.
Adopting ways to protect biodiversity and animal welfare	Adopting behaviours that help maintain stable ecosystems and combat mass extinctions, for example by making conscious dietary choices that support organic food production and animal welfare.

In order to identify and better understand the relevant data on the MDAAE website, the following interactive table with analyses and visualisations of labour market data is presented in the **Skills** section of the website (Source: DYPA-ERGANI)

- Skills Mapping - Sector: Information and communication
  (Source: DYPA - ERGANI)
  https://mdaae.gr/en/data/mapping-demand-for-skills-in-greece/

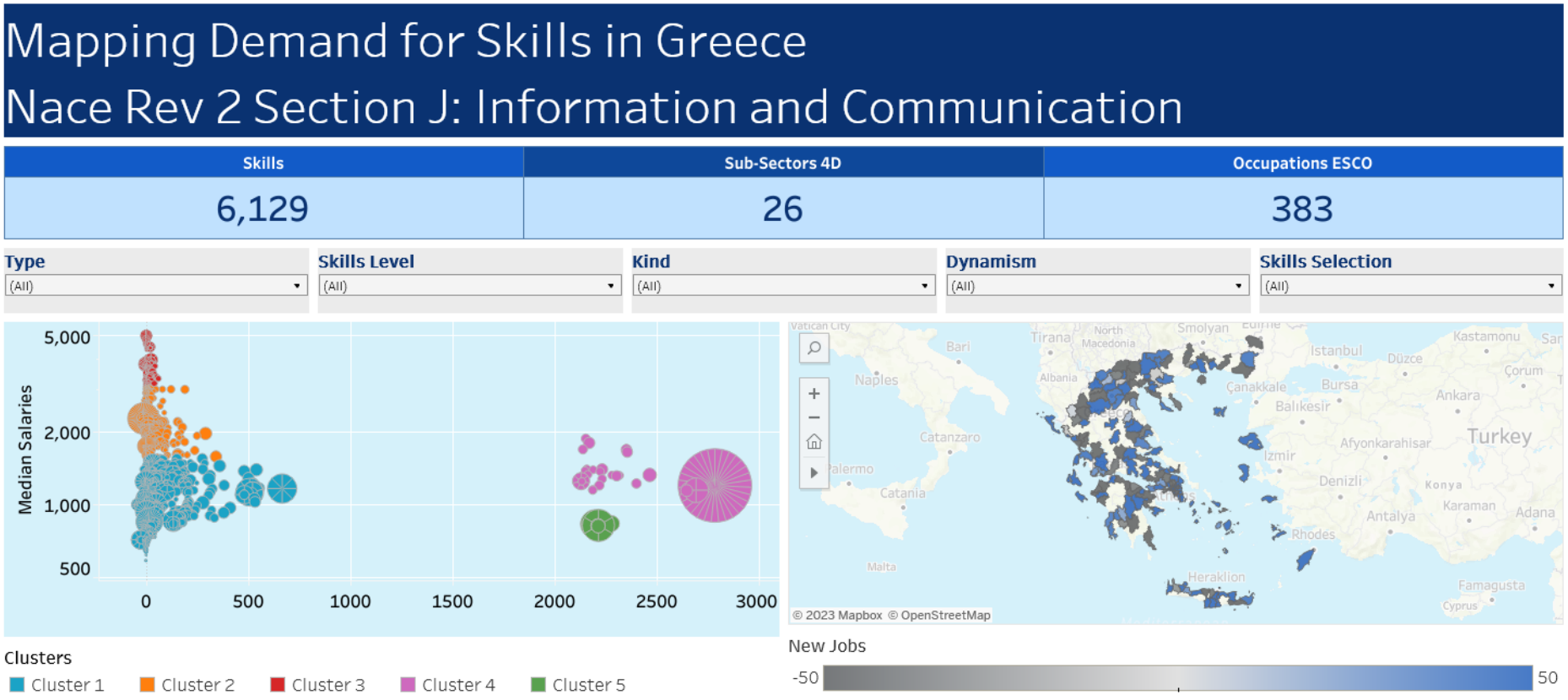


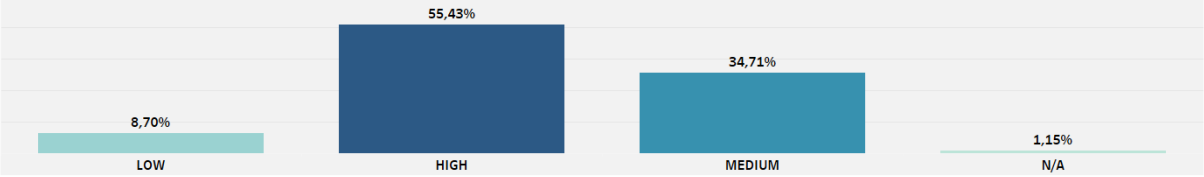
Figure 61. Skills Mapping - Sector: Information and Communication / Source: DYPA, ERGANI

2.7. Data from business surveys

In support of the Strategy, empirical surveys have also been carried out in the framework of the MDAAE to investigate the digital and green skills proficiency of businesses. The selection of digital skills was based on the Digital Competence Framework for Citizens (DigComp) 2.2 (https://joint-research-centre.ec.europa.eu/digcomp_en). The selection of green skills was based on the ESCO classifications (https://esco.ec.europa.eu/el) and the National Strategy for Labour force Upskilling 2022. The measurement scales used were from 0-10 to increase the reliability of the survey. The relative reliability indices of the survey were KMO 0.944 Sig. .000 Cronbach's Alpha of 55 Items 0.969 Sig. 0.000. The statistical confidence interval applied was 99% and the significance level α=3.35% with the reference population being the total number of businesses employing staff.

