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# The Swedish Telecommunications Market 2018

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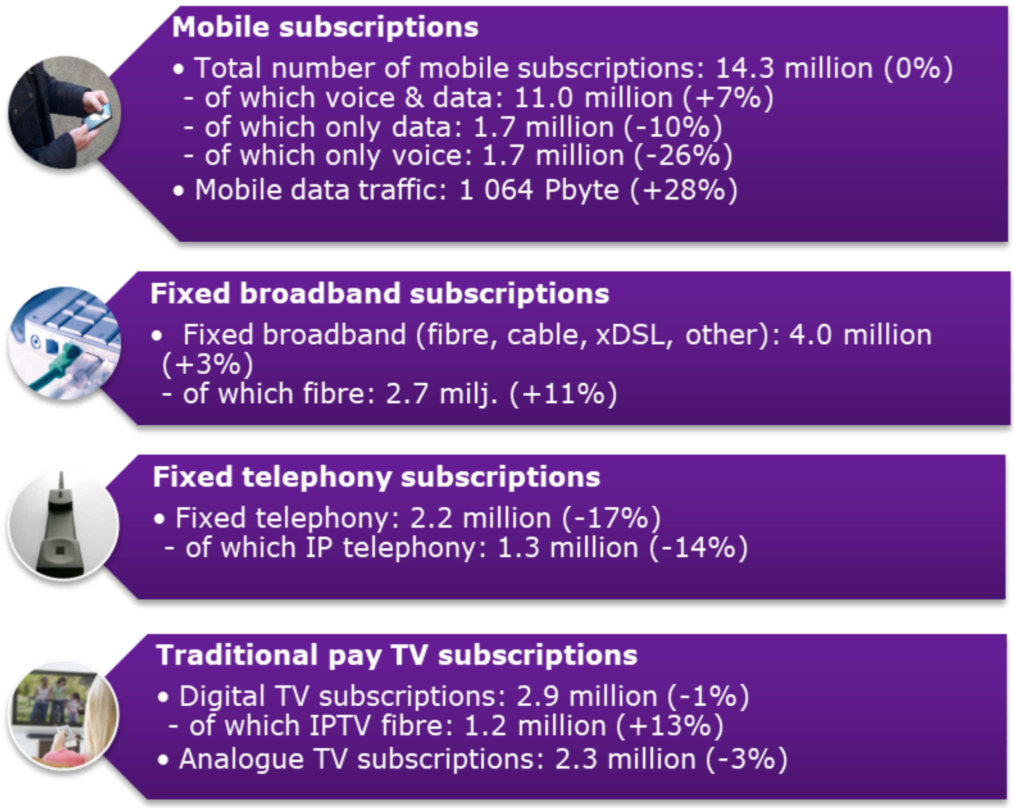
# Contents

# 1 A selection of results

All figures refer to the situation on 31 December 2018 and comparisons are made with the same date the previous year. The questionnaire was sent to 606 organisations, 97 per cent of which responded.

**Figure 1 A selection of results**

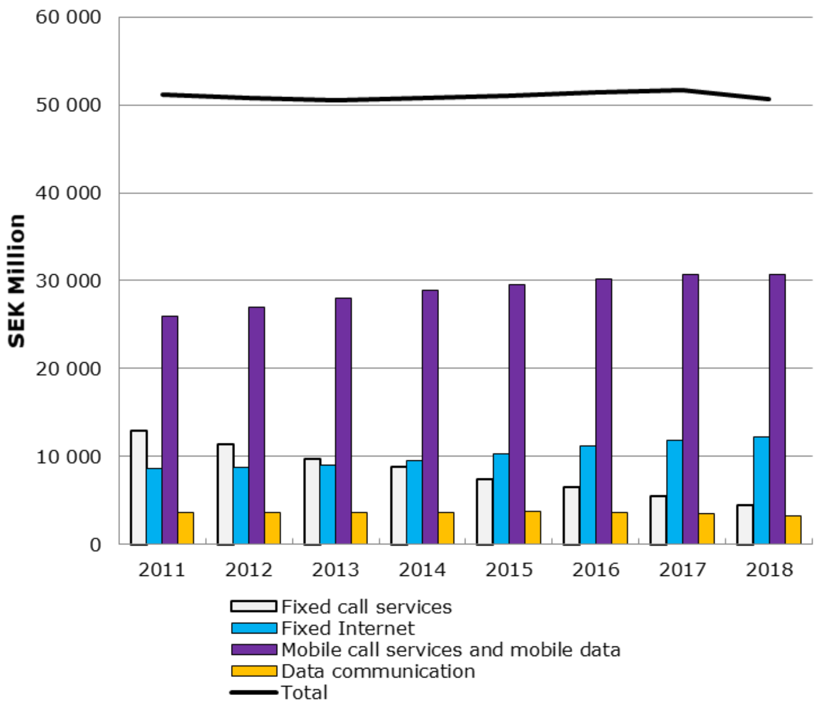


# 2 Income in the market for electronic communication

In 2018, income in the end user market for electronic communication (which in this report refers to mobile voice and data services, fixed internet services, fixed-line telephone services and data communication services) amounted to approximately SEK 50.7 billion, which is 2 per cent lower than the previous year.

