REPUBLIC OF SERBIA

RATEL

REGULATORY AGENCY FOR ELECTRONIC COMMUNICATIONS AND POSTAL SERVICES

AN OVERVIEW OF THE ELECTRONIC COMMUNICATIONS MARKET IN THE REPUBLIC OF SERBIA

The First Quarter of 2020

The Overview presents the data for the first quarter of 2020 along with comparative data for the three previous quarters.

The presented data reflect the overall market status for each given quarter, including the actual quarterly data for the leading electronic communications operators in the Republic of Serbia, whereas the data for the rest of the market were estimated based on the data for 2019 collected in the annual questionnaires. Therefore, the total quarterly report may show discrepancies with respect to the data collected in the regular annual questionnaires. The Agency shall not be held responsible for the correctness of the data submitted by the operators in the quarterly and annual questionnaires.

Quarterly electronic communications market indicators referring to fixed telephony include the data on the operators that make up over 98% of the market, in terms of the number of subscribers. The data on the market situation include CDMA subscribers and the effectuated traffic.

Quarterly electronic communications market indicators referring to mobile telephony include the data on three mobile operators and, as of Q1 2019, the Agency also collects data on virtual mobile operators.

Quarterly electronic communications market indicators referring to Internet services include the data for the leading operators that make up approximately 90% of the market, in terms of the number of subscribers, whereas the data for the remaining 10% of the market were estimated based on the data for 2019 collected in the annual questionnaires.

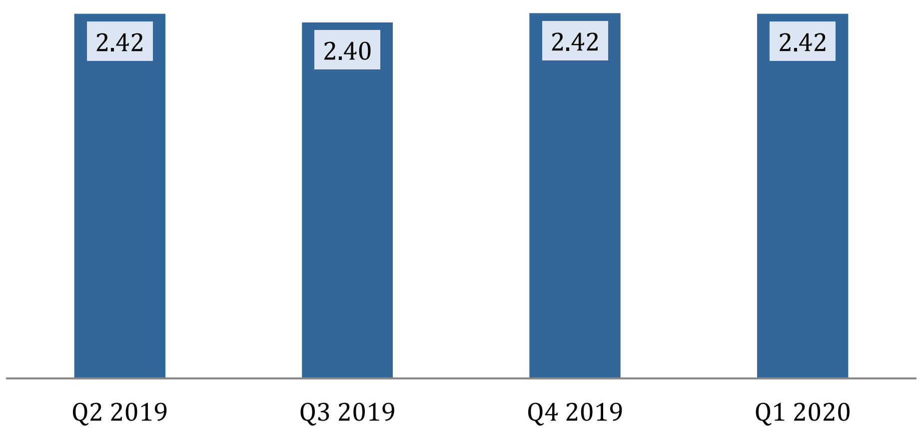
Quarterly electronic communications market indicators referring to media content distribution include the data for the leading operators that make up approximately 91% of the market, in terms of the number of subscribers, whereas the data for the remaining 9% of the market were estimated based on the data for 2019 collected in the annual questionnaires.

Quarterly electronic communications market indicators referring to bundled services include the data for the leading operators that make up approximately 95% of the market, whereas the data for the remaining 5% of the market were estimated based on the data for 2019 collected in the annual questionnaires.

Public Fixed Telecommunications Networks and Services

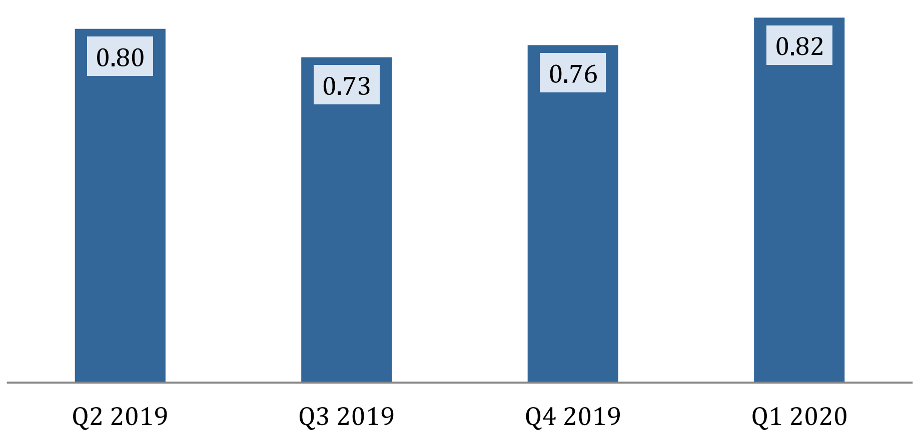
Both the number of fixed telephony subscribers and the generated traffic have remained unchanged in Q1 2020, compared to the previous quarter. Approximately 2.42 million fixed telephony subscribers generated approximately 820 million minutes of traffic in the last observed quarter, which means that a fixed telephony subscriber on average spent 3.7 minutes a day on calls.

Number of fixed line subscribers (in million)*



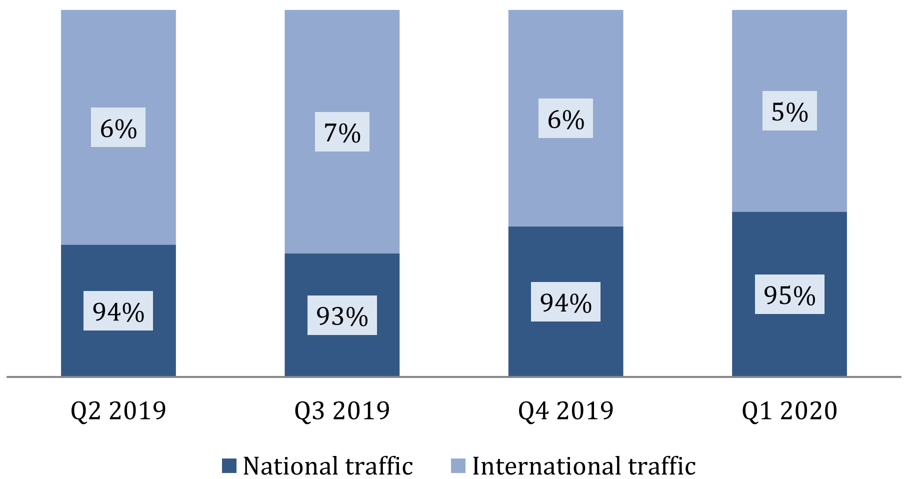
**Q4 2019 data have been harmonized with the Annual Reports data for 2019.*

Total fixed telephony traffic (in billion minutes)