55.43% of the businesses that participated in the survey said that their staff had a high level of proficiency in digital skills, 34.71% had a medium level of proficiency and 8.70% had a low level of proficiency. The businesses with the highest level of proficiency in digital skills belong to the sectors of Information and communication, Professional, scientific and technical activities and Administrative and support activities, with percentages of 86.44%, 80.39% and 75% respectively. On the contrary, businesses in the Manufacturing, Electricity, gas, steam and air conditioning supply and Wholesale and retail trade; repair of motor vehicles and motorcycles sectors the percentage of staff with a high level of proficiency in digital skills is lower than the average.

DIGITAL SKILLS PROFICIENCY



DIGITAL SKILLS PROFICIENCY BY SECTOR

	LOW	MEDIUM	HIGH	N/A
ΣΥΝΟΛΟ	8,70%	34,71%	55,43%	1,15%
INFORMATION AND COMMUNICATION	1,69%	11,86%	86,44%	
PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	1,96%	16,34%	80,39%	1,31%
ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	8,33%	16,67%	75,00%	
FINANCIAL AND INSURANCE ACTIVITIES	6,82%	27,27%	63,64%	2,27%
EDUCATION	7,69%	32,97%	59,34%	
HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	3,74%	40,19%	55,14%	0,93%
TRANSPORTATION AND STORAGE	7,14%	39,29%	53,57%	
ACCOMMODATION AND FOOD SERVICE ACTIVITIES	9,17%	36,67%	53,33%	0,83%
OTHER SERVICE ACTIVITIES	6,82%	38,64%	52,27%	2,27%
ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY	13,43%	34,33%	47,76%	4,48%
WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES	10,19%	42,13%	46,99%	0,69%
MANUFACTURING	15,10%	38,02%	44,79%	2,08%
OTHER SECTORS	9,86%	38,03%	50,70%	1,41%

Figure 62. Digital skills proficiency by sector

Protecting ICT devices, Managing data, information and digital content, Solving technical problems and Managing digital identity were identified as the most important digital skills for all sectors. The assessment of the importance of each skill varies by sector.

DIGITAL SKILLS IMPORTANCE

Protect ICT devices	8,992
Manage data, information and digital content	8,547
Solve technical problems	8,443
Manage digital identity	8,401
Evaluate data, information and digital content	8,156
Articulate information needs, search for data, information and content in digital environments, access them and navigate between them	8,155
Interact through digital technologies	8,126
Protect health and well-being while using digital technologies	8,067
Share through digital technologies	8,064
Develop digital content	8,062
Identify needs and technological responses	8,058
Identify digital competence gaps	7,983
Use online conventions of netiquette	7,912
Collaborate through digital technologies	7,858
Protect the environment from the impact of the digital technologies	7,814
Creatively use digital technologies	7,574
Engage in citizenship through digital technologies	7,363
Computer programming	6,720

Figure 63. Digital skills importance

The data analysis for calculating the mismatch (importance minus proficiency) per digital skill shows that two of the skills, which occupy one of the top four positions in the importance list, also occupy the top positions in the mismatch list (Protecting ICT devices, and Solving technical problems). The other two skills (Managing digital identity, and Managing data, information and digital content), which occupy two of the top four positions in the importance list, are about halfway down the importance list. The analysis businesses for the second time the results of the same survey conducted by the MDAAE in 2020. The mismatches show sectoral variation.

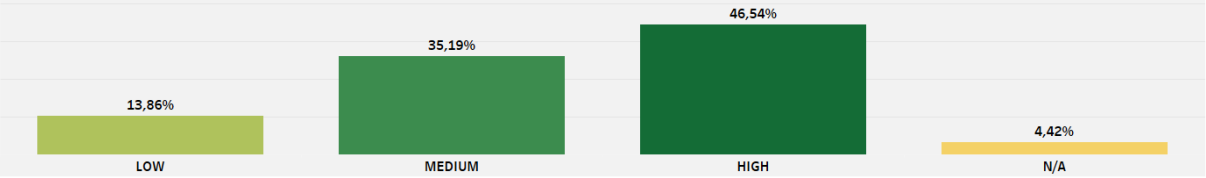
DIGITAL SKILLS IMPORTANCE AND PROFICIENCY

	IMPORTANCE	PROFICIENCY
Protect ICT devices	8,992	6,336 -2,657
Manage data, information and digital content	8,547	6,414 -2,133
Solve technical problems	8,443	5,490 -2,953
Manage digital identity	8,401	5,993 -2,408
Evaluate data, information and digital content	8,156	6,242 -1,914
Identify needs and technological responses	8,058	5,478 -2,579
Collaborate through digital technologies	7,858	5,898 -1,959
Protect health and well-being while using digital technologies	8,067	6,314 -1,753
Share through digital technologies	8,064	5,875 -2,189
Develop digital content	8,062	5,646 -2,416
Identify digital competence gaps	7,983	5,402 -2,581
Use online conventions of netiquette	7,912	5,979 -1,933
Protect the environment from the impact of the digital technologies	7,814	5,927 -1,886
Creatively use digital technologies	7,574	5,124 -2,450
Engage in citizenship through digital technologies	7,363	5,538 -1,825
Computer programming	6,720	4,110 -2,610
Interact through digital technologies	8,126	5,787 -2,339
Articulate information needs, search for data, information and content in digital environments, access them and navigate between them	8,155	6,217 -1,938

Figure 64. Digital skills importance and proficiency

46.54% of the businesses participating in the surveys stated that their staff have high proficiency in green skills, 35.19% medium and 13.86% low proficiency.