The average income[1] generated per household per month in 2018 was SEK 612, which is SEK 8 more than in 2017. The average income per month includes fixed telephone services, SEK 44 (SEK 10 reduction), mobile phone and data services, SEK 387 (same level as the previous year) and internet services (excluding mobile data) of SEK 182 (SEK 4 increase).

**Figure 2 End user income in the market for electronic communication**

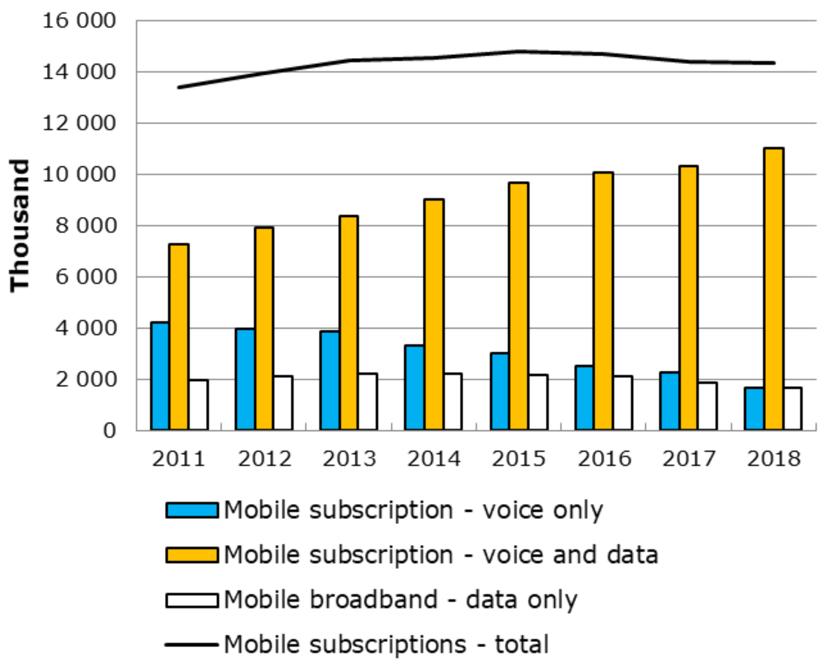



[1] Average income is calculated as income for 2018 divided by the average number of subscriptions per household

# 3 Mobile subscriptions and M2M

There were a total of 14.3 million mobile subscriptions on 31 December 2018, which was at the same level as a year earlier. The number of mobile subscriptions for both voice and data, which is often used on smart phones, was 11 million, an increase of 7 per cent (see Figure 3 below). Mobile subscriptions for voice alone amounted to 1.7 million, which is 10 per cent fewer than the previous year. Mobile subscriptions for voice alone amounted to 1.7 million, a reduction of 26 per cent. 77 per cent of the total number of mobile subscriptions were contract subscriptions, the others were pay-as-you-go (cash cards). The proportion of contract subscriptions has increased steadily; 10 years ago the corresponding proportion was 60 per cent.

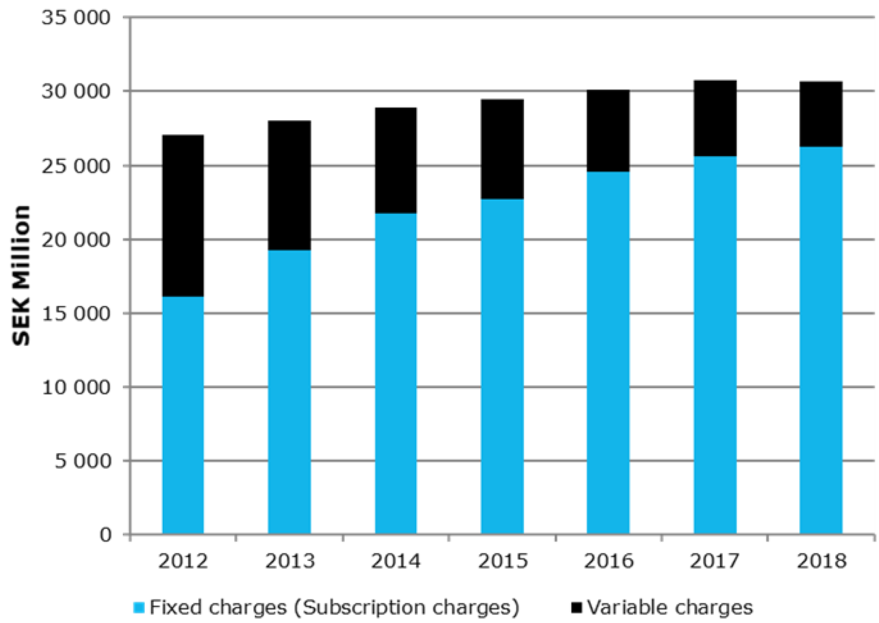
**Figure 3 Number of mobile subscriptions**




## Income from mobile subscriptions at the same level as a year earlier

End user income from mobile subscriptions amounted to approximately SEK 30.7 billion. This is at the same level as the previous year. 86 per cent of the income was fixed charges (subscriptions) and the rest variable charges. Income from fixed charges amounted to SEK 26.2 billion, an increase of 3 per cent. Variable charges fell by 14 per cent to SEK 4.4 billion.

