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## \_Telecommunications

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# Main sector indicators

— The Croatian Regulatory Authority for Network Industries (HAKOM) data for the fourth quarter of 2024 show that the trends from previous years continued in the telecommunications sector. More precisely, the use of telephone services in the fixed network has decreased compared to the previous period, while the use of mobile network services and internet access services has increased.

“In the fourth quarter of last year, the number of users of the fixed network decreased by 1.2 percent year-on-year.

At the end of last year, the total number of connections in the fixed network was 1,201,798, which is a year-on-year decrease of 0.1 percent. In the fourth quarter of 2024, a total of 1,101,644 users of telephone services in the fixed network generated 215,203,351 minutes of outbound traffic in the fixed network. In the fourth quarter of last year, the number of users in the fixed network decreased by 1.2 percent year-on-year. In the same period, total outbound traffic in this network decreased by 16.3 percent.

Taking this data into account, teleoperators recorded a decline in total revenue from telephone services in the fixed network in the analyzed period. Compared to the fourth quarter of 2023, total revenue from this type of service decreased by 5.5 percent. In total, in the last three months of 2024, 29.8 million euros in revenue were generated from providing telephone services in the fixed network. Only 7.5 percent of that amount refers to wholesale revenue, which decreased by 19.0 percent compared to the fourth quarter. The remainder, i.e., EUR 27.5 million, refers to retail revenue, which also recorded a year-on-year decline of 4.2 percent.

The largest share of the fixed network services market is held by HT Group. In the fourth quarter of 2024, its share was 60.2 percent of the total number of users of telephone services in the fixed network. In the same period, A1 Hrvatska provided telephone services in the fixed network to 26.5 percent of users, while Telemach Hrvatska provided them to 11.8 percent of users.

**Table 1**  
**Fixed and mobile communication network in the fourth quarter of 2024**

Source: HAKOM (2025a).

	Fixed network	Mobile network
<b>Number of users</b>	1,101,644	4,717,531
<b>Outbound traffic (in min.)</b>	215,203,351	2,738,298,749
<b>Total revenue (in euros)</b>	29,768,676	167,898,798

At the end of 2024, trends in the use of telephone services in the mobile network were different from those in the fixed network. More precisely, in the mentioned period, the number of users of telephone services in the mobile network increased by 3.4 percent, compared to the fourth quarter of 2023. In the last quarter of last year, there were 4,717,531 users of telephone services in the mobile network. The majority of them, i.e., 81.5 percent, relate to private users. At the end of last year, the number of private users of telephone services in the mobile network increased by 3 percent year-on-year. This is a consequence of the increase in the number of users with a subscription, i.e., their number increased by 6.1 percent compared to the fourth quarter of the previous year. Users with a subscription thus accounted for 61.1 percent of the total number of private users. In the same period, the number of users without a subscription decreased by 1.5 percent compared to the fourth quarter of 2023. In the last quarter of 2024, the number of business users increased by 5.2 percent compared to the same period in 2023 and amounted to 872,405 users. At the end of last year, the density of mobile service users was 121.8 percent, which is an increase of 3.4 percent year-on-year.

“In the fourth quarter of last year, the total outbound traffic of telephone service operators in the mobile network was 1.7 percent higher compared to the previous year.

In the fourth quarter of last year, the total outbound traffic of telephone service operators in the mobile network was 1.7 percent higher compared to the previous year. In the last three months of 2024, 2,738,298,749 minutes of mobile phone calls were made. In the same period, the duration of roaming calls from companies' own users was reduced by 13.7 percent in international networks, while the duration of roaming calls from foreigners in national networks increased by 8.13 percent year-on-year. In the fourth quarter of 2024, the number of sent SMS messages was lower by 10.6 percent compared to the fourth quarter of 2023. Moreover, the number of sent MMS messages decreased by 10.2 percent.

Given the increase in the number of users, as well as of outbound traffic, in the fourth quarter of 2024, the total revenue from telephone services in the mobile network increased by 10.8 percent year-on-year. It should be emphasized that this increase is a consequence of an increase in retail revenue of 14.3 percent compared to the same period in 2023. In the fourth quarter of 2024, wholesale revenue decreased by 18.8 percent compared to the last quarter of 2023. Retail revenue from telephone services in the mobile network accounts for 92.3 percent of the 167.9 million euros in total revenue from telephone services in the mobile network in the last

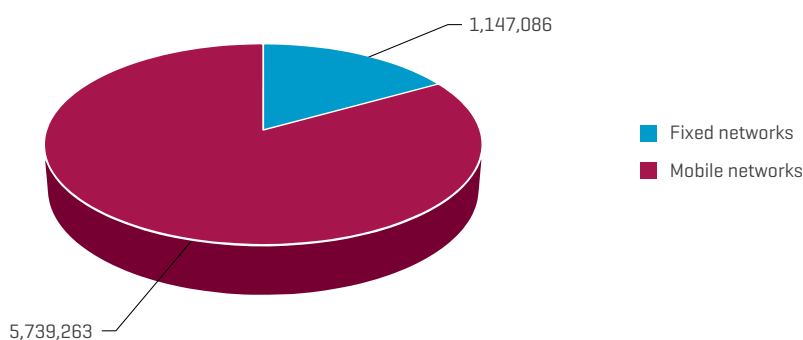
IN THE LAST QUARTER OF LAST YEAR, THERE WERE 4,717,531 USERS OF TELEPHONE SERVICES IN THE MOBILE NETWORK.

three months. In the last three months of 2024, retail revenue from sales to private users amounted to 114.8 million euros, 78.5 percent of which was generated from the sale of telephone services to customers with a subscription. In the fourth quarter of 2024, total revenue from sales to users with a subscription increased by 17.2 percent, compared to the same period in 2023. In the last three months of last year, retail revenue from business users amounted to 40.2 million euros, which is an increase of 14.9 percent compared to the same period in 2023.