GREEN SKILLS PROFICIENCY



GREEN SKILLS PROFICIENCY BY SECTOR

	LOW	MEDIUM	HIGH	N/A
ΣΥΝΟΛΟ	13,86%	35,19%	46,54%	4,42%
INFORMATION AND COMMUNICATION	3,39%	28,81%	62,71%	5,08%
PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	7,19%	32,03%	57,52%	3,27%
ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	11,11%	30,56%	55,56%	2,78%
ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY	14,93%	29,85%	53,73%	1,49%
EDUCATION	12,09%	35,16%	49,45%	3,30%
OTHER SECTORS	9,86%	33,80%	47,89%	8,45%
FINANCIAL AND INSURANCE ACTIVITIES	9,09%	36,36%	47,73%	6,82%
HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	11,21%	36,45%	47,66%	4,67%
ACCOMMODATION AND FOOD SERVICE ACTIVITIES	15,00%	34,17%	45,00%	5,83%
MANUFACTURING	16,67%	36,46%	43,23%	3,65%
OTHER SERVICE ACTIVITIES	15,91%	34,09%	43,18%	6,82%
TRANSPORTATION AND STORAGE	14,29%	41,07%	41,07%	3,57%
WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES	18,06%	37,27%	40,28%	4,40%

Figure 65. Green skills proficiency by sector

The businesses with the highest staff proficiency in green skills belong, in descending order, to the sectors of Information and communication, Professional, scientific and technical activities, Administrative and support service activities and Electricity, gas, steam and air conditioning supply, with percentages of 62.71%, 57.52%, 55.56% and 53.73% respectively. On the other hand, in businesses in Manufacturing, Other service activities, Transportation and storage and Wholesale and retail trade; repair of motor vehicles and motorcycles, the percentage of staff with high proficiency in green skills is lower than average.

GREEN SKILLS PROFICIENCY

Understanding environmental issues, such as climate change, biodiversity loss and resource depletion	6,209
Implement measures to reduce air pollution, noise pollution, light pollution, water pollution or environmental pollution	6,116
Implement principles, policies and regulations aimed at environmental sustainability, including the reduction of waste and energy and water consumption, reuse and recycling of products	6,114
Understanding of the principles of sustainability and its application at work	6,042
Adopting behaviours that help maintain stable ecosystems and combat mass extinctions, for example by making conscious dietary choices that support organic food production and animal welfare	5,733
Familiarity with green technologies, such as renewable energy systems, energy efficient appliances and sustainable materials	5,686
Providing information and promoting environmentally friendly behaviours on social networks and at work	5,564
Employees should be able to collect and analyse data related to environmental performance and make recommendations for improvement	4,885

Figure 66. Green skills proficiency

Implementing measures to reduce air pollution, noise pollution, light pollution, water pollution or environmental pollution, Implementing principles, policies and regulations aimed at environmental sustainability, including the reduction of waste and energy and water consumption, reuse and recycling of products, and Understanding environmental issues such as climate change, biodiversity loss and resource depletion were identified as the most important green skills.

GREEN SKILLS IMPORTANCE

Implement measures to reduce air pollution, noise pollution, light pollution, water pollution or environmental pollution	8,184
Implement principles, policies and regulations aimed at environmental sustainability, including the reduction of waste and energy and water consumption, reuse and recycling of products	8,138
Understanding environmental issues, such as climate change, biodiversity loss and resource depletion	8,032
Understanding of the principles of sustainability and its application at work	7,972
Familiarity with green technologies, such as renewable energy systems, energy efficient appliances and sustainable materials	7,913
Providing information and promoting environmentally friendly behaviours on social networks and at work	7,618
Adopting behaviours that help maintain stable ecosystems and combat mass extinctions, for example by making conscious dietary choices that support organic food production and animal welfare	7,294
Employees should be able to collect and analyse data related to environmental performance and make recommendations for improvement	7,161

Figure 67. Green skills importance

The analysis of the data to calculate the mismatch per green skill showed that the green skills with the largest mismatch between importance and proficiency are Familiarity with green technologies, such as renewable energy systems, energy efficient appliances and sustainable materials, Collecting and analysing environmental data and Implementing measures to reduce air pollution, noise pollution, light pollution, water pollution or environmental pollution. Here too, the mismatches show sectoral variation.

3. Actions framework to achieve the objectives of the Strategy

3.1. Seeking change: Transforming the labour market for creative use of labour force skills

As already highlighted in the 2022 Strategy, the effective use of skills in the workplace has potential benefits for employers, workers and society and can contribute to increase productivity and innovation in businesses on the one hand, and to increase wages and job satisfaction of employees on the other. Public policy makers can work with employers to help create the right conditions or provide direct support and incentives to enhance the use of skills in the workplace.

Objective:

- Business/ organisation investments in their labour force skill development with a focus on green and digital skills.

Related Actions:

- Informing businesses/ organisations by sector (at the third level of classification NACE Rev. 2) about the detailed clusters of occupations and cutting-edge skills of today and of the next 5 years in their sector through relevant electronic messages and the organisation of relevant events.
- Collecting and disseminating information on good practices for the development and use of employee skills.
- Focussing the above actions on sectors such as Information and communication, Wholesale and retail trade and repair of motor vehicles and motorcycles, Construction, Manufacturing, Other service activities, Electricity supply, gas, steam and air conditioning, Waste collection, treatment and disposal and materials recovery and Public administration and defence, where there are the largest deficits of high-skill jobs compared to the EU-27 average.
- Focusing the above actions on the Regions besides Attica, where the percentage of highly qualified positions is extremely low, and on small and medium-sized businesses which in many cases have less expertise in this matter.