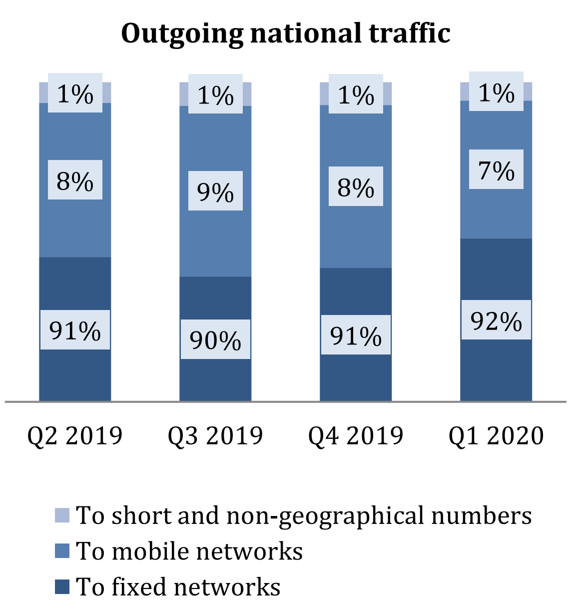
The subscriber structure has not changed over the observed quarters: 88% of the fixed telephony subscribers in Q1 2020 remain to be natural persons, i.e. private users. In all observed quarters, the largest share of the fixed telephony traffic is accounted for by the national traffic, with 95% in Q1 2020.

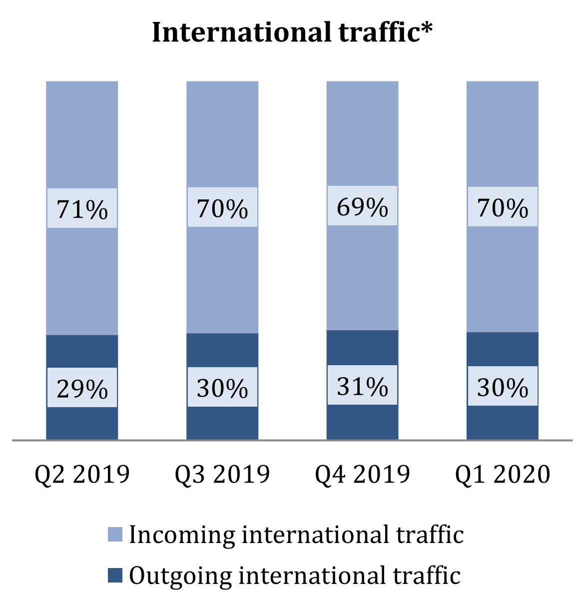
Fixed telephony traffic structure



The outgoing calls from fixed network are mostly directed towards other fixed networks, while the international traffic is dominated by incoming calls.

Structure of national and international traffic in fixed telephony

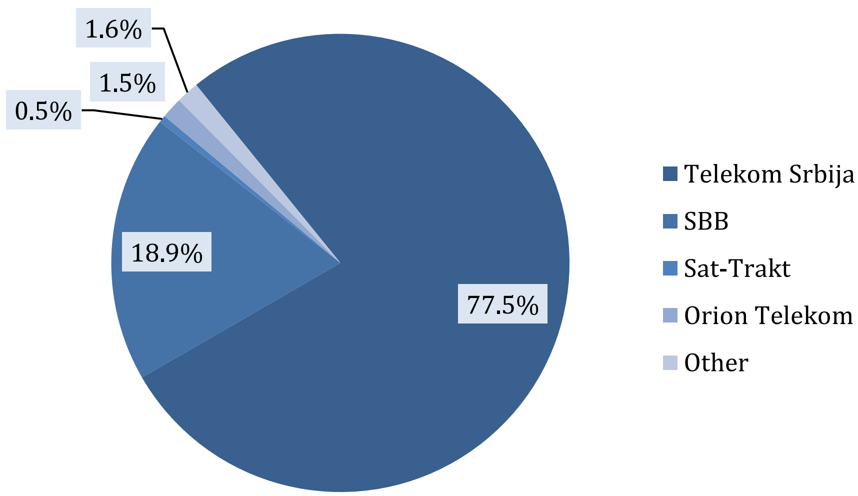




**Data regarding three previous quarters of 2019 have been corrected in accordance with the data from 2019 Annual Reports.*

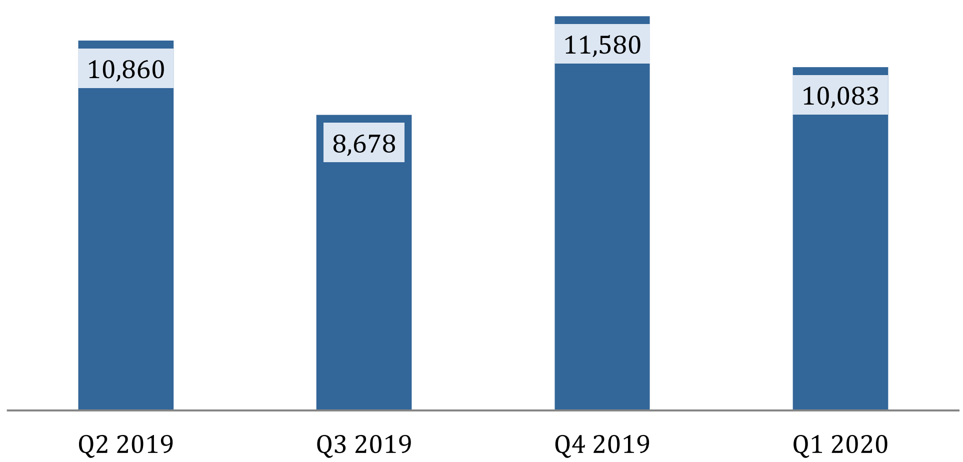
Below is shown the leading operators' market share according to the number of subscribers in Q1 2020.

Operators' market share according to number of subscribers in Q1 2020



The number of portings in the first quarter of 2020 was approximately 10 thousand (around 3.3 thousand a month), showing a decrease compared to the previous quarter.

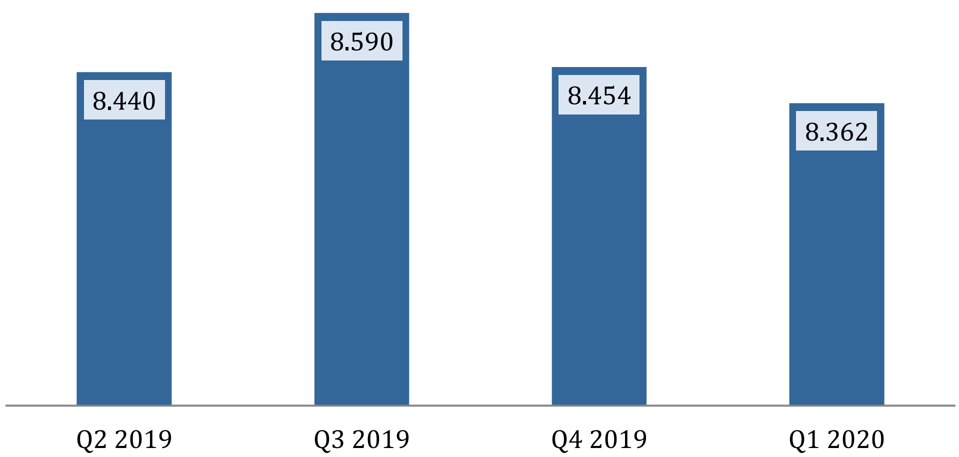
Fixed telephony number portings per quarter