The largest share of the market of telephone service in the mobile network, measured by the number of users in the fourth quarter of last year, was held by Hrvatski Telekom. Its share in the mentioned period amounted to 44.4 percent of users of telephone services in the mobile network. It is followed by A1 Hrvatska with 34.1 percent and Telemach Hrvatska with 21.5 percent of users of telephone services in the mobile network.

**Figure 1**  
**The number of broadband connections in 2024**

Source: HAKOM [2025a].



In the analyzed period, the number of broadband connections increased as well, i.e., by 5.1 percent year-on-year. In the last three months of 2024, there were a total of 6,886,349 broadband internet connections in Croatia. In that period, the number of broadband internet connections via fixed networks was 1,147,086 [Figure 1], which is an increase of 3.4 percent compared to the same period in 2023. As for the number of broadband connections via mobile networks, it amounted to 5,739,263, and it increased by 5.5 percent year-on-year. In the fourth quarter of 2024, HT Group had the largest share of the total number of broadband connections. Its share in the mentioned period was 58.8 percent of the total number of connections via the fixed network and 43.2 percent of the total number of connections via the mobile network. A1 Hrvatska had a share of 27.7

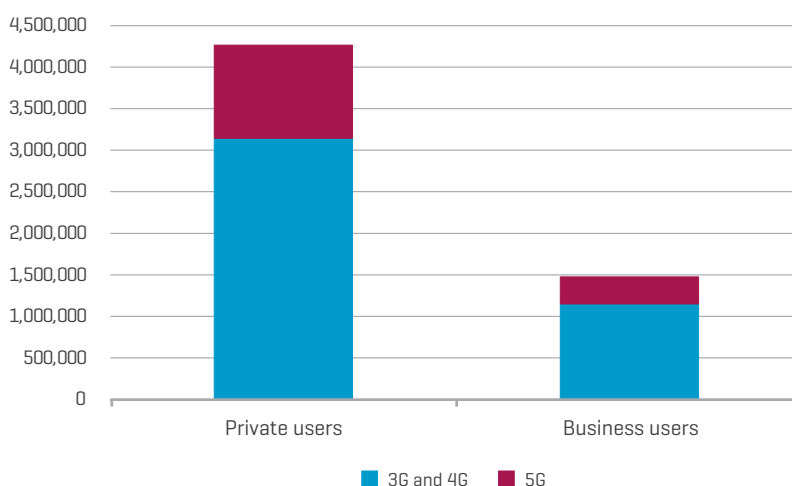
percent in the total number of connections via the fixed network and 37.3 percent in the total number of connections via the mobile network. The shares of Telemach Hrvatska represented 8.9 percent of the total number of connections via the fixed network and 19.5 percent of the total number of connections via the mobile network.

In the analyzed period, a year-on-year trend of increasing the number of connections via the 5G network was observed, while the number of users of 3G and 4G network is declining or, in the case of business users, it is mildly increasing compared to the number of users of 5G network in the fourth quarter of 2024. The number of private users of broadband internet access via 3G and 4G networks decreased by 4.9 percent, while the number of private users accessing the internet via 5G networks increased by 36.8 percent. In the case of business users, the number of those who used 3G and 4G networks to access the internet in the fourth quarter of last year increased by 3.7 percent compared to the same period in 2023. At the same time, the number of business users accessing the internet via 5G networks increased by 55.5 percent.

However, it should be noted that users using 3G and 4G networks still predominate in the total number of broadband internet connections [Figure 2]. In the last quarter of 2024, they accounted for 74.9 percent of the total number of broadband connections.

**Figure 2**  
**Number of broadband connections via mobile networks in the fourth quarter of 2024**

Source: HAKOM [2025a].



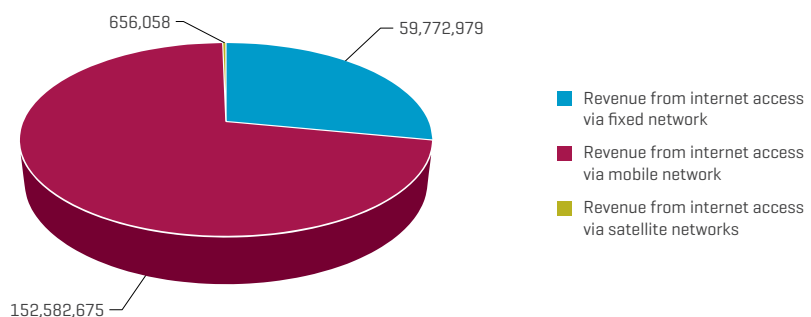
Data traffic in fixed and mobile networks is increasing as well. In the mentioned period, data traffic in fixed networks increased by 26.8 percent compared to the fourth quarter of the previous year. In the same period, data traffic in mobile networks recorded a year-on-year increase of 0.5 percent. Far more data traffic was generated via fixed networks in the fourth quarter of last year: 994,597 TB compared to 332,026 TB achieved via mobile networks.