Expected Results:

1. Reduce the percentage of jobs requiring a high level of skills by 50% in the sectors concerned.
2. Information on the cutting-edge skills and the benefits of labour force upskilling in 103,901 businesses/ organisations outside Attica and 62,844 within Attica that have displayed employees' mobility in the years 2021, 2022 and 2023.

Target population of businesses/ organisations	Total	Attica	Central Macedonia	Crete	South Aegean	Thessaly	Western Greece	Peloponnese	Central Greece	Ionian Islands	Epirus	Western Macedonia	North Aegean
Total	**163547**	**62844**	**29499**	**11494**	**8769**	**9810**	**8762**	**8289**	**6799**	**4735**	**4831**	**3589**	**2667**
Wholesale and retail trade and repair of motor vehicles and motorcycles	91540	33468	17322	6631	5646	5521	5040	4603	3647	2999	2544	1881	1601
Manufacturing	29289	10483	5673	1963	940	2004	1599	1708	1639	642	858	758	450
Construction	17367	6755	2518	1339	1117	1074	893	830	723	539	559	488	216
Other service activities	18259	7872	2902	1236	880	908	824	852	579	424	617	349	314
Information and Communication	6661	4133	1039	318	153	209	260	169	114	103	136	80	65
Provision of electricity, gas, steam and air conditioning	1444	499	251	101	37	113	108	72	87	25	80	55	23
Waste collection, treatment and disposal and materials recovery	1183	277	217	78	94	97	90	108	67	44	49	30	14

3.2. Towards a smart labour market: Boosting innovation and business resilience by upgrading the digital skills of the labour force

The digital revolution has shaped the modern world in unprecedented ways. Technological developments have triggered and followed the globalisation of the economy. Digitalisation and its effects have paved the way for the emergence of the information society and the knowledge economy driven by human capital.

According to successive surveys within the activities framework of the MDAAE, businesses/ organisations have noticed an increase in their digital proficiency in 2023 (May-June) compared to 2020 (August-September).

In particular, 56.08% of businesses/ organisations reported a high level of digital skills proficiency among their staff as a whole in 2023, while in 2020 the corresponding percentage was 47.83%. A medium level of digital skills proficiency, of their staff as a whole, was reported by 35.12% of businesses/ organisations in 2023, while in 2020 the corresponding percentage was 38.60%. Low proficiency was reported by 8.80% in 2023 while 13.56% in 2020.

At the same time, sectors such as Wholesale and retail trade, repair of motor vehicles and motorcycles, Manufacturing, Transport and storage, Other service activities and Accommodation and food service activities had digital skills proficiency of less than 50% of their staff as a whole.

The thematics of the actions for upgrading digital skills should take into account the skills mismatches identified by labour market surveys and national and international trends (AI, Cloud, Big Data).

Priority should be given to actions for upgrading the digital skills of the labour force of the above sectors (employees and unemployed, but also micro-business owners)[30].

[30] Indicative actions available in Vuorikari, R., Kluzer, S. and Punie, Y., DigComp 2.2: The Digital Competence Framework for Citizens - With new examples of knowledge, skills and attitudes, EUR 31006 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-48882-8, doi:10.2760/115376, JRC128415.

3.3. Acting with the environment in mind: Cultivating environmental awareness and promoting responsible environmental behaviour

The 2022 Strategy focused on cultivating environmental awareness and promoting responsible environmental behaviour among persons employed and unemployed people, for whom specific actions were carried out in three categories, all of which contribute to the formation of responsible environmental behaviour:

A. "Awareness-raising" actions, which are the prerequisites for achieving responsible behaviour. They include environmental awareness, increasing the knowledge about development issues, the attitudes of the individual towards these issues (e.g., environmental, economic, social, etc.).

B. "Familiarising" actions, which make environmental problems a personal affair of the individual by engaging in, immersing in and participating in their solution. These actions aim to cultivate a substantial knowledge of the dimensions of environmental issues (social, etc.) and personal investment in them (personal, emotional, economic, etc.), as well as an awareness of the consequences of relevant behaviour (positive and negative) and a personal commitment to solving the issues.

C. "Empowerment" actions, which are related to environmental problem-solving skills and are those that give people a sense that they can make changes and contribute to solving environmental issues.

As already mentioned in a previous chapter, a survey was conducted in 2023 by the MDAAE to investigate the green skills proficiency of the business labour force. The survey indicated that 46.54% of the businesses reported that their labour force had high proficiency in green skills, 35.19% medium proficiency and 13.86% low proficiency.

The businesses with the highest staff proficiency in green skills belong, in order, to the sectors Information and communication, Professional, scientific and technical activities, Administrative and support service activities and Electricity, gas, steam and air conditioning supply, with percentages of 62.71%, 57.52%, 55.56% and 53.73%, respectively. On the other hand, in businesses in Manufacturing, Other service activities, Transport and storage and Wholesale and retail trade, repair of motor vehicles and motorcycles, the percentage of staff with high proficiency in green skills is lower than average.

Implementing measures to reduce air pollution, noise pollution, light pollution, water pollution or environmental pollution, Implementing principles, policies and regulations aimed at environmental sustainability, including the reduction of waste and energy and water consumption, reuse and recycling of products, and Understanding environmental issues such as climate change, biodiversity loss and resource depletion were noted as the most important green skills.

The data analysis for the calculation of mismatch by skill showed that the green skills with the largest mismatch between importance and proficiency are Familiarity with green technologies,

Collecting and analysing environmental data and Implementing measures to reduce air pollution, noise pollution, light pollution, water pollution or environmental pollution. Here too, the mismatches show sectoral variation.