Public Mobile Telecommunications Networks and Services

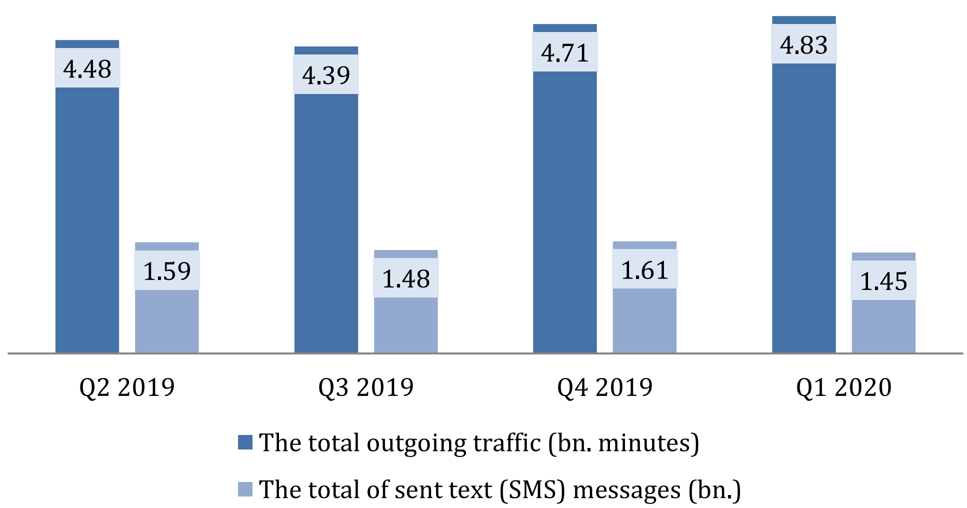
In Q1 2020, there were approximately 8.4 million active mobile telephony subscribers that generated approximately 4.8 billion minutes of national and international voice traffic and sent around 1.5 billion SMS messages. On average, in Q1 2020, a mobile user spent 6.3 minutes a day on calls and sent 1.9 text messages. On the mobile networks market, a slight decrease in the number of active mobile telephony subscribers has been observed in Q1 2020, by approximately 1.1 % compared to the previous quarter.

Total number of active mobile telephony subscribers (in million)



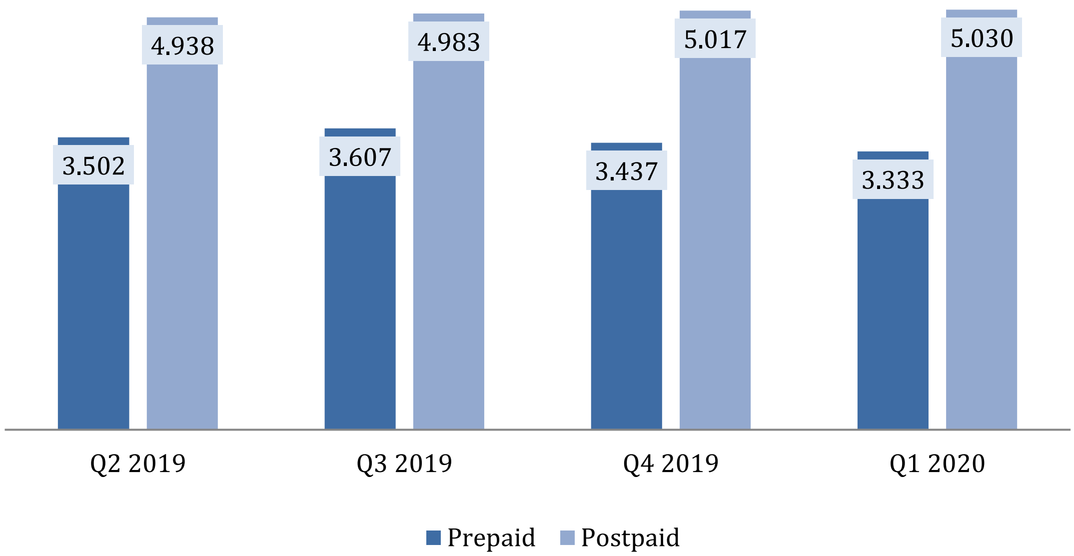
In Q1 2020, the effectuated voice traffic in mobile networks has increased, whereas the SMS traffic dropped compared to Q4 2019.

Generated voice and SMS mobile telephony traffic



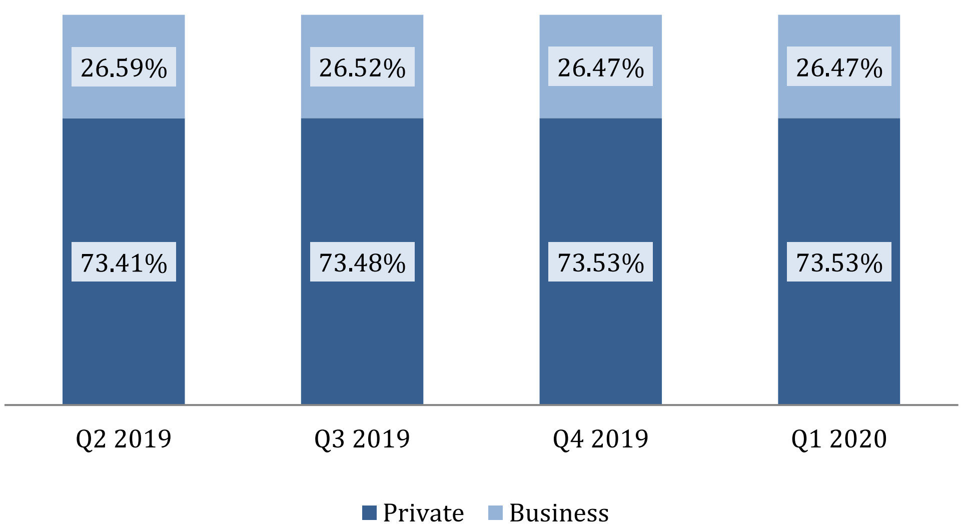
In Q1 2020, the number of postpaid subscribers has slightly increased, whereas the number of prepaid users has been somewhat lower compared to the previous qaurter.