**Figure 4 Income from mobile subscriptions**

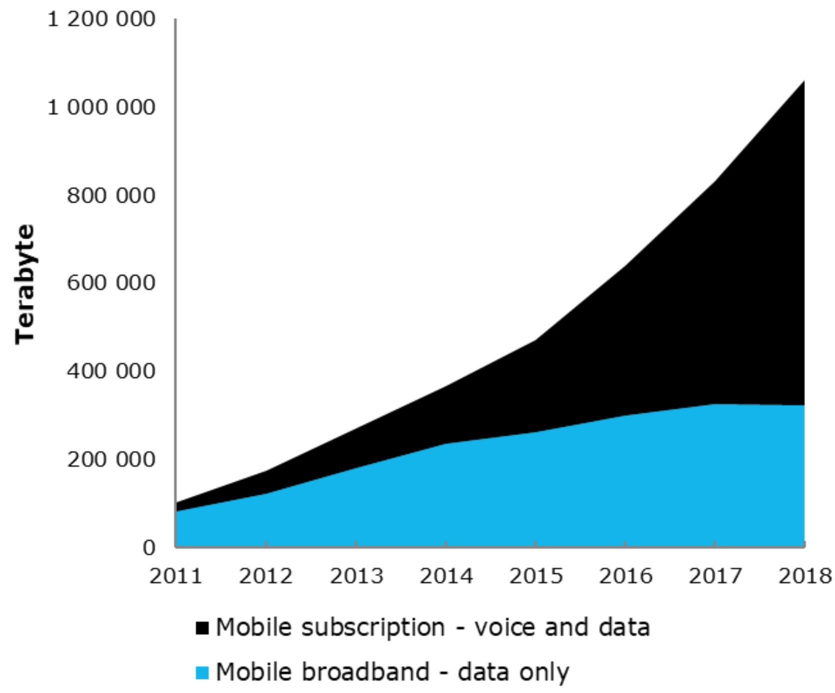



## Data traffic in the mobile networks continued to grow, but at a lower rate of increase

Data traffic in the mobile networks increased to 1,064 Pbytes[2] during 2018 (see Figure 5 below). This was an increase of 28 percent, which is a lower rate of increase than the previous period (30%). Private mobile subscriptions for calls and data drove traffic growth and generated an average of 6.8 Gbytes per subscription per month, which was an increase of 42 per cent. The average amount of traffic for a private data-only mobile subscription was 18.6 Gbytes per month. The number of subscriptions that used data services in 4G networks continued to increase and amounted to 10.9 million, which is 76 per cent of all mobile subscriptions.

[2] Peta = $1000^5$

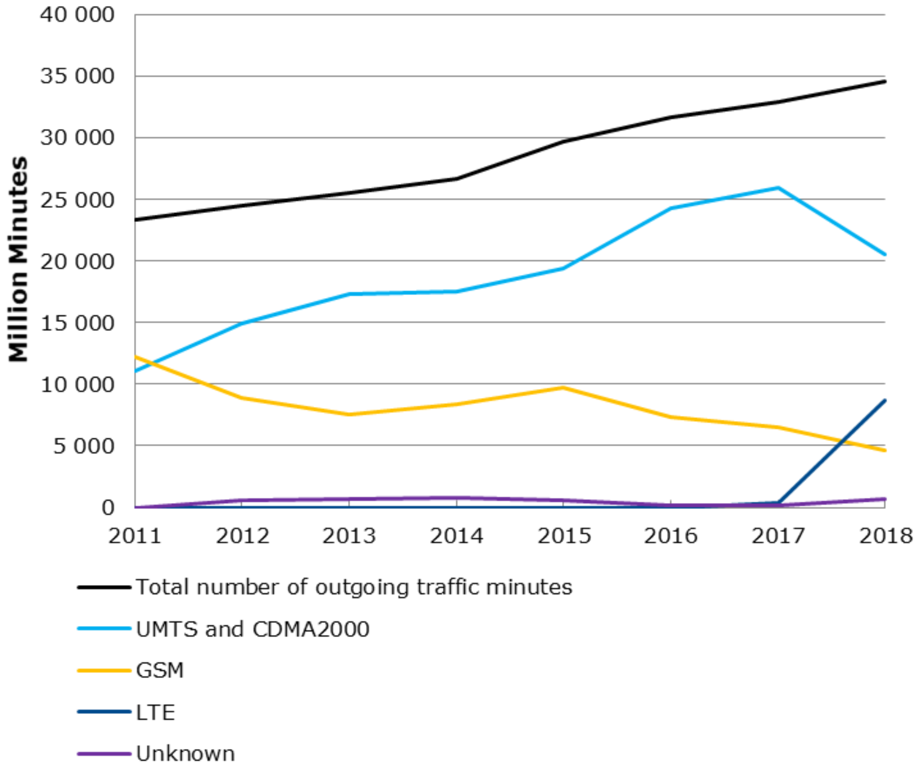
**Figure 5 Data traffic in mobile networks**




## Voice calls over 4G networks (VoLTE) increase

The number of outgoing voice traffic minutes from mobile subscriptions amounted to 34.6 billion in 2018. The number of call minutes via 4G networks (VoLTE) amounted to 8.7 billion, which corresponds to 25 per cent of all mobile call traffic. This can be compared with 1 per cent a year ago. The increase is at the expense of call traffic in 3G networks (UMTS), which is falling (see Figure 6 below).