Taking into account the specific research for achieving this objective, it is proposed to implement the following actions:

- **Production of educational material and training of workers and unemployed people to cultivate knowledge of environmental processes.**

  In particular, upon completion of the process, trainees should:
  - Learn the basic parts of the natural environment (geosphere, biosphere, hydrosphere, hydrosphere, cryosphere and atmosphere) and understand that living organisms and the non-living things are closely related and interdependent.
  - Learn the characteristics and functions of the living environment.
  - Be aware of the relationships, interdependencies and interactions of people and their societies with the environment.
  - Be aware of the role of technology in addressing environmental issues.

- **Production of educational material and training of workers and unemployed people to develop skills to understand and deal with environmental issues.**

  In particular, upon completion of the process, trainees should:
  - Be able to identify the types and causes of environmental issues.
  - Be able to understand the consequences of environmental issues.
  - To be able to assess their own impact on nature and to consider the protection of nature as a basic duty of every individual.
  - Be able to apply methods to reduce air pollution, noise pollution, light pollution, water pollution or environmental pollution.
  - Be able to identify and evaluate alternatives and courses of action.

- **Producing educational material and training for workers and unemployed people to cultivate knowledge on the implementation of principles, policies and regulations aimed at environmental sustainability, including the reduction of waste, energy and water consumption, the reuse and recycling of products and the comprehension of environmental issues such as climate change, biodiversity loss and resource depletion.**

  In particular, upon completion of the process, trainees should:
  - Know the main views on sustainability: anthropocentrism (human-centredness), technocentrism (technological solutions to ecological problems) and ecocentrism (nature-centredness), as well as how these views influence assumptions and arguments.
  - Learn the basic values and principles underlying socio-economic models and their relation to sustainability.

- Learn that values and principles influence actions that can harm, not harm, restore or regenerate the environment.
- Be aware that different cultures and different generations may attach more or less importance to sustainability depending on their value systems.
- Be aware that when people's demand for resources is dictated by greed, indifference and extreme individualism, this has negative consequences for the environment.
- Know that one's position in society affects one's personal values.
- Be able to critically evaluate and compare underlying values and sustainability principles in arguments, actions, policies and political claims.
- Be able to evaluate issues and actions based on the values and principles of sustainability.
- Align personal choices and actions with the values and principles of sustainability.
- Be able to articulate and negotiate the values, principles and objectives of sustainability, while acknowledging different points of view.
- Be able to identify and incorporate the values of communities, including minorities, when defining problems and making decisions about sustainability.
- Act in accordance with the values and principles of sustainability.
- willingly exchange and clarify views on sustainability values.
- Be open to others and their worldviews.
- Willingly and critically assess and evaluate different cultural contexts according to their impact on sustainability.

3.4. Towards an energy sustainable labour market: Promoting a circular economy and energy saving

The promotion of a Circular Economy model can be carried out at two levels. Firstly, by promoting knowledge, competences and skills related to renewable energy sources (RES), repairs, material reuse and the sharing economy and secondly by developing complex cognitive skills consisting of management, planning and ICT (Information and Communication Technologies) activities.

Until 15/5/2023, 8,723 beneficiaries (6,453 unemployed and 2,270 workers) participated in DYPA's training actions on the circular economy (29.96% of the total number of beneficiaries). Of these, 71.65% completed the training and 53.69% were certified. A possible extension of the programmes could include self-employed persons and small business owners.

Additionally, in order to further implement this objective, it is proposed to implement the following actions:

Creation of educational material and training of unemployed, employees and self-employed people with the aim of promoting knowledge, skills and competences related to renewable energy sources (RES), repairs, material reuse and the sharing economy for employees, unemployed and owners of micro-businesses in the following occupations:

- Lifting machine operators
- Wind turbine technicians
- Supervisors power plants
- Motor vehicle technicians
- Vehicle and equipment cleaners
- Clothing/footwear manufacturing technicians
- Oil painters
- Water and waste water treatment plant operators
- Environmental engineering technicians
- Workers in the removal of hazardous materials
- Plant and system operators
- Controllers/ samplers
- Waste and recyclable material collectors
- Septic tank repairers and sewage pipe cleaners
- Maintenance engineers for heating, ventilation, air conditioning (and refrigeration) systems
- Mobile heavy equipment mechanics

Creation of educational material and training of employees and unemployed people, aiming at the development of complex cognitive skills consisting of management, planning and application of ICT (Information and Communication Technologies) in the following occupations:

- Industrial relations specialists
- PR specialists
- Environmental and development scientists
- Building/ construction inspectors
- Interior designers
- Architects and engineers
- Computer and system administrators
- Installers /repairers of engines and towers
- Telecommunications installers and repairers
- Telecommunications equipment installers and repairers
- Computer engineers

3.5. From diagnosis to action: Reducing skills mismatches in the labour market with targeted skills enhancement actions at sectoral - occupational - spatial level

In order to reduce the mismatches between supply and demand, the following methodology will be applied by those involved in the counselling of unemployed people with different characteristics (long-term unemployed, women, beneficiaries of unemployment benefits, persons with disabilities, etc.).

Infrastructure actions

- Analysis of the labour market and identification of dynamic sectors and occupations over time by Municipality, Gender, Age, Education Level, Skill Level, Employment Status.
- Analysis of planned investments in the area and detailed identification of staffing requirements.
- Comparative analysis of the occupational structure of the sectors of interest and identification of the upgrading needs.
- Empirical research in existing businesses to identify needs in staffing & skills.
- Training of employment counsellors in the implementation methodology.