Number of prepaid and postpaid subscribers (in million)



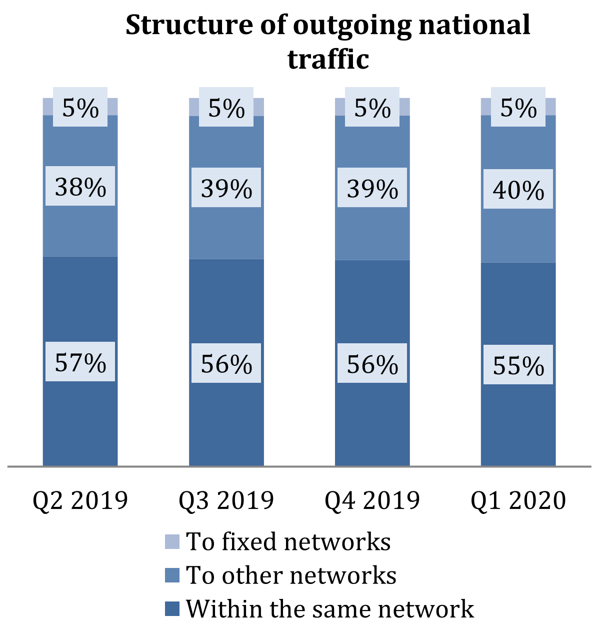
The majority of postpaid subscribers are natural persons, accounting for around 74%, much the same as in other observed quarters.

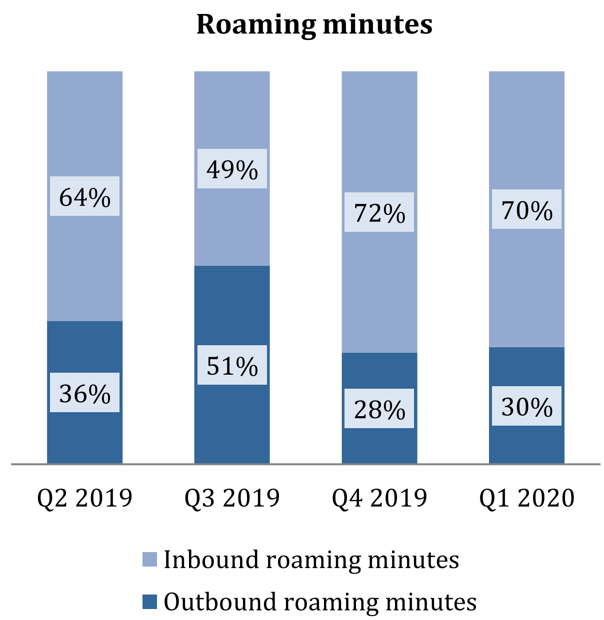
Postpaid subscriber structure



Most of the outgoing traffic in Q1 2020 has been generated within the same mobile network (55%). As for the roaming, the subscribers of foreign networks generated more traffic than the subscribers of national networks abroad.

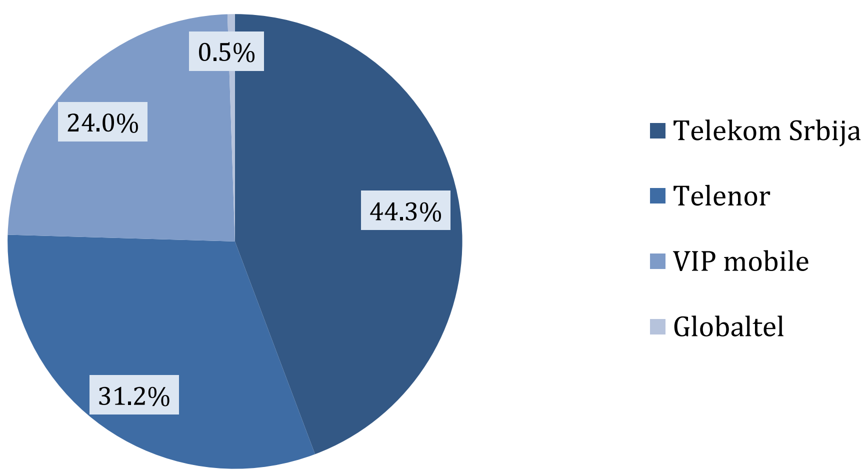
Structure of mobile networks outgoing traffic





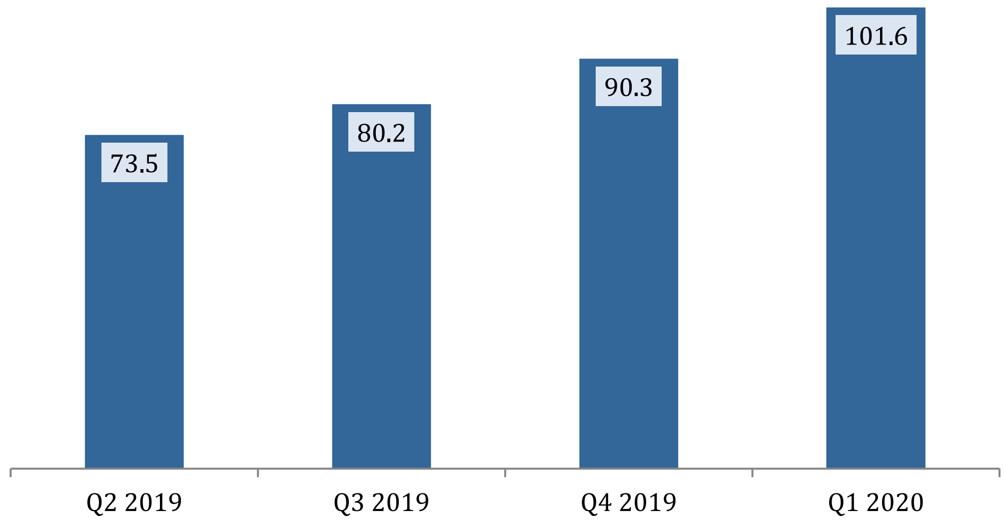
There haven't been any significant changes in market shares in terms of the number of users, compared with the previous quarter.