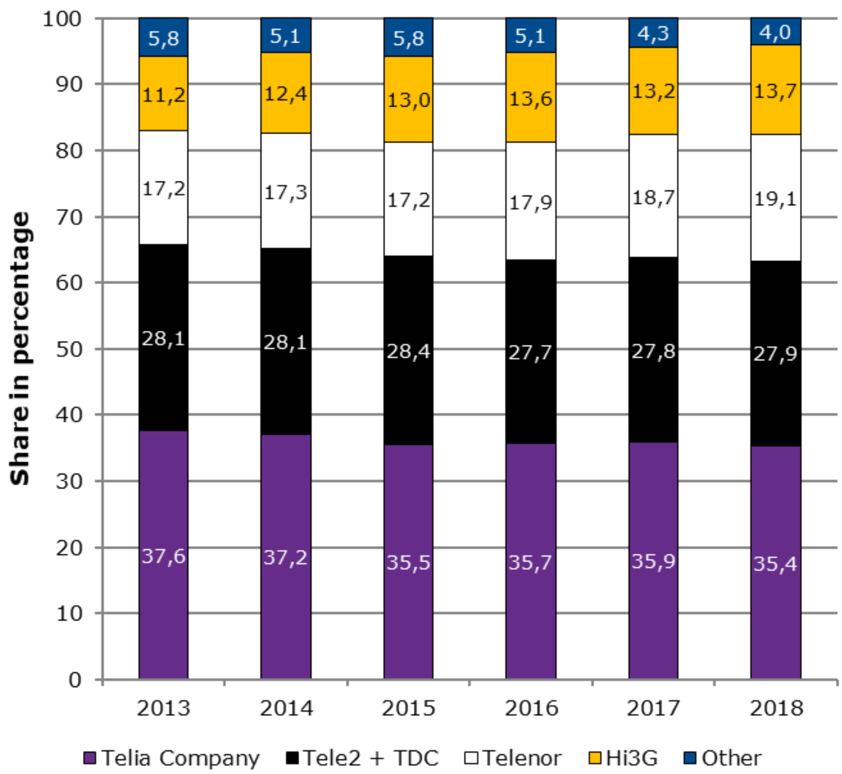
**Figure 6 Outgoing traffic minutes in mobile networks**




The average length of a mobile call was 3.4 minutes and the average number of calls per mobile subscription per month was 67, which was at the same level as the previous year. The number of SMS texts sent decreased by 3 per cent to 8.2 billion. On average 54 SMS texts were sent per subscription per month, compared with 56 the previous year.

Market share for mobile subscriptions includes mobile subscriptions for voice and data, mobile subscriptions for voice alone and mobile broadband for data alone. The four largest companies, Telia Company, Tele2, Telenor and Hi3G (Three), had 96 per cent of all subscriptions between them, which is the same level as the previous year.

**Figure 7 Market share of mobile subscriptions per operator**




## The number of SIM cards for M2M increased by 12 per cent

There were 12.9 million SIM cards for M2M, which is an increase of 12 percent. Services can be global, which means that not all Swedish M2M[3] subscriptions are necessarily used in Sweden. The largest player in M2M in Sweden, Telenor Connexion, has reported that out of their 9.8 million SIM cards, 6.8 million have been used outside Sweden.

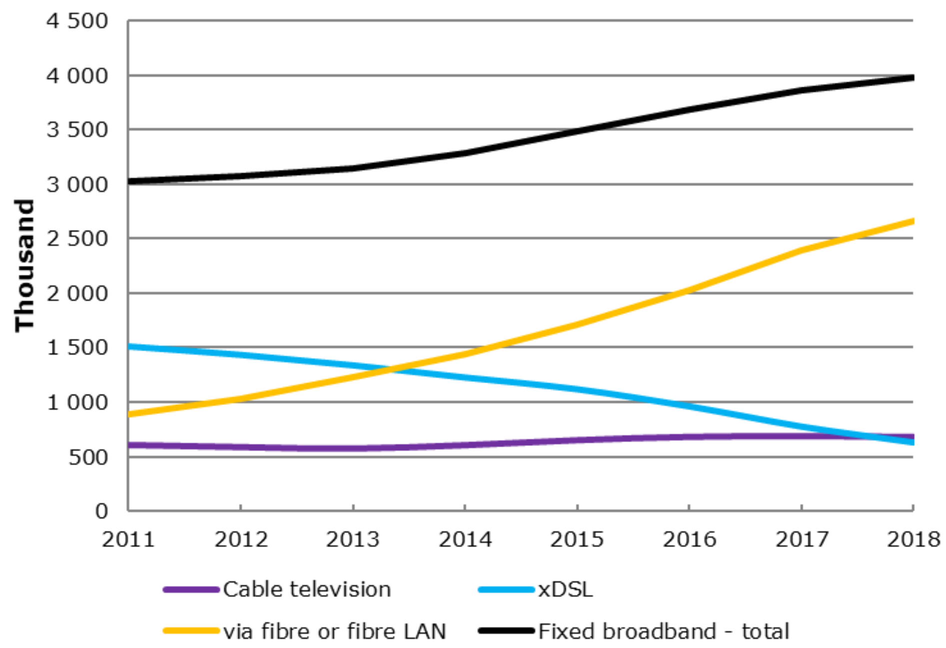
[3] M2M refers to technology for wireless communication between different devices. Here, this refers to the M2M subscriptions that use mobile numbers. M2M solutions are used for, e.g., monitoring, measurement, control, transport and logistics.