In the last three months of 2024, teleoperators generated 213.0 million euros in total revenue from internet access services, which is 12.2 percent more than in the same period in 2023. The largest part of this revenue, i.e., 152.6 million euros, was generated from internet access services via a mobile network, which increased by 14.2 percent year-on-year [Figure 3]. In the fourth quarter of 2024, 59.8 million euros were generated from internet access via fixed networks, i.e., 6.6 percent more than a year earlier. The largest year-on-year increase was recorded in revenue from internet access services via satellite connections. In the analyzed period, 656.1 thousand euros were generated from this type of service, which is as much as 199 percent more compared to the fourth quarter of 2023. This is also related to the increase in the number of connections via satellite connections by 120 percent in the aforementioned period. It should be noted that this refers to only 3,805 connections.

Based on the data on revenue from internet access and telephone services in fixed and mobile networks [Figure 4], it is clear that internet services represent by far the most important source of revenue in the telecommunications services market in the fourth quarter of 2024. Telephone services in the fixed network generate significantly less revenue, and given the downward trend in the use of this type of service, it is expected that the total revenue from their provision will continue to decrease in the future.

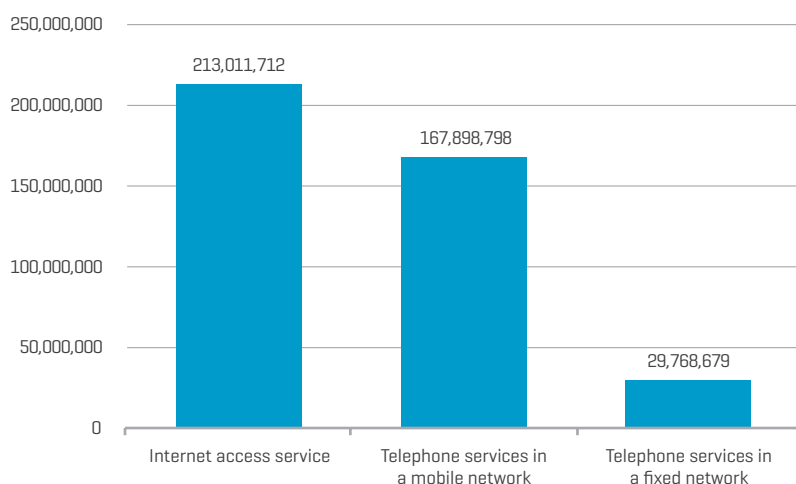
**Figure 3**  
Revenue from internet access services in the fourth quarter of 2024, in euros

Source: HAKOM (2025a).



**Figure 4**  
Revenue from internet access and telephone services in fixed and mobile networks in the fourth quarter of 2024, in euros

Source: HAKOM (2025a).



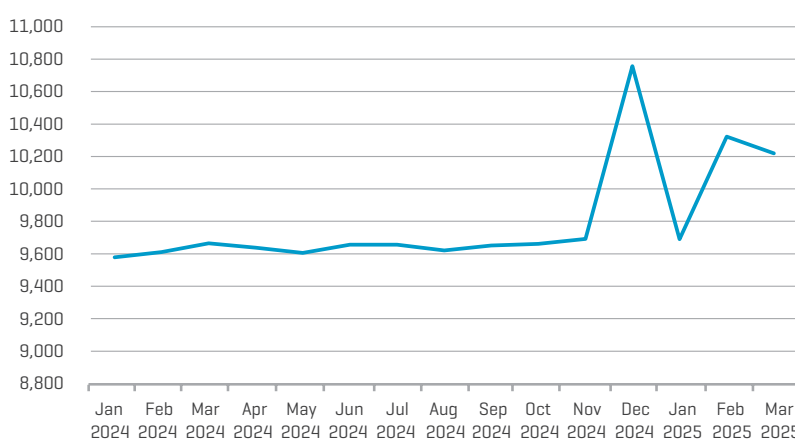
“According to data from the Croatian Bureau of Statistics, the average number of persons employed in the telecommunications sector in 2024 was 9,733.

According to data from the Croatian Bureau of Statistics, the average number of persons employed in the telecommunications sector in 2024 was 9,733, which is 3.6 percent more than in 2023. On a monthly basis, the highest number of persons employed in this sector was recorded in December 2024, when it amounted to 10,756 (Figure 5). According to provisional data from the Croatian Bureau of Statistics, 2025 began with 9,690 persons employed in this industry. Subsequently, in February of this year, there was an increase in the number of persons employed in the telecommunications sector by 6.5 percent compared to the previous month, and by 7.4 percent compared to February 2024. In March and April of this year, there was a decrease in the number of persons employed in the telecommunications industry, but it still remained higher than in the same months of 2024.