Of the above actions mentioned in the 2022 Strategy, three have now been implemented and are available through the MDAAE at https://mdaae.gr/en/. At the same time, an Occupations Guide has been created in which the key figures of the labour market by occupation in a three-digit breakdown (ISCO-08 classification) for the year 2022 are summarised.

Stakeholders can identify the critical labour market indicators for each occupation, such as the occupation dynamism according to the new jobs created, a ranking table of skills, knowledge and competences required, the percentage of persons employed by gender, age, educational level and field of education, the percentage of persons employed by position, sector, employment status, type of contract and duration of overtime work. In addition, the percentage (%) of employed persons by Region is shown at spatial level and the dynamism of the selected occupation, the number of employed persons, and their median wage by employment status (Full-time and Part-time) for the years 2011-2022 are analysed by year.

It is proposed that DYPA counsellors (for workers and employers) undergo training on the tools of the Mechanism.

PHASE A

1. Detailed information of the unemployed, in clusters with similar characteristics, by employment counsellors on the situation of the local labour market, in relation to their

characteristics (gender, age, educational level, knowledge, abilities, skills, etc.), based on the conclusions of the infrastructure actions.

- The clustering of unemployed people is now also possible through the machine learning algorithms developed in the framework of the MDAAE.

2. Selection of training programmes in specific thematic modules based on the matching of the knowledge and skills they offer with those required by the local and sectoral labour market (according to the tools of the infrastructure actions).
    - The skills identification tools in the framework of the MDAAE support the identification of skills needs at a detailed occupational-sector-local level.
3. Customisation of the Individual Action Plan foreach beneficiary, taking into account the individual interview and the local labour market situation. Drafting of a strategic action plan for each beneficiary.

PHASE B

1. Identification and assessment of opportunities, prospects, problems and constraints for business actions. Detailed information for the unemployed.
2. Providing advice on entrepreneurship issues through group sessions.
3. Provision of tailor-made coaching, through individual and group sessions, in order to transform proposed business ideas into viable business plans, using a specialized electronic platform (business canvas).

3.6. Looking to the future: Investing in occupations and skills of the future

The ever-changing conditions of the socioeconomic reality are shaping new needs while channelling employment in new occupations. In order to achieve the above objective, it is proposed, on the one hand, to continuously monitor international developments and organisations that study the labour market at international level and, on the other hand, to regularly investigate the evolution of occupations within the sectors of economic activity.

Related actions

- Identifying new dynamic occupations worldwide.
- Comparative analysis of the European and Greek labour market and identification of new occupations.
- Communication with businesses likely to use the new occupations and analyse the needs for knowledge, skills and competences.

Indicative occupations that will drive the digital and green transition according to CEDEFOP[31] are:

Digital Operations Specialists

- Data scientists and analysts
- E-commerce specialists
- GPS experts (precision farming)
- Waste sorting optimization professionals

Green cutting-edge jobs

- Construction professional
- Materials extraction/ recycling/ reuse specialist

Materials and process engineers

- Product designers in the context of the circular economy
- Transport and mobility experts
- Environmental protection specialists

Green technology experts

- Industrial process analysts in relation to pollutants
- Industrial symbiosis experts
- Hydrogen technology specialists
- Specialist urban analysts
- Circular economy infrastructure designers
- Geoinformatics Engineers

[31] Cedefop green skills foresights in cities, circular economy, waste management and agri-food (2022-23).

Green governance

- Green/Smart cities data managers
- Transport and storage data managers (logistics)
- (Strategic) waste manager
- Waste Pricing Professional
- Renewable energy

Green awareness

- Human resource specialists
- Specific consumer behaviour
- Sustainability trainers
- Rational waste management trainers

3.7. Interpersonal skills as a performance factor in the labour market: Enhancing the horizontal skills of the labour force while connecting/ matching to the real needs of the labour market

According to analyses by international organisations, basic fundamental skills can make people more adaptable and resilient to changing demands. Digital, transversal, social, emotional and technical skills will become increasingly necessary for adults to succeed both at work and in life. High quality and inclusive education, lifelong learning and training should be accessible to all, to enable full participation in society and to manage transitions to the labour market. More adults will need more opportunities for upgrading skills and retraining. Learning providers will need to create more flexible and blended forms of learning. Businesses will need to adopt more creative and productive ways of using the skills of their employees.

Related actions

- Cultivation of important skills for both employers and employees in the general population such as (in descending order of importance according to a survey of the Labour Market Diagnosis Mechanism, Confidence level: 99% Margin of Error: 1.15% Cronbach's Alpha: 0.973 - Kaiser-Meyer-Olkin: 0.946).
  - Team working
  - Interpersonal and communication skills
  - Problem solving
  - Responsibility/ Autonomy
  - Creativity/ Creative thinking
  - Flexibility/ Adaptability
  - Lifelong learning
  - Literacy
  - Initiative and entrepreneurship
  - Digital skills
  - Numeracy Foreign languages

3.8. Tailoring the actions of the Strategy to individual needs of beneficiaries, including persons with disabilities

The successful achievement of the Strategy's objectives requires that they be adapted to the different needs of the beneficiaries.

For this reason, in order to provide information to groups with special needs, it is proposed to adapt/enrich the suggested tools and actions with specific tools and techniques.

Specific actions

Developing interfaces that present labour market information according to the needs and skills of different users.

Tools should be designed in such a way that they can reach a broad group of users, including users with disabilities (e.g., low language level or low cognitive skills), such as the visualisation-based Berufe Entdecker tool.

Especially when the target group is students or young potential professionals, online tools should invest in an attractive template both visually and descriptively, and increase their potential reach to the student community (such as for example the website BeroepeninBeeld.nl, Occupations in the Picture, which seems attractive to students, university students as well as teachers).

