

4. Reforms-Economic development

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4.1. Recent developments in the digital transition of the Greek economy

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4.1.1. Introduction

Despite relatively positive developments in the Greek economy during 2023 in terms of economic growth, the trajectory of the digital transition index continues to be less than encouraging as it remains at 25th place in 2021 and 2022. Significant changes have been made to the DESI 2023 to align with the Digital Compass. As a result, it no longer ranks European countries on the whole index, nor in its four dimensions. It only provides rankings based on each of the individual indicators. Consequently, all indicators are presented here and the relative ranking for 2022 is provided so that the comparative evolution of each sub-index becomes apparent.

4.1.2. Recent developments in the digital transition

As the relevant methodological note of the European Commission (2023) explains, the decision on the Digital Decade Policy Programme adopted by the Commission and the European Parliament in December 2022 gives the indicator its new role, namely, to monitor the progress of the EU27 on the Digital Decade goals. DESI is now included in the report on the Digital Decade and is used by the Commission to monitor the progress of the Union and the member states in various dimensions and across a multitude of variables (indicators) related to digital transformation.

The DESI index, further adapting to the Digital Compass, slightly changes the names of the four dimensions and enriches the indicators they contain. An important change is that DESI ceases to be published as an overall index. This means that countries are no

longer ranked based on DESI; rather, they are ranked based on each of the 34 indicators included in DESI. As mentioned, DESI has four dimensions: Digital skills, Digital infrastructure, Digital transformation of businesses, and Digitalization of public services (Table 4.1.1). It is noted that the index data refer to at least one year back.

Digital skills refer to the population of each state and include 9 indicators. We notice that despite the significant percentage of the population that uses the internet, Greece remains in a relatively low position since the corresponding percentages in most member states are higher. The increase in the percentage of companies providing ICT training is a positive development; however, Greece ranks at relatively low positions compared to the European average.

Worryingly, the percentage of ICT specialists has fallen, and thus Greece ranks last (27th). Moreover, ICT graduates remain at the same percentage of university graduates while the European average has increased. As a result, the Greek economy has lost ground and has fallen in ranking. The percentage of female Greek ICT specialists is the only parameter of the specific dimension of DESI in which Greece exceeds the European average.

In terms of digital infrastructure, the country seems to be divided into two categories. It is far behind in terms of network speed and capacity while it is quite ahead in terms of 5G network development. Specifically, in high speed (100Mbps, 1Gbps) fixed broadband as well as very high capacity network coverage, the country ranks last, with a large distance from the European average. In fact, any improvement that occurred between 2022 and 2023 was not enough to “unhook” Greece from 27th place. On the contrary, in terms of 5G coverage and spectrum, the country is among the first positions, with higher percentages than the European average.

In the dimension of digital transformation of businesses, which mostly concerns the private sector, there is a clear deterioration in 2023. Despite the increase in the percentage of small and medium enterprises (SMEs) with at least a basic level of digital intensity, Greece’s position fell to last place because other member states

TABLE 4.1.1 DESI 2022 and 2023 indicators

	DESI 2022			DESI 2023		
	Greece	EU27	Rank	Greece	EU27	Rank
Digital skills						
Internet use	77.1%	87.2%	26	81.9%	88.6%	25
At least basic digital skills*	52.5%	53.9%	17	52.5%	53.9%	17
Above basic digital skills*	21.7%	26.5%	19	21.7%	26.5%	19
At least basic content creation skills*	62.3%	66.2%	19	62.3%	66.2%	19
Enterprises providing ICT training*	12.0%	19.7%	25	13.4%	22.4%	24
Females having at least basic digital skills*	51.4%	52.3%	19	51.4%	52.3%	19
ICT specialists	2.8%	4.5%	26	2.5%	4.6%	27
ICT graduates	3.5%	3.9%	20	3.5%	4.2%	22
Female ICT specialists	21.0%	19.1%	10	20.3%	18.9%	13
Digital infrastructure						
At least 100 Mbps fixed broadband take-up	8.5%	40.6%	27	20.3%	55.1%	27
At least 1 Gbps broadband take-up	0%	7.6%	27	0%	13.8%	27
Fixed Very High Capacity Network (VHCN) coverage	19.8%	70.2%	27	27.9%	73.4%	27
Fiber to the Premises (FTTP) coverage	19.8%	50.0%	25	27.9%	56.5%	25
Mobile broadband take-up*	76.5%	86.5%	26	76.5%	86.5%	26
5G coverage	66.1%	65.8%	10	85.7%	81.2%	12
5G spectrum	99.2%	56.1%	5	99.2%	68.2%	5
Digital transformation of businesses						
SMEs with at least a basic level of digital intensity	38.8%	54.9%	23	41.2%	69.1%	27
Electronic information sharing*	31.9%	38.1%	19	31.9%	38.0%	19
Social media*	28.0%	29.3%	14	28.0%	29.3%	14
Big data*	12.9%	14.2%	12	12.9%	14.2%	12
Cloud*	15.2%	34.0%	25	15.2%	34.0%	25
Artificial Intelligence*	2.6%	7.9%	26	2.6%	7.9%	26
e-invoices*	-	32.2%	-	-	32.2%	-
SMEs selling online	19.5%	18.5%	13	16.9%	19.1%	19
e-Commerce turnover	10.6%	11.6%	13	7.3%	11.3%	22
Selling online cross-border	7.0%	8.7%	19	7.0%	8.7%	19