**Figure 5**  
**Number of persons employed in the telecommunications sector in 2024 and 2025, by month**

Note: Data for January, February, and March 2025 are provisional.

Source: Croatian Bureau of Statistics [2025c].



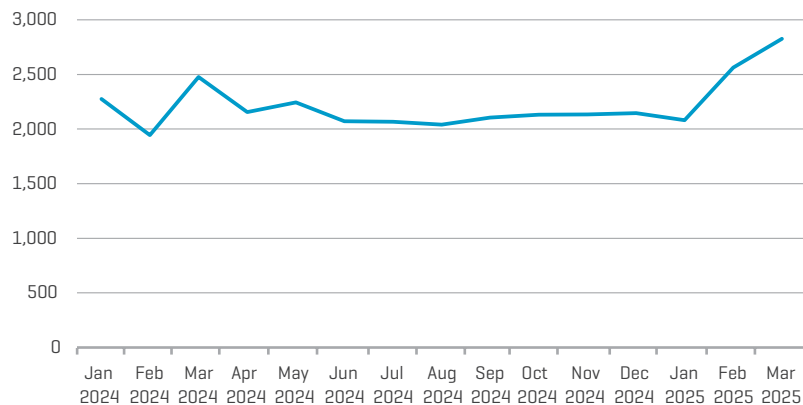
The average monthly gross wage of persons employed in the telecommunications sector in 2024 was 2,150 euros. Compared to the average of 2023, the gross wage of persons employed in the telecommunications sector increased by 6.4 percent. Last year, the highest average gross wage was paid out in March and amounted to 2,478 euros (Figure 6). The average gross wage paid in the telecommunications sector in January this year decreased slightly compared to the same month in 2024. It amounted to 2,082 euros, which is 8.5 percent lower compared to January of last year. However, in February and March of this year, gross monthly wages were paid in amounts higher than those from the previous year. Thus, in February of this year, the average gross wage of persons employed in the telecommunications sector increased by 31.8 percent year-on-year. In March of this year, the increase in the monthly gross wage was 14 percent on a year-on-year basis.



## THE AVERAGE MONTHLY GROSS WAGE OF PERSONS EMPLOYED IN THE TELECOMMUNICATIONS SECTOR IN 2024 WAS 2,150 EUROS.

**Figure 6**  
**Average monthly gross wage in the telecommunications sector in 2024 and 2025, in euros**

Source: Croatian Bureau of Statistics (2025b).



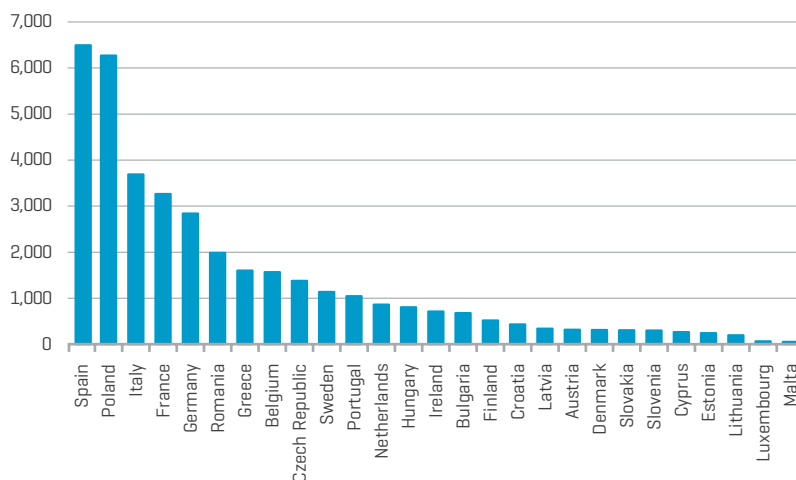
Regarding the prices of telecommunications services, data from the Croatian Bureau of Statistics show that there was a price increase of 0.6 percent last year compared to 2023. At the same time, prices of mobile telephony services (3.8 percent) and other information transmission services (6.5 percent) increased. In the same period, prices for internet access services decreased by 2.2 percent, while prices for telecommunications service packages decreased by 3.8 percent compared to 2023. Last year, the prices of fixed telephony services remained at the price level of 2023.

# Telecommunications sector in the European Union

In the European Union, in 2023, according to Eurostat data, a total of 37,705 companies were registered in the telecommunications sector. Spain ranks first in terms of the number of companies in the telecommunications sector, with 6,497 companies in 2023. It is followed by Poland with 6,270 companies operating in the telecommunications sector in that year. Therefore, one-third of companies in the telecommunications sector in the EU operate in two EU countries. Malta ranks last in terms of the number of companies in the telecommunications sector, with 52 companies operating in 2023.

**Figure 7**  
**Number of companies in the telecommunications sector in EU countries in 2023**

Source: Eurostat.