At European level according to CEDEFOP[32] special approaches and programmes have been developed for groups with special needs. This information is often used by career professionals or (employment) counsellors working with special needs groups and not always by individual users themselves.

Indicative labour market monitoring tools adapted to specific user groups:

- Visual tool for students Berufe Entdecker (Germany): http://entdecker.biz-medien.de/
- Easy-language career information from Latvian State Employment, such as the Jobseeker Handbook Agency: http://www.nva.gov.lv/karjera/
- Initiative on the need for targeted interventions for children with special educational needs KomposyT (Slovakia) www.komposyt.sk

[32] https://www.cedefop.europa.eu/en/tools/resources-guidance/toolkit/how-can-you-work-with-groups-with-special-needs

4. Governance of the labour force skills development system

The governance of skills development systems (OECD, 2021) is a particularly complex task and involves several challenges for governments. It lies a between education, labour market and development policies and requires the synergy of many stakeholders, including governments, social partners, employers, employees, trainers, learners and others.

A skills development system aims (EC, 2020) to balance the supply and demand of skills in the labour market to ensure a good skills base for further economic growth. It seeks to harness and optimise the individual skills of the current and future labour force, taking into account the current or future needs of employers.

Greece should focus on the governance of a skills development system consisting of the following pillars:

- Involvement of all key stakeholders in the creation and dissemination of an intelligent skills strategy based on the real needs of the labour market.
- Supporting employers, employees, education and training providers and other stakeholders in making informed choices.
- Setting objectives and implementing relevant policies.
- Coordination of institutional and informal actors and stakeholders.

According to the provisions of Law 4921/2022, the governance of the National Skills Development System in our country is structured as follows (see Figure 1).

The **Governmental Committee** is responsible for the coordination of the Ministries, institutions and bodies that exercise policy on skills issues in the field of initial and continuing vocational training and lifelong learning, and in particular in the management of the relevant funded or co-funded programmes (Art.3, Act of Ministerial Council 14/29.4.2022).

The **National Labour force Skills Council** has an executive role on issues of continuing vocational training, re-skilling, upskilling of the labour force and its connection to the labour market and employment, in the framework of the Labour force Skills Strategy. In particular, its mission is: (a) the development of the Labour force Skills Strategy; (b) the monitoring of the implementation of the Labour force Skills Strategy; (c) the continuous monitoring of issues related to the continuing vocational training of the labour force, continuous monitoring of the continuing professional development of the labour force, its reskilling and upskilling and connection to the labour market and employment, and the submission of recommendations for the design of relevant policies to the Minister of Labour and Social Security or other competent bodies in accordance with the legislation in force (Article 27, paragraph 1, of Law 4921/2022).