# 4 Fixed broadband

## Fibre subscriptions continued to increase

There were 4.0 million subscriptions for fixed broadband, which corresponds to an increase of 3 per cent. The number of subscriptions via fibre was 2.7 million, which is an increase of 11 per cent. Fibre accounted for the greater part of the increase in fixed broadband and amounted to more than two-thirds (67%) of all fixed broadband subscriptions (see Figure 8 below). The number of fixed broadband subscriptions via cable TV networks amounted to 0.7 million (-1%), subscriptions via xDSL 0.6 million (-19%) and other fixed broadband 14,000 (+ 16%).

**Figure 8 Number of subscriptions or fixed broadband**

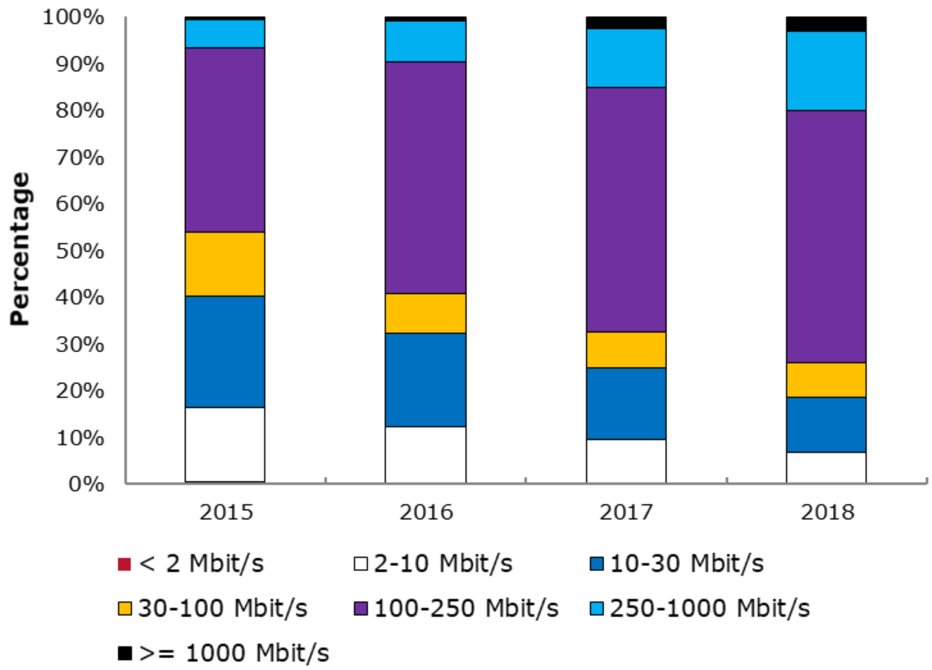



## Subscriptions for 100 Mbps and 1 Gbps download increased

There were 2.9 million subscriptions with download speeds of 100 Mbps or more, which was an increase of 13 per cent. Three-quarters (74%) Of all subscriptions in Sweden have 100 Mbps or more, which was an increase from 67 per cent. Subscriptions of 1 Gbps or more have also increased. There were 28 per cent more than in the previous year and amounted to 123,000 subscriptions.

Fibre subscriptions with a download speed of 100 Mbps or more amounted to 2.4 million (an increase of 17 per cent), while subscriptions via cable TV networks with the same speed amounted to 580,000, which was an increase of 7 per cent.