Market share in terms of number of users in Q1 2020



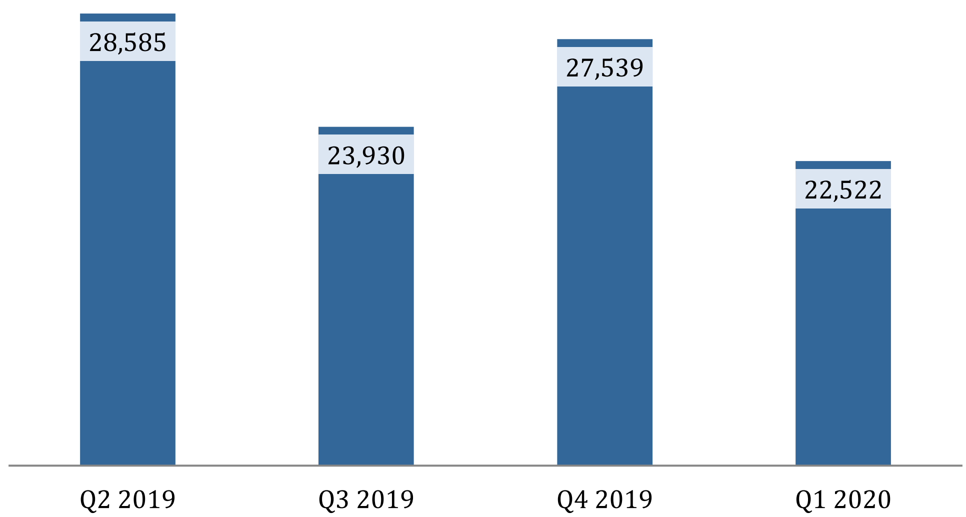
Data transmission over mobile network has shown growth in the analyzed period, amounting to 101.6 million GB in Q1 2020, which means that a mobile broadband subscriber used on average 183 MB daily, or almost 5.6 GB a month.

Mobile Internet traffic (in million GB)



The number of mobile telephony number portings was approximately 22.5 thousand in the first quarter of 2020, or approximately 7.5 thousand per month, which is a decrease compared to the previous quarter.

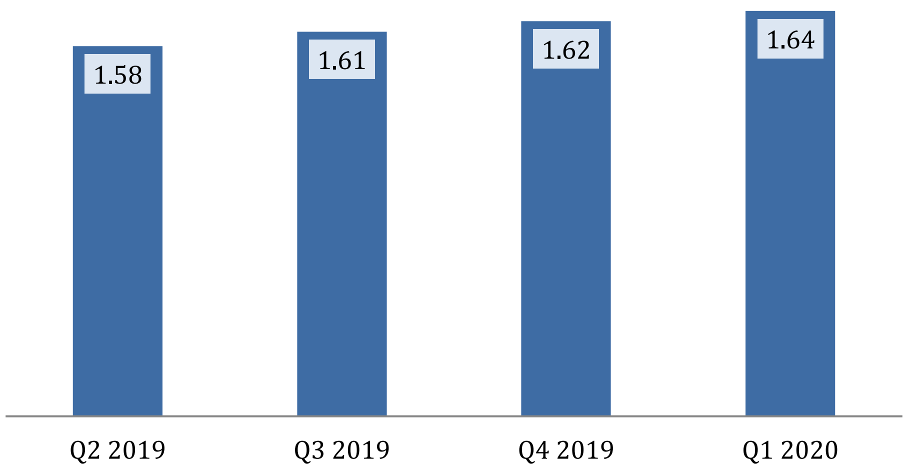
Mobile telephony number portings per quarter



Broadband Internet Access

Compared to the previous quarter, the number of fixed broadband Internet access users in Q1 2020 has slightly increased, amounting to approximately 1.64 million subscribers.

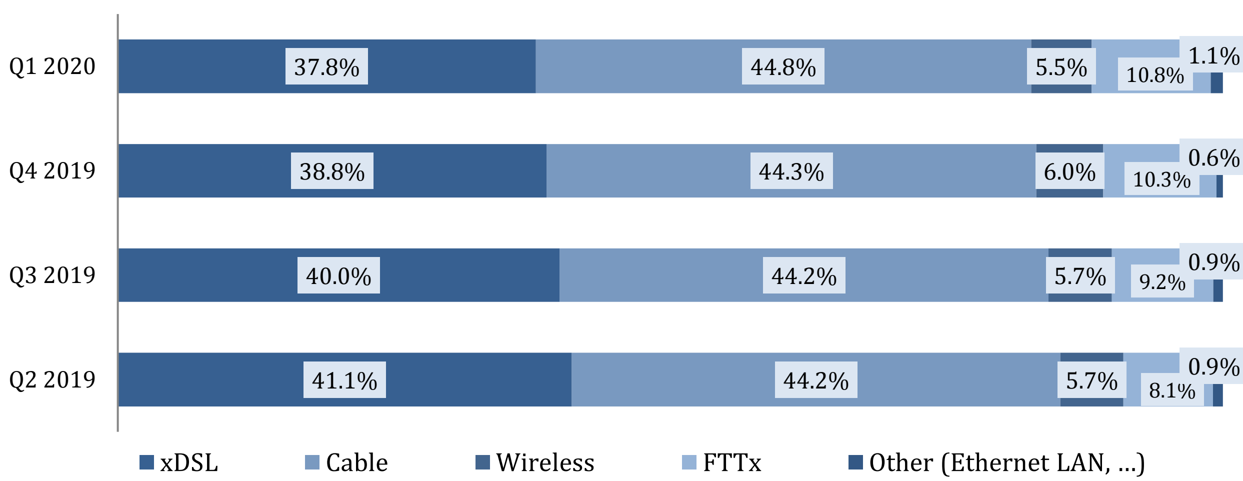
Number of fixed broadband Internet subscribers (in million)*



**Q4 2019 data have been harmonized with the Annual Reports data for 2019.*

The majority of fixed broadband Internet subscribers have xDSL or cable access. The number of xDSL subscribers has been marked by a slight drop and the share of cable access subscribers has slightly increased in the analyzed period.

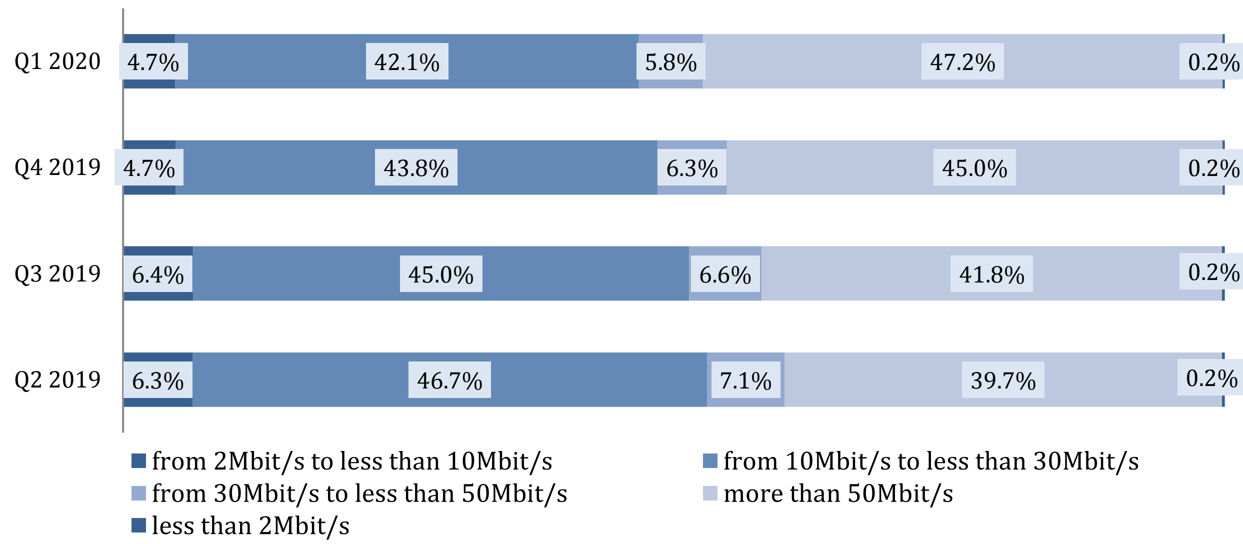
Number of subscribers according to type of access *



**Q4 2019 data have been harmonized with the Annual Reports data for 2019.*

In Q1 2020, the majority of subscribers used Internet access rate over 50 Mbit/s (around 47%) and between 10 Mbit/s to less than 30 Mbit/s (around 42%).