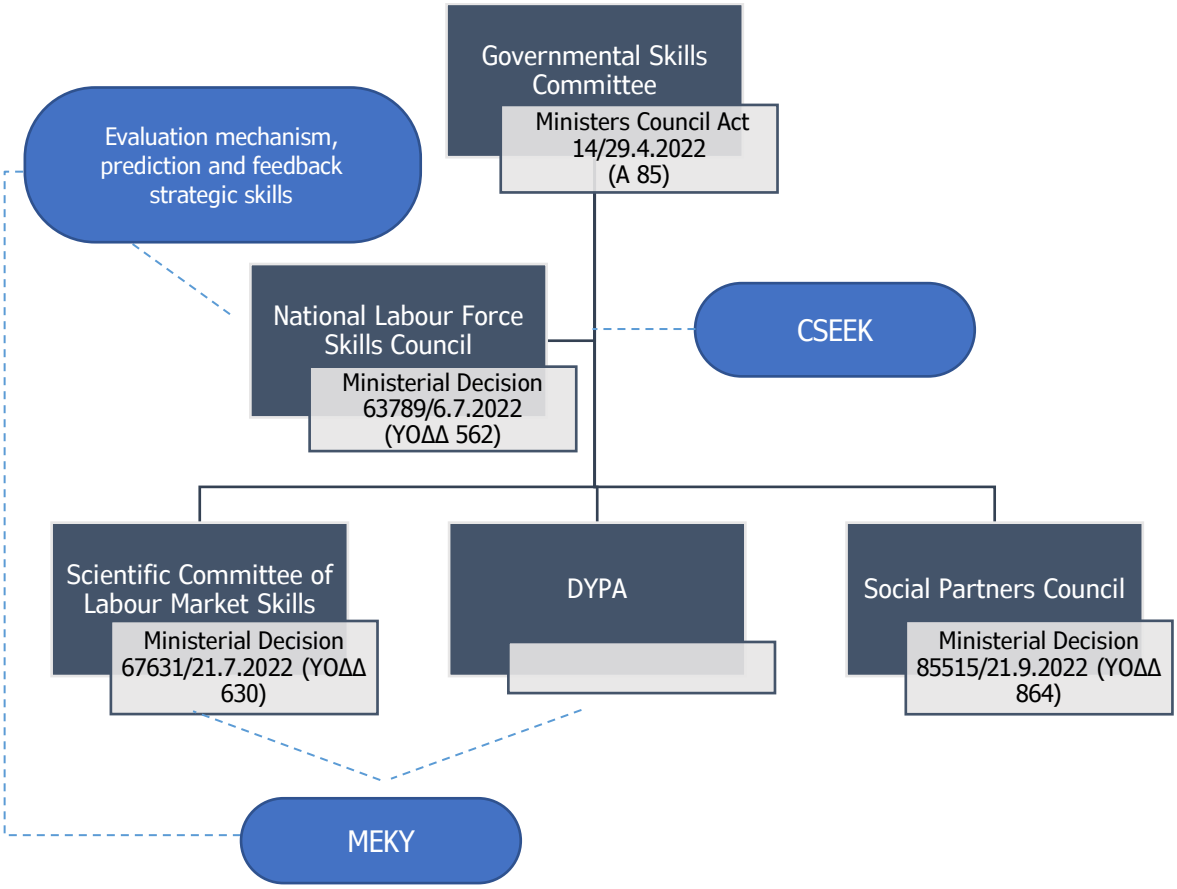


Figure 68. Governance of the National Skills Development System

The **Scientific Committee of Labour force Skills** supports the National Skills Council in an advisory and scientific capacity mainly through: a) the scientific documentation of the recommendations or proposals of the National Labour force Skills Council through the preparation of surveys and studies on the issues within its competence; b) the provision of opinions to the National Labour force Skills Council at its request on the issues within its competence, (c) supporting the National Labour force Skills Council in the implementation of the Labour force Skills Strategy; (d) collecting and processing qualitative and quantitative statistical data on labour market data, as well as on existing continuing vocational training programmes, (e) the systematic monitoring of developments at international and European level, as well as the transfer of the know-how resulting from this monitoring to the Greek context (f) participation in European and international networks for the purpose of exchanging scientific data and alternative strategies on continuing vocational training, retraining and skills; (g) assisting in the development of the new tools and mechanisms described in this document; (h) the development of the new tools and mechanisms described in this document, aiming to implement and promote the upgrading to the skills of the labour force and their connection to the labour market (Article 28, paragraphs 1-3 of Law 4921/2022).

The **Public Employment Service (DYPA, its acronym in Greek)** provides administrative support to the National Skills Council and the Scientific Committee of Labour force Skills, and is responsible

for implementing the objectives of this Strategy through the implementation of the relevant programmes.

The **Council of Social Partners** may issue opinions on its own initiative or if it is invited to do so by the Minister of Labour and Social Security or the Board of Directors of DYPA on matters within DYPA's competence, and in particular, on vocational training and the acquisition of skills by the labour force (Art.12, par.1 of Law 4921/2022).

The National Labour force Skills Council may receive and use data from the Unit of Experts in Employment, Social Insurance, Welfare and Social Affairs **(MEKY, its acronym in Greek)** of article 80 of Law 4826/2021 (A' 160) and the Labour Market Diagnosis Mechanism managed by MEKY.

In the context of anticipating skills that the labour market will need in the future a **Skills Forecasting Mechanism** is being created with the sole purpose of feeding the National Labour force Skills Strategy with data for the design of targeted and effective policies. The Skills Forecasting Mechanism will operate as a complement to MEKY and its data will be assessed and used by the Scientific Committee of Labour force Skills.

For the fulfilment of its mission and to ensure its proper functioning, the National Labour force Skills Council cooperates with the **Central Council for Vocational Education and Training (KSEEK, its acronym in Greek)** of article 5 of Law 4763/2020 (A 254). The National Labour force Skills Council and KSEEK hold a joint meeting at least once a year for the purpose of exchanging views and freely make available and take into account their data, reports and findings to each other. Within the framework of their cooperation, they may proceed to joint procurement procedures in accordance with Article 42 of Law 4412/2016 (A147).

The National Labour force Skills Council, with the assistance of the Scientific Committee of Labour force Skills, prepares and submits to the Minister of Labour and Social Security **an Annual Report** on its activities and planning for the following year, in order to promote the objectives set by the Labour force Skills Strategy.

The National Skills Council and DYPA, in close alignment with national policy priorities and interacting with key national actors and stakeholders, aim to address the challenges related to skills forecasting and matching in the national context and to identify potential development opportunities for the near future.

The National Labour force Skills Council cooperates with market representatives, social partners and social partners' institutes, chambers, foundations, international organisations and agencies, the National Alliance for Digital Skills and Employment and other public and private sector bodies, as well as with the Sectoral Skills Councils of article 5, par. 4 of Law 4763/2020.

5. Sources and amount of funding

The funding of the measures and individual actions of the Strategy, including those that will be specified in the coming period in the context of its strategic objectives and guidelines, will be primarily provided by the Recovery and Resilience Fund (RRF). Within the RRF, more than €1.2 billion is foreseen to finance reforms (changes in structures and procedures) and investments (structural and organisational changes), including the creation of the necessary infrastructure and the design and implementation of programmes with an emphasis on digital and green skills as well as horizontal skills (e.g., economic literacy). In addition, resources in the order of EUR 370 million will be made available for sectoral skills development with facilitating authorities, ministries such as the Ministry of Interior, the Ministry of Culture and Sports, the Ministry of Justice, the Ministry of Immigration and Asylum, the Ministry of Tourism, the Ministry of Labour and Social Security (to the extent that they do not relate to programmes under the responsibility of the Ministry of Labour and Social Security).

The implementation of the Strategy also expects to use the available opportunities for complementary funding of policies and actions to support vocational education and training through the resources of the European Structural and Investment Funds which are allocated to Greece to meet the European objectives during the programming period 2021-2027. The main objective is to use these resources in a rational and efficient way in order to have the maximum possible impact on the development of the skills and employability of the labour force, in order to reduce the skills mismatch and improve the labour supply-demand matching indicators.

In this direction, the Government may also use resources from the regular budget of the Ministry of Labour and Social Security, as well as from the relevant ministries and supervised bodies. These resources include resources from the public investment budget and from the National Development Programme and the Sectoral Development Programmes of the Ministries.