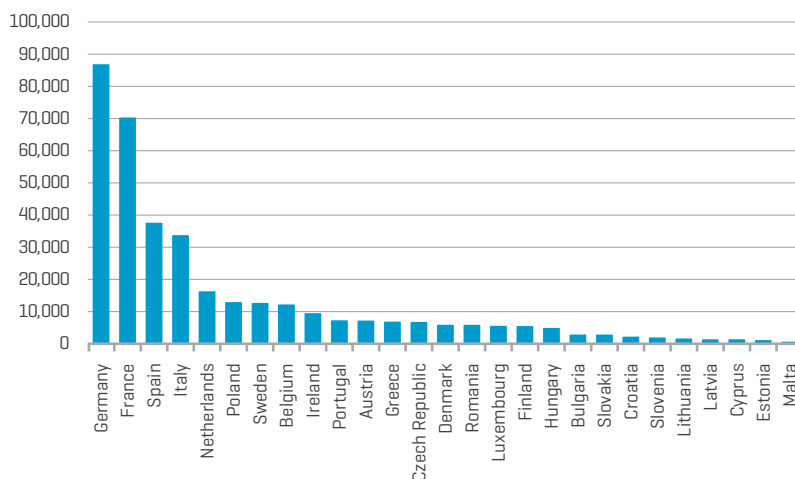


If we analyze the net turnover generated by companies in the telecommunications sector in European Union countries, it can be noticed that by far the largest turnover is generated by telecommunications companies in Germany. These companies generated a total of 86,678.9 million euros in net turnover, or approximately 25 percent of the total net turnover of the telecommunications sector at the EU level. They are followed by France, where, in 2023, the telecommunications sector had a net turnover of 70,097.9 million euros. In Croatia, in 2023, the telecommunications sector generated a total of 2,001.5 million euros in turnover. The total net turnover of the telecommunications sector in the European Union in 2023 amounted to 358,692.4 million euros. In the mentioned year, the telecommunications sector in Malta had the lowest net turnover. It amounted to 406.2 million euros.

IN 2023, THE TELECOMMUNICATIONS SECTOR  
IN THE EU EMPLOYED A TOTAL OF 815,199  
EMPLOYEES.

**Figure 8**  
**Net turnover in the telecommunications sector in EU countries in 2023, in millions of euros**

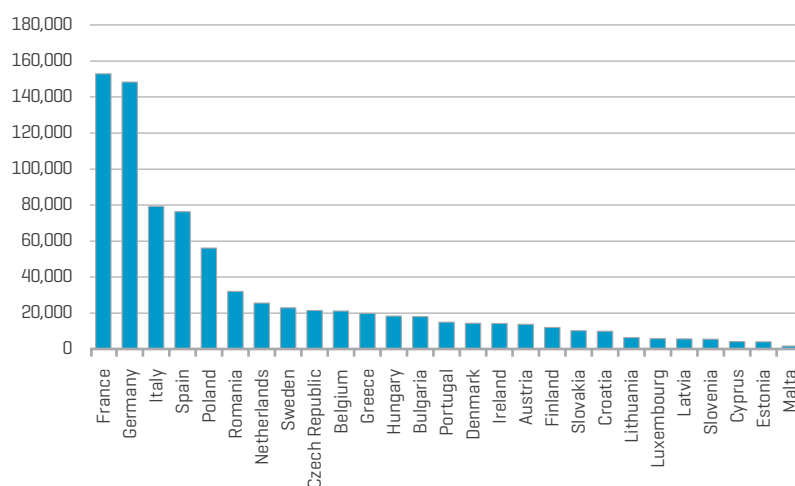
Source: Eurostat.



In 2023, the telecommunications sector in the EU employed a total of 815,199 employees. The largest number of them (152,856, i.e., 18.8 percent) represent persons employed in the telecommunications sector in France. Germany follows with 148,283 persons employed in the telecommunications sector in 2023 (Figure 9). In Croatia, in the same year, 9,887 employees were employed in the telecommunications sector. In 2023, the lowest number of persons employed in the telecommunications sector was recorded in Malta. In that country, 1,633 persons were employed in the telecommunications sector that year.

**Figure 9**  
**Number of persons employed in the telecommunications sector in EU countries in 2023**

Source: Eurostat.



“Last year, the production volume in the telecommunications sector at the European Union level was 10.5 percent higher compared to 2021.

Eurostat data on production volume and turnover in the telecommunications sector indicate positive trends compared to 2021. Last year, the production volume in the telecommunications sector at the European Union level was 10.5 percent higher compared to 2021. Out of the EU countries for which data are available, only in Spain did the production in this sector decrease by 0.8 percent compared to 2021. Malta leads the way in terms of the increase in this indicator in 2024 compared to 2021, with an increase of 26.9 percent.

Last year, the production volume in the telecommunications sector at the EU level increased by 2.9 percent compared to 2023. Last year, the largest year-on-year increase in production in the telecommunications sector was achieved by Bulgaria (7.6 percent) and Sweden (7.2 percent). In Croatia, in 2024, the production volume of this sector increased by 1 percent compared to the previous year. The largest decline in production in the telecommunications sector last year was in Spain, where production volume decreased by 7.3 percent year-on-year.