TABLE 4.1.1 (continued)

	DESI 2022			DESI 2023		
	Greece	EU27	Rank	Greece	EU27	Rank
Digitalization of public services						
e-Government users	69.5%	64.8%	18	80.5%	74.2%	19
Digital public services for citizens	52.4	74.6	25	64.6	77.0	23
Digital public services for businesses	47.6	81.7	26	73.7	83.7	24
Pre-filled forms	45.3	64.5	21	54.4	68.2	20
Transparency of service delivery, design, and personal data	48.8	62.3	23	52.4	64.7	21
User support	75.1	81.6	20	74.1	83.6	22
Mobile friendliness	82.0	92.0	25	84.6	93.3	24
Access to e-health records	-	-	-	60.7	71.7	22

Source: DESI 2023.

*Data of both years refer to 2021.

- No data.

increased their respective rates considerably more. Specifically, the EU27 average increased by 15 points, while Greece's score increased only 2.5 points. Although most indicators refer to data from 2021, it appears that businesses in Greece are making significant use of social media and big data. However, in cloud using and artificial intelligence they are quite behind their European partners. They also seem to be losing ground in selling online and, consequently, in e-commerce turnover.

The dimension of digitalization of public services concerns the public sector and is the only one of DESI's four dimensions in which Greece shows a relative improvement compared to DESI 2022. It is interesting that despite the significant increase in the percentage of e-governance users and even though this percentage is above the European average, Greece's position fell one place to 19th. This is explained by the fact that countries closely behind Greece (such as Cyprus and Slovakia) increased their score more than Greece did. Another notable point about this indicator is that the EU27 average is far behind the middle position in the ranking. This is the case because a few populous countries (i.e., Poland and Germany) have significantly lower rates of e-government users, thus pushing the European average

downwards. All other indicators are not measured as a percentage but as a pure number between 0 and 100.

Greece improved its ranking in digital public services for citizens and businesses, in pre-filled forms, in the transparency of service delivery, design, and personal data, as well as in the degree of mobile friendliness of the provided e-government services. The country is in most indicators of this dimension quite close to the European average, which shows the significant improvements of the Greek public sector digitization in recent years. Furthermore, it is encouraging that Greece's progress in most indicators is faster than the EU27 average, resulting in a rise in the ranking and convergence with the EU27. This is something that the new DESI focuses on (the digital convergence of the member states).

4.1.3. Concluding remarks

Despite the significant progress that has been made in several areas of digital transformation, the country continues to lag significantly behind its peers and, of course, to be far from the European average in most indicators. Particular attention needs to be paid to the digitization of the private sector, which seems to be wid-

ening the gap with the other member states and, consequently, falling to the lower ranking positions.

The digitization of the public sector appears to be progressing at a relatively faster pace than the rest of the EU27, resulting in the country's convergence with European averages in most indicators. Digital infrastructure needs special attention and network upgrades should be accelerated because Greece not only lags in network speed and capacity, but the progress it makes is relatively slower than that of the rest of the member states. Consequently, it remains firmly in the last ranking positions of the relevant indicators.

Finally, particular attention should be given to two indicators of the digital skills dimension. The number of ICT specialists as well as ICT graduates should increase. These two indicators are very important as they relate to the education and the ability of the domestic workforce to meet the ever-increasing labor market needs for a skilled digital workforce. In these specific indicators, Greece is losing ground in relation to its EU partners, and this is very worrying for future developments

in the labor market. If domestic and foreign companies operating in Greece cannot find domestic skilled labor, there is a serious possibility that they will leave the country and settle in other EU member states where finding ICT specialists may be easier. This will have very negative consequences for the Greek economy in general, especially during the current phase where a significant effort is being made to attract foreign direct investment.

References

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