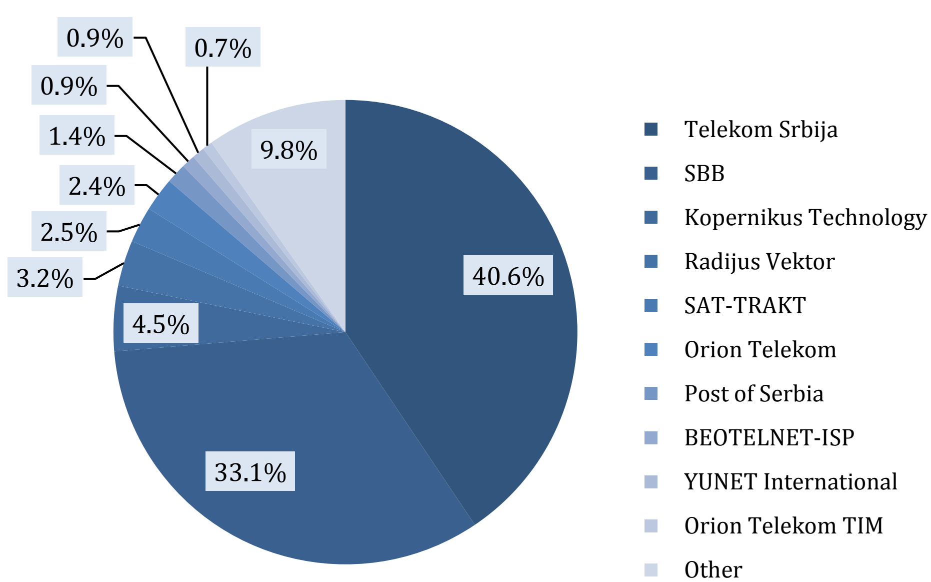
Number of fixed broadband Internet subscribers according to access rate



**Q4 2019 data have been harmonized with the Annual Reports data for 2019.*

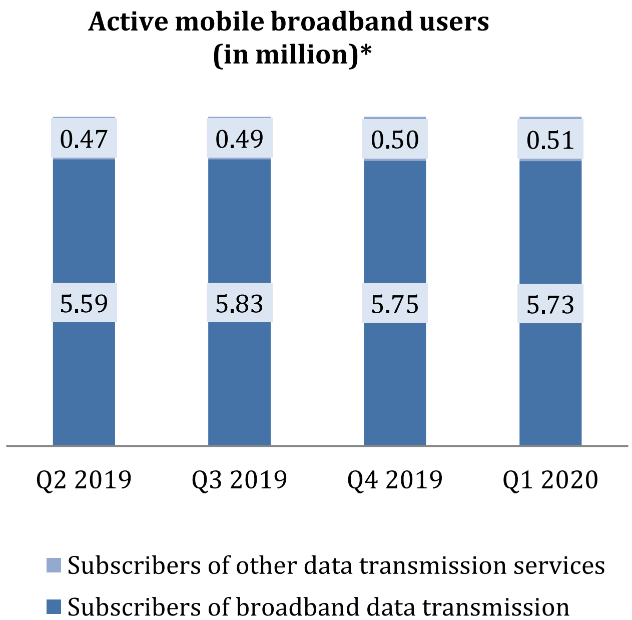
In Q1 2020, there haven't been any significant changes in the leading operators' market shares, in terms of number of subscribers, compared with the previously observed quarters.

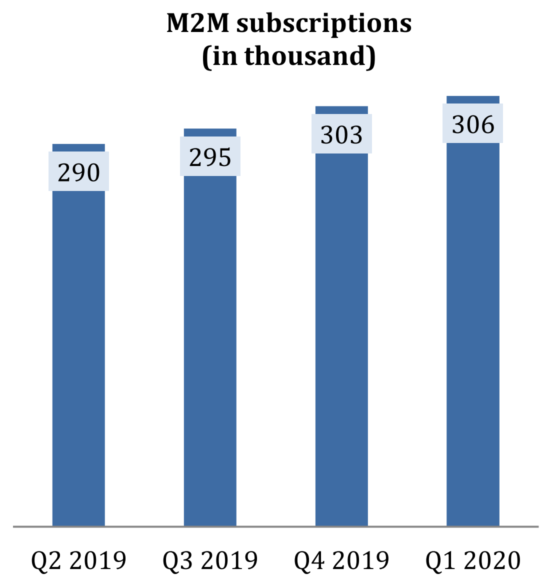
Market share in terms of number of fixed broadband subscribers in Q1 2020



The number of active mobile broadband subscribers in Q1 2020 has not significantly changed compared to the previous quarter, amounting to 6.24 million. The number of M2M subscriptions is on the rise in the first quarter as well, reaching approximately 306 thousand.

Number of active mobile broadband subscribers and M2M subscribers



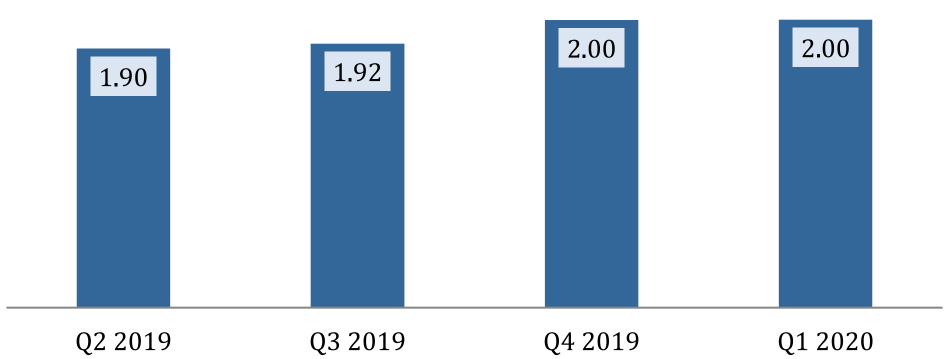


**Active mobile broadband subscribers include subscribers of data transmission services contracted together with voice services, or as an additional package to the voice tariff plan, whereas subscribers of other data transmission services represent mobile broadband transfer users with single service agreement, separate from voice service (data card subscriptions, USB modem/dongle subscriptions, tablet subscriptions and similar).*

Media Content Distribution

Compared to the previous period, the number of media content distribution service subscribers has remained unchanged, amounting to approximately 2 million in Q1 2020.