Last year, the telecommunications sector turnover at the level of the EU was 9.3 percent higher compared to 2021. It increased in all EU countries in the analyzed period. The highest increase in turnover was generated in the telecommunications sector in Hungary, where turnover increased by 37.7 percent in 2024. In 2024, turnover in Croatia increased as well, by 26.3 percent compared to 2021, which placed Croatia in third place, behind Cyprus, where turnover in the telecommunications sector increased by 27.1 percent. Compared to 2023, the turnover of the telecommunications sector at the level of 27 EU countries increased by 2.1 percent last year. The largest year-on-year increase in turnover in the telecommunications sector last year was achieved in Denmark. In this European Union country, turnover in the telecommunications sector increased by 19.7 percent compared to 2023. It is followed by Hungary, with a year-on-year increase in turnover in the telecommunications sector of 15.9 percent. In the same period, there was a decline in turnover in the telecommunications sector in Romania, Slovakia, and Greece.

Last year, producer prices in the telecommunications sector were lower compared to 2021. At the EU level, the decrease was 1.8 percent. Producer prices decreased the most in Hungary. In 2024, they were lower by 11.2 percent compared to 2021. In the analyzed period, a number of EU countries experienced an increase in producer prices in the telecommunications sector. Producer prices in this sector increased the most in Hungary (16.3 percent), Lithuania (15.3 percent), and Latvia (14.6 percent). Croatia is also among the countries where producer prices in the telecommunications sector were higher in 2024, that is, by 12 percent compared to the base year of 2021. The decline in producer prices in the telecommunications

Table 2

**Manufacture, turnover, and producer prices in the European Union in 2024, changes compared to 2021 and year-on-year rates of change**

	Manufacture		Turnover		Producer prices	
	2021 = 100	% change (y-o-y)	2021 = 100	% change (y-o-y)	2021 = 100	% change (y-o-y)
<b>EU-27</b>	110.5	2.90	109.3	2.1	98.2	-0.2
<b>Belgium</b>	114.8	4.70	115.4	5.4	100.5	0.7
<b>Bulgaria</b>	121.4	7.60	126	6.7	104	-0.7
<b>Czech Republic</b>	106.2	2.30	111.1	3.6	102.3	1.1
<b>Denmark</b>	n/a	n/a	115.6	19.7	n/a	n/a
<b>Germany</b>	109.6	5.60	111.8	3.4	95.9	-2.9
<b>Estonia</b>	101	-7.30	112.2	1.3	110	6.5
<b>Ireland</b>	n/a	n/a	n/a	n/a	104.4	2.2
<b>Greece</b>	116	-0.30	111.1	-0.4	95.7	-0.4
<b>Spain</b>	99.2	-1.90	104	0.5	104.8	2.3
<b>France</b>	120.5	4.00	106.5	0	88.8	-3.3
<b>Croatia</b>	116	1.00	126.3	7.3	112	6.9
<b>Italy</b>	105.3	-1.90	101.1	0.2	98	4.5
<b>Cyprus</b>	n/a	n/a	127.1	3.6	101.6	3.8
<b>Latvia</b>	103.1	-2.70	118.2	2.3	114.6	5.2
<b>Lithuania</b>	110.7	5.00	122.6	2.3	115.3	1.5
<b>Luxembourg</b>	107.4	-0.30	110.4	2.7	110.3	8.6
<b>Hungary</b>	118.1	5.20	137.7	15.9	116.3	10
<b>Malta</b>	126.9	-0.20	117.9	0.4	92.7	0.4
<b>Austria</b>	110	5.40	101.8	0.2	92.6	-4.8
<b>Poland</b>	112.1	-1.00	121.6	1.5	108.5	2.5
<b>Romania</b>	100.9	-5.10	105.1	-6.3	102.1	-3.1
<b>Slovenia</b>	106.4	0.40	116.6	1.9	108.8	0.7
<b>Slovakia</b>	108.1	1.70	113.3	-2.7	103.3	-5.2
<b>Finland</b>	115.9	5.00	111.6	3.3	95.9	-1.6
<b>Sweden</b>	104.7	7.20	111.6	2.8	104.6	-1.6

Notes: Data for the Netherlands and Portugal are not available. Data on the manufacture and turnover are calendar adjusted, while data on producer prices are original indices.

Source: Eurostat.

“Last year, producer prices in this sector at the EU level were 0.2 percent lower than in 2023.

sector in the European Union was also present on a year-on-year basis. Last year, producer prices in this sector at the EU level were 0.2 percent lower than in 2023. If they are observed separately, the largest decrease in producer prices in the telecommunications sector was recorded in Slovakia, where the year-on-year rate of change was -5.2 percent. Croatia is among the countries where producer prices in the telecommunications sector increased last year, that is, by 6.9 percent compared to 2023.

# Leading companies

— When it comes to total revenue generated in 2024, the ten leading companies in the telecommunications sector [engaged in wired, wireless, and satellite telecommunications] include HT d.d., A1 Hrvatska d.o.o., Telemach Hrvatska d.o.o., Odašiljači i veze d.o.o., HEP-Telekomunikacije d.o.o., Roaming Networks d.o.o., Teleperformance HRV d.o.o., Nokia Solutions and Networks d.o.o., Croatel d.o.o., and Printec Croatia d.o.o. The majority of these companies made the list of the ten leading companies in the sector in previous years as well. The only novelty is the inclusion of the Teleperformance HRV d.o.o. company among the leading companies in terms of total revenue in the telecommunications sector.