**Figure 9 Proportion of fixed broadband subscriptions by speed**



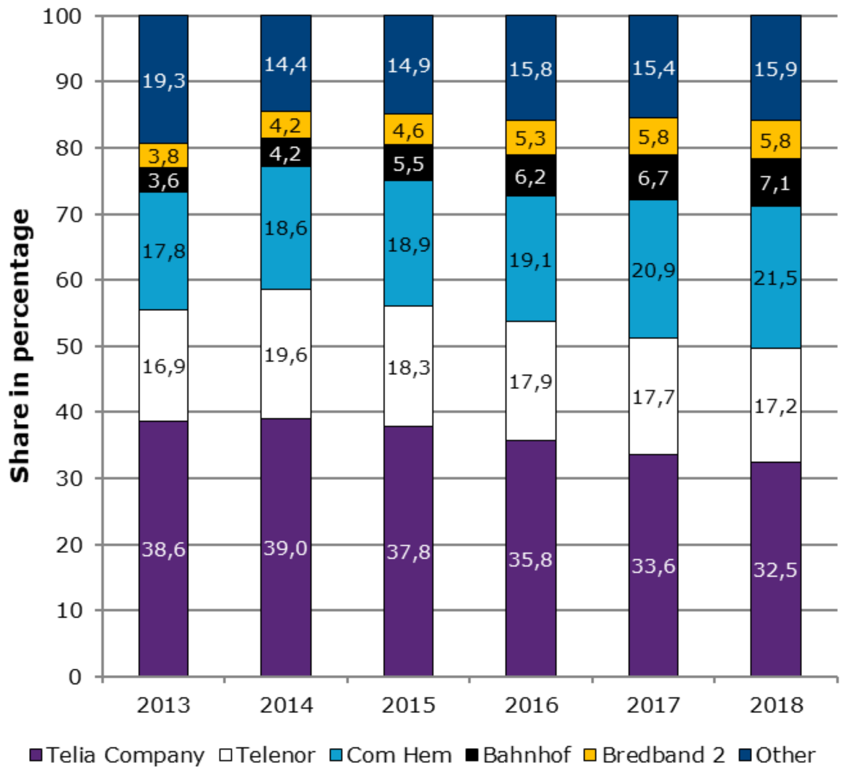

Upload speeds are also increasing for fixed broadband subscriptions. The number of fixed broadband subscriptions with upload speeds of 100 Mbps or more increased by 20 per cent to 1.8 million.

## Collective connections, now one in five of all private broadband subscriptions

Almost 816,000 broadband subscriptions were stated to be collective connections, which is an increase of 13 per cent. Collective connections refers to active, private internet subscriptions with, for example, landlords, housing cooperatives, housing associations or village communities rather than directly with the end customer. 22 per cent of the total number of private broadband subscriptions were via collective connections. The three largest operators, Telia

Company, Telenor and Com Hem, accounted between them for 71 per cent of fixed broadband subscriptions.

**Figure 10 Proportion of fixed broadband subscriptions by operator**

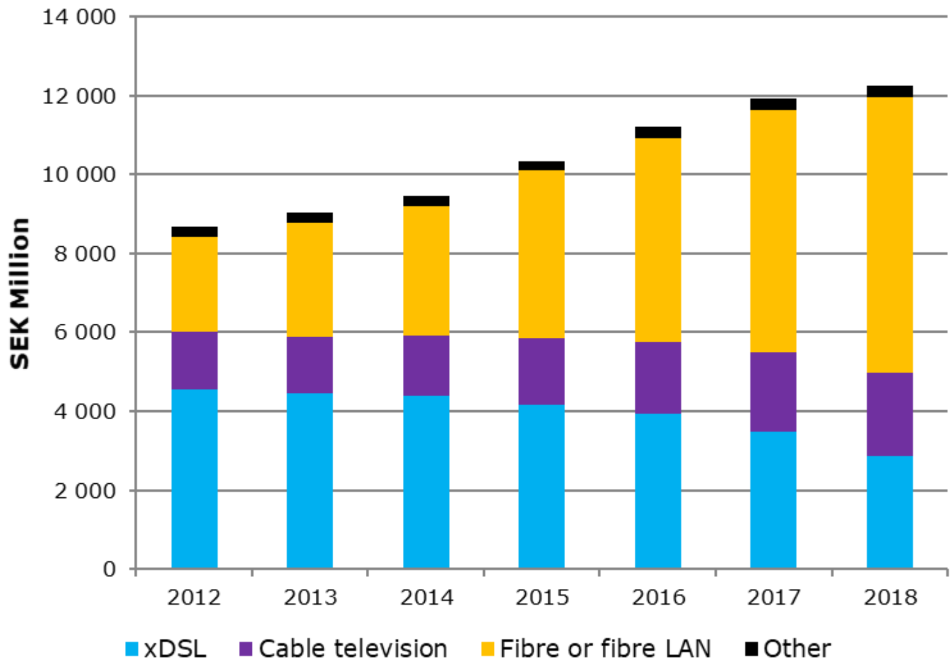



## Income from fixed broadband increased

Income from fixed broadband subscriptions was SEK 12.3 billion in 2018. This is 3 per cent more than the previous year. Income from dial-up connections was negligible. Income from fibre subscriptions[4] increased by 14 per cent to SEK 7.0 billion. Income from cable TV subscriptions increased by 6 per cent to SEK 2,1 billion, while income from xDSL subscriptions fell by 18 per cent to SEK 2.9 billion. Income from other access technologies was SEK 300 million.

[4] PTS has estimated Bahnhof's income from broadband subscriptions via fibre for the years 2015 – 2018 because Bahnhof misunderstood the question.

**Figure 11 Income from fixed broadband**

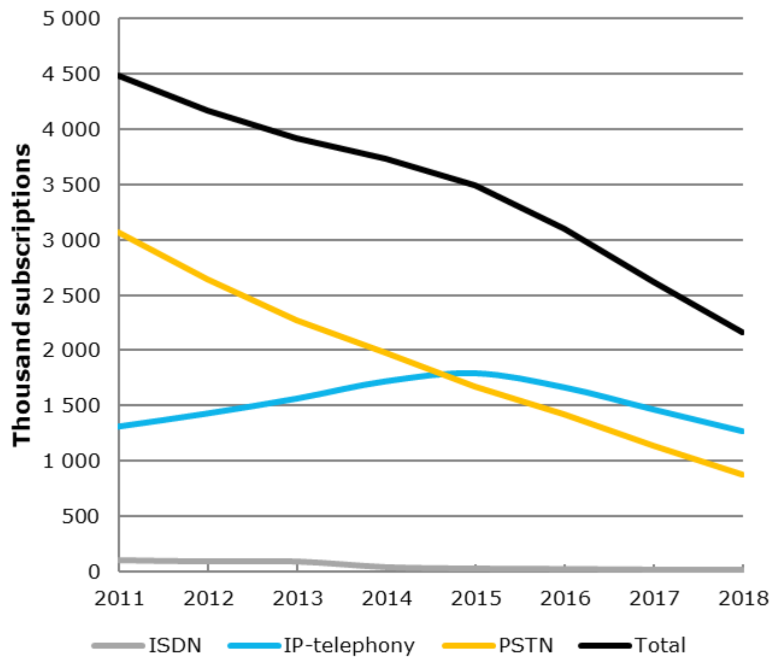


# 5 Subscriptions for fixed line telephony

### Subscriptions for fixed line telephony decreased further

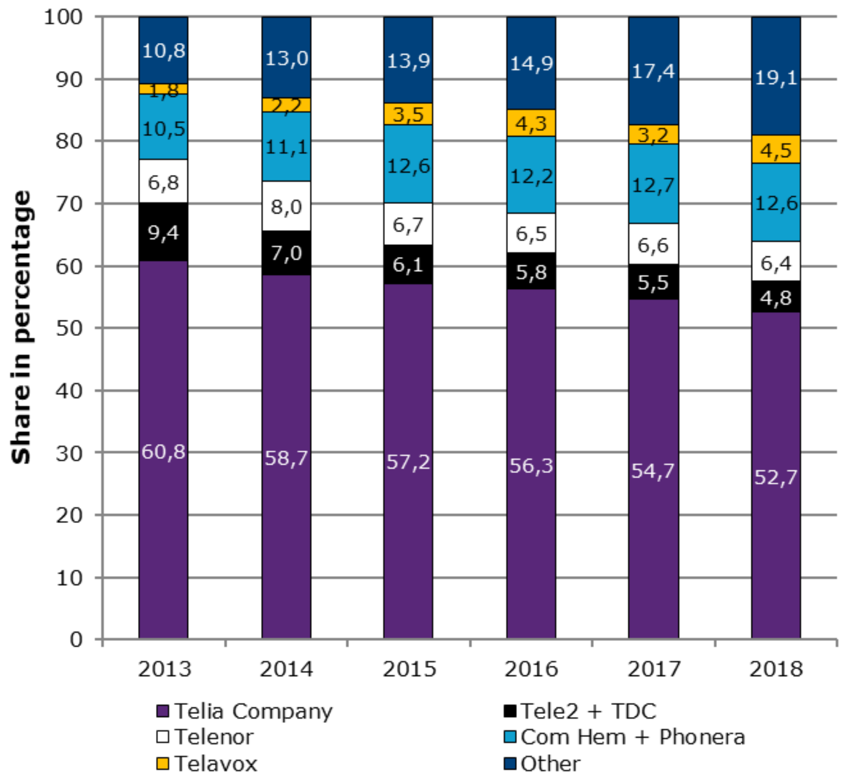
There were 2.2 million subscriptions for fixed line telephony, which was a reduction of 17 per cent. Of these, 1.3 million or 59 per cent were subscriptions to IP telephony (see Figure 12 below). The number of call minutes from fixed line telephony subscriptions fell 14 per cent to 5.7 billion minutes.

**Figure 12 Number of subscriptions for fixed line telephony**




Telia Company had the largest market share in terms of fixed line telephony subscriptions, 52.7 per cent. The second largest was Com Hem with 12.6 per cent, followed by Tele2 with 6.4 per cent.

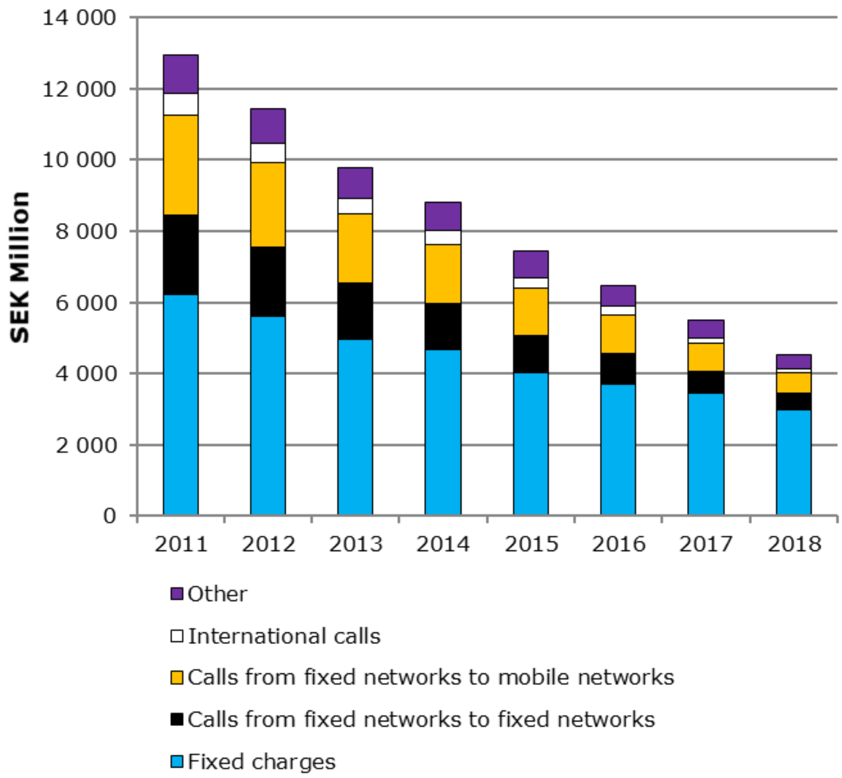
**Figure 13 Proportion of fixed line telephony subscriptions by operator**




## Income from fixed line telephony decreased

Income from fixed line telephone services (excluding income from dial-up internet) fell by 18 per cent to SEK 4.5 billion in 2018.

**Figure 14 Income from fixed line telephone services**



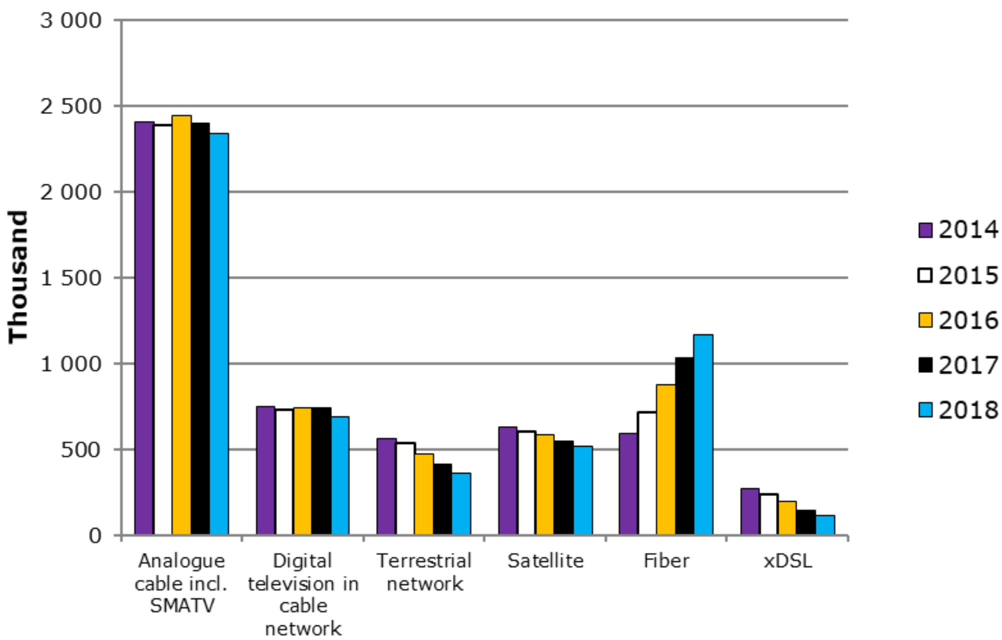

In 2018 fixed charges represented 66 per cent of income from fixed line telephony, which is 3 percentage points more than the previous year. Income from IP telephony amounted to SEK 0.9 billion in 2018, which is a decrease of 15 per cent from the previous year. IP telephony's share of income was 21 per cent, which is an increase of just under 1 per cent compared with the previous year.

# 6 Traditional pay TV subscriptions

## The number of TV subscriptions begins to decrease

There were 2.9 million digital TV subscriptions (via cable TV networks, satellite, terrestrial networks or broadband), which was 1 per cent less than the preceding year. The number of subscriptions for TV via fibre increased by 13 per cent to 1.1 million, and fibre is the largest digital distribution platform for digital pay TV subscriptions. All other pay-TV subscriptions, i.e. via cable-TV networks, terrestrial networks and satellite, decreased (see Figure 15 below). The total number of analogue cable TV subscriptions (including SMATV[5]) was 2.3 million, which was a decrease of 3 per cent. Many households in apartment buildings have an analogue cable TV subscription included in the rent, as well as a digital subscription. It is estimated that there are about 190,000 subscriptions via SMATV, which is a decrease of 13 per cent compared with the same date the previous year.

**Figure 15 Number of pay-TV subscriptions**




The Swedish Telecommunications Market includes terrestrial TV subscriptions where the household *pays* for a subscription. Households can also receive digital terrestrial TV *without paying* for a subscription. In this case households

[5] Satellite Master Antenna Television (SMATV) is an independent cable TV network where many households share an antenna.