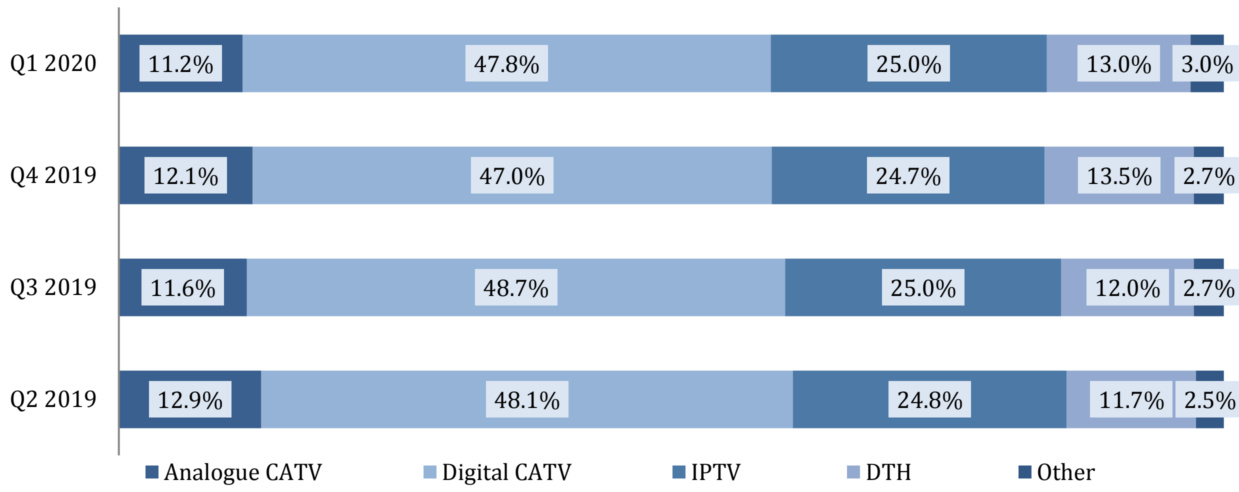
Number of media content distribution service subscribers (in million)*



**Q4 2019 data have been harmonized with the Annual Reports data for 2019.*

In Q1 2020, the majority of subscribers used CATV distribution, either analogue or digital (around 59%). The number of IPTV subscribers is slightly rising, whereas the share of DTH subscriptions has slightly dropped, while wireless network and Internet media content distribution were the least used.

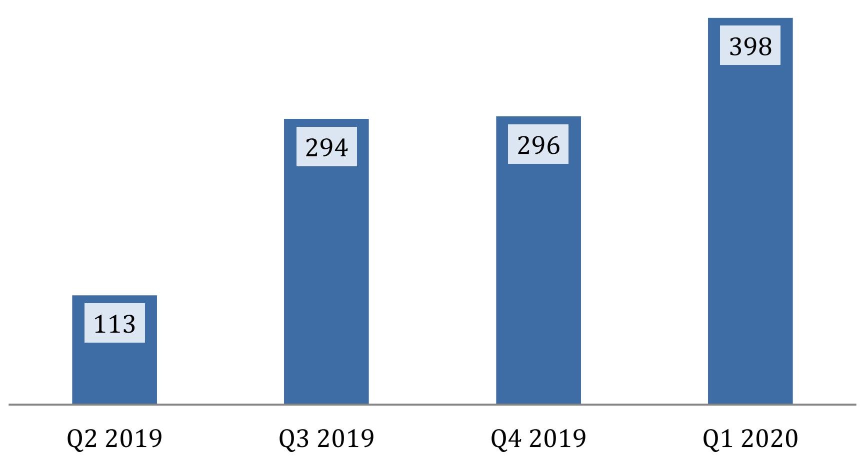
Media content distribution subscribers by type of distribution *



**Q4 2019 data have been harmonized with the Annual Reports data for 2019.*

The number of met requests for additional services, such as video on demand (VoD), content recording, TV on mobile devices, playback etc, has increased in Q1 2020 compared to Q4 2019, amounting to approximately 398 million requests, or some 86 requests a month per user. The number of met VoD requests in Q1 2020 was around 15.2 million.

Number of met requests for additional services (in million)*

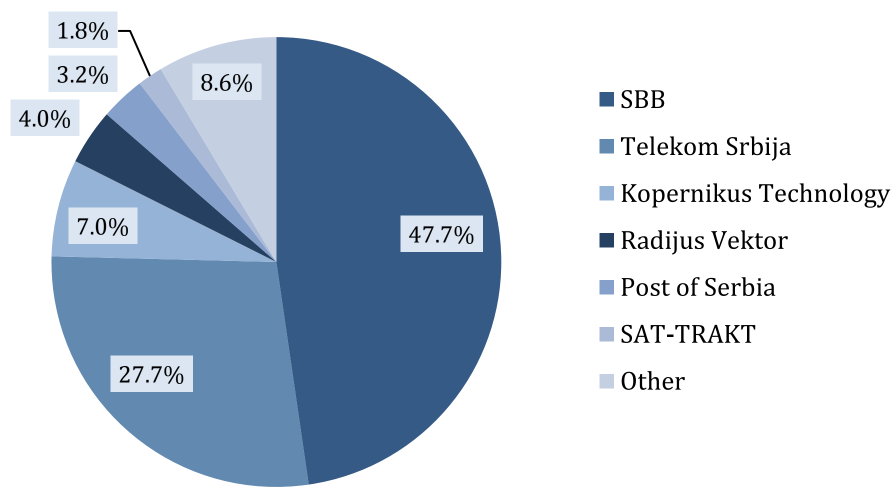


**Data regarding three previous quarters of 2019 have been corrected in accordance with the data from 2019 Annual Reports.*

In Q1 2020, around 32% of media content distribution subscribers with the possibility to have additional channels, subscribed to such programmes.

As for the leading operators' market shares, in terms of the number of subscribers, there haven't been any significant changes in Q1 2020 compared to the previous quarter.