**Table 3**  
**Performance indicators of leading companies in the telecommunications sector in 2023 and 2024**

Note: Debt ratio = total liabilities/total assets; current ratio = current assets/current liabilities; gross margin = gross profit/total revenue \* 100; labor productivity = total revenue/number of persons employed.

Sources: Fina Info.Biz and the author's calculation according to Fina data.

	2023	2024	Index 2024/2023
<b>Total revenue</b>	1,800,539,537	1,985,730,177	110.3
<b>Gross profit</b>	229,920,909	270,999,596	117.9
<b>Number of persons employed</b>	6,190	6,551	105.8
<b>Labor productivity</b>	290,878.76	303,118.63	104.2
<b>Gross margin</b>	12.8	13.7	106.9
<b>Current ratio</b>	1.3	1.3	98.8
<b>Debt ratio</b>	0.4	0.4	101.4

In 2024, Teleperformance HRV increased its total revenue by 39.3 percent and, with 9.32 million euros in total revenue, ranked seventh among the leading companies in the sector. HT d.d. remained in first place with a total revenue of 976 million euros, which accounts for almost half of the total revenue generated by the ten leading companies in the telecommunications sector. Last year, the total revenue at the level of the ten leading telecommunications companies increased by 10.3 percent compared to 2023. In addition to the already mentioned company Teleperformance HRV, a significant increase in total revenue year-on-year was recorded by Odašiljači i veze, whose total revenue in 2024 was 37.3 percent higher than the previous year.

The total revenue of Hrvatski Telekom increased by 10.5 percent last year compared to 2023. Last year, an increase in total revenue on a year-on-year basis was also recorded by Croatel (15.6 percent), Telemach Hrvatska (11.4 percent), A1 Hrvatska (8.9 percent), and HEP-Telekomunikacije (3.6 percent). At the same time, the companies Roaming Networks, Nokia Solutions and Networks, and Printec Croatia generated less revenue than in 2023 (Table 4). The largest decrease in revenue last year was experienced by Printec Croatia, a company that, with a total revenue of 7.8 million euros, ranks tenth among the leading companies. The decrease in total revenue in this case amounted to 17.6 percent year-on-year.

**Table 4**  
**Performance indicators of leading companies in the telecommunications sector in 2024**

	Total revenue (in million euros)	Index 2024/2023	Debt ratio	Current ratio	Gross margin (in %)	Labor productivity (in thousand euros)
<b>HT d.d.</b>	976.0	110.5	0.2	2.1	16.8	289.9
<b>A1 Hrvatska d.o.o.</b>	579.1	108.9	0.6	0.7	14.8	354.2
<b>Telemach Hrvatska d.o.o.</b>	310.1	111.4	0.9	0.7	3.7	483.8
<b>Odašiljači i veze d.o.o.</b>	49.0	137.3	0.1	4.5	9.4	142.6
<b>HEP-Telekomunikacije d.o.o.</b>	20.7	103.6	0.2	0.6	3.1	530.2
<b>Roaming Networks d.o.o.</b>	17.6	94.1	1.2	0.6	6.0	302.9
<b>Teleperformance HRV d.o.o.</b>	9.3	139.3	0.8	1.6	6.9	35.8
<b>Nokia Solutions and Networks d.o.o.</b>	8.3	85.6	0.4	2.3	3.0	245.3
<b>Croatel d.o.o.</b>	7.8	115.6	0.1	5.4	29.6	95.2
<b>Printec Croatia d.o.o.</b>	7.8	82.1	0.4	2.3	-2.4	85.5

Note: Debt ratio = total liabilities/total assets; current ratio = current assets/current liabilities; gross margin = gross profit/total revenue \* 100; labor productivity = total revenue/number of persons employed.

Sources: Fina Info.Biz and the author's calculation according to Fina data.

“In 2024, the gross profit generated by the ten leading companies in the sector amounted to 271.0 million euros.

In 2024, the gross profit generated by the ten leading companies in the sector amounted to 271.0 million euros, which is 17.9 percent more compared to 2023. The ten leading companies in the sector, with the exception of the Printec Croatia company, ended last year with a profit. Last year, Printec Croatia operated at a loss of 186,513 euros. Hrvatski Telekom had the highest gross profit last year. It amounted to 164.31 million euros and increased by 7.1 percent compared to the gross profit this company generated in 2023.

The ten leading companies in the telecommunications sector employed 6,551 employees last year, i.e., 5.8 percent more than a year earlier. More than half of the persons employed, that is, 3,367, were employed at Hrvatski Telekom. This company increased the number of persons employed by

## THE TEN LEADING COMPANIES IN THE TELECOMMUNICATIONS SECTOR EMPLOYED 6,551 EMPLOYEES LAST YEAR.

4.2 percent year-on-year last year. The biggest increase in the number of persons employed last year was recorded for the Teleperformance HRV company, i.e., it increased by 27.5 percent compared to the number of persons employed in 2023. In total, this company had 260 persons employed last year. The number of persons employed decreased last year in the companies HEP-Telekomunikacije, Roaming Networks, Nokia Solutions and Networks, and Croatel. The largest decrease in the number of employees last year was recorded for the company Roaming Networks, in which the number of persons employed was almost 30 percent lower than in 2023.

“The increase in total revenue at the level of the ten leading companies in the sector was greater than the increase in the number of persons employed and resulted in an increase in labor productivity of 4.2 percent.

The increase in total revenue at the level of the ten leading companies in the sector was greater than the increase in the number of persons employed and resulted in an increase in labor productivity of 4.2 percent. In 2024, labor productivity was highest in the HEP-Telekomunikacije company and amounted to 530.22 thousand euros. In terms of labor productivity in 2024, it is followed by Telemach Hrvatska (483.8 thousand euros), A1 Hrvatska (354.2 thousand euros), and Roaming Networks (302.9 thousand euros). Hrvatski Telekom, with labor productivity of 289.9 thousand euros, is in fifth place.

Croatel had the highest gross margin last year, amounting to 29.6 percent. It is followed by Hrvatski Telekom with a gross margin of 16.5 percent and A1 Croatia, whose gross margin was 14.8 percent. Taking into account the loss incurred in 2024, the Printec Croatia company had a negative gross margin. Overall, at the level of the ten leading companies in the telecommunications sector, the gross margin increased by 6.9 percent compared to 2023 and amounted to 13.7 percent.

“In 2024, the current ratio of the ten leading companies in the sector was below the recommended value of 2.

In 2024, the current ratio of the ten leading companies in the sector was below the recommended value of 2. More precisely, it was 1.3 and was approximately the same as in 2023. The data from Table 4 relating to current ratio show that most of the ten leading companies in this sector have a good ratio of current assets to current liabilities. Last year, A1 Hrvatska, Telemach Hrvatska, HEP-Telekomunikacije, and Roaming Networks had problems with meeting current liabilities. In 2024, the ability to meet current liabilities was slightly worse in the Teleperformance HRV company. The other analyzed companies had a current ratio value greater than 2.



As for debt, the value of the debt ratio of the ten leading companies in the sector shows that it was low last year. In 2024, the debt ratio of the top ten telecommunications companies was 0.4. A high level of indebtedness was present in the companies Telemach Croatia [0.9], Teleperformance HRV [0.8], and A1 Hrvatska [0.6], as well as in Roaming Networks, whose indebtedness coefficient exceeds the value of 1, i.e., total liabilities exceed the value of total assets.

# Conclusion and expectations

Data for last year indicate that there are no changes in trends in the use of telecommunications services. Telephone services in the fixed network are being used less and less, while the use of telephone services in the mobile network and internet services is increasing, as in previous years. Internet services are the most important source of revenue for telecommunications service providers. It is expected that revenue from this type of service will continue to increase, while the importance of telephone services in the fixed network will continue to decline.

It should also be noted that the number of connections via the 5G network is increasing. In Croatia, 5G non-standalone networks are currently being used, while the implementation of 5G standalone networks is still in its early stages [Tomić, 2025]. A1 Hrvatska announced the gradual shutdown of its 3G network this year [A1 Hrvatska, 2024]. Hrvatski Telekom completely shut down its 3G network as of January 30<sup>th</sup> of this year [Hrvatski Telekom, 2025a]. Two leading companies in Croatia are therefore focusing their resources on developing a 5G network and modern infrastructure to provide services to their users. Telemach still has no plans to shut down the 3G network in Croatia [Čizmić, 2024].

Support for the development of broadband internet access infrastructure is also provided through investments co-financed with state aid. This year, contracts were signed for four broadband infrastructure development projects that will be implemented by Hrvatski Telekom in partnership with the cities of Pula, Vinkovci, and Opuzen, and the municipality of Zmijavci [Ministry of the Sea, Transport and Infrastructure, 2025]. The value of the projects is 21.3 million euros, and they were co-financed as part of the National Recovery and Resilience Plan. Their goal is to enable broadband access of at least 100 Mbit/s to households, as well as business and public users, through the construction of a very high-capacity access network through investment by operators with state aid.

## INTERNET SERVICES ARE THE MOST IMPORTANT SOURCE OF REVENUE FOR TELECOMMUNICATIONS SERVICE PROVIDERS.

The telecommunications sector in Croatia is dominated by Hrvatski Telekom, which has the largest share in the market of telephone services in both fixed and mobile networks, as well as the internet services market. Its position in the market is also visible in the business results achieved last year. Maintaining the position of market leader in the high-tech sector with a high level of innovation requires significant investments, primarily in new technologies, of which this company is clearly aware. Last year, Hrvatski Telekom invested 242.9 million euros in digitalization and infrastructure construction in Croatia, which is almost 10 percent more than in 2023 [Hrvatski Telekom, 2025b].

“HAKOM announced that, in the first quarter of this year, total revenue from services on the electronic communications market increased by 7.1 percent compared to the same period last year.

This year, just like last year, all three leading telecommunications service providers in Croatia have increased the prices of their services for customers in order to adjust to inflation. All three companies are clearly using the opportunity they have been given to more easily cope with the challenges of price increases in the economy. Last year, the telecommunications sector increased the number of persons employed as well as average wages. Business data from the leading companies in the sector also show that they are coping well with market challenges and the demands placed on them by technological advances. According to the first data for this year, a continuation of positive trends can be expected. HAKOM announced that, in the first quarter of this year, total revenue from services on the electronic communications market increased by 7.1 percent compared to the same period last year.

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