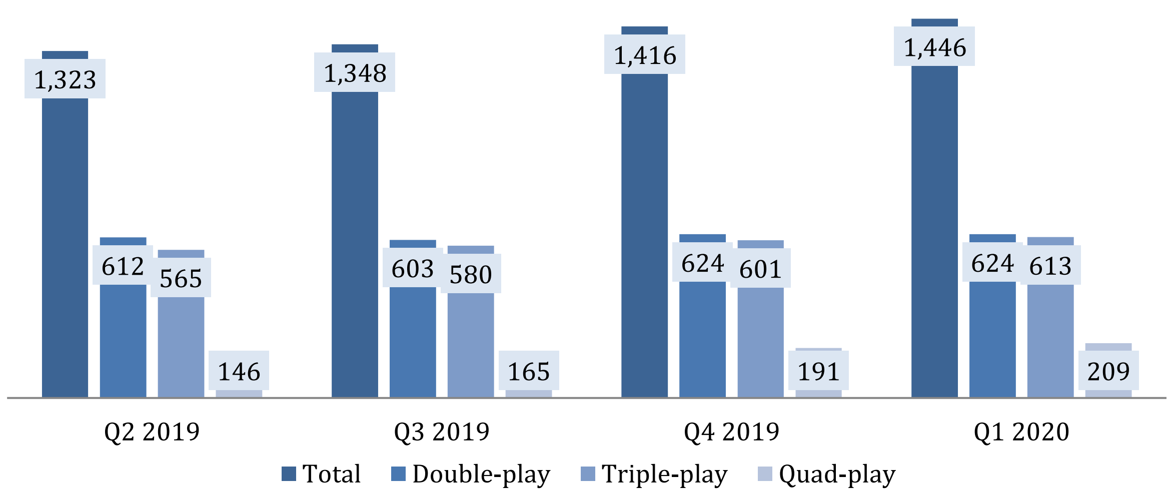
Operators' market share in terms of number of subscribers in Q1 2020



Bundled Services

The number of bundled service subscribers in Q1 2020 has increased compared to the previous quarter, amounting to approximately 1.45 million. Packages offering two services (double-play) were most used, whereas least used were packages with four services (quad-play).

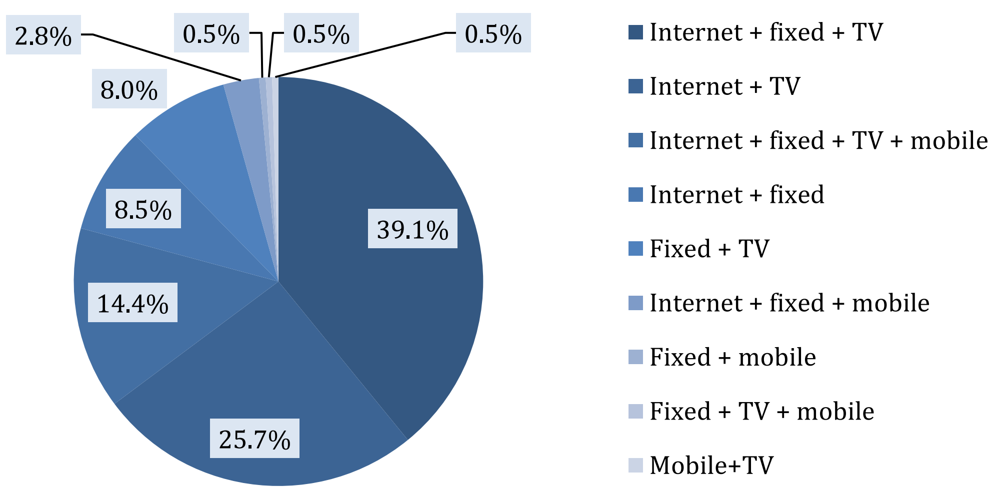
Number of bundled service users (in thousand)*



**Q4 2019 data have been harmonized with the Annual Reports data for 2019.*

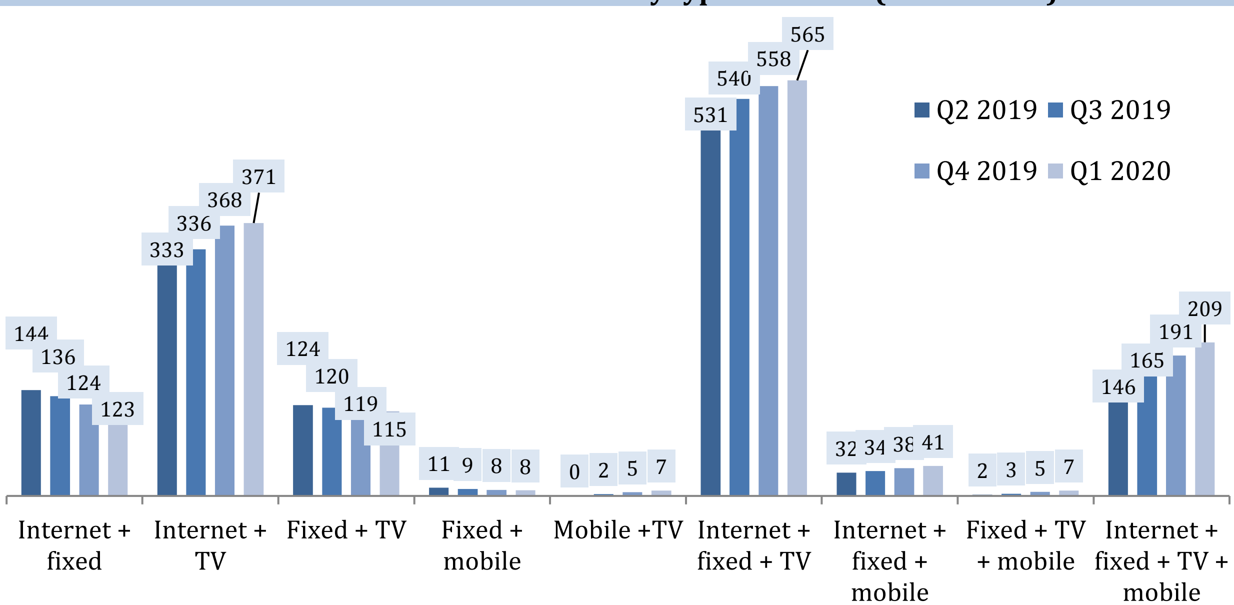
Of all bundled services offered by operators in Q1 2020, the most popular was the package with broadband Internet access, fixed telephony and TV, followed by a double-play offering broadband Internet access and TV, as well as the only available quad-play package including broadband Internet access, fixed telephony, TV and mobile telephony. These packages also have had the highest subscriber growth rate in Q1 2020. A triple-play offering fixed and mobile telephony and TV, as well as a recently introduced package including mobile telephony and TV have had the lowest number of subscribers. The shares of different bundled services in terms of number of subscribers are given below.

Share of bundled services in Q1 2020



Fluctuations in different packages' number of subscribers can be seen below.

Number of bundled service users by type of service (in thousand)*



**Q4 2019 data have been harmonized with the Annual Reports data for 2019.*

Broadband Internet access is mostly purchased as a bundled service, whereas mobile telephony is generally purchased as a stand-alone service.

Share of bundled and stand-alone services purchased in Q1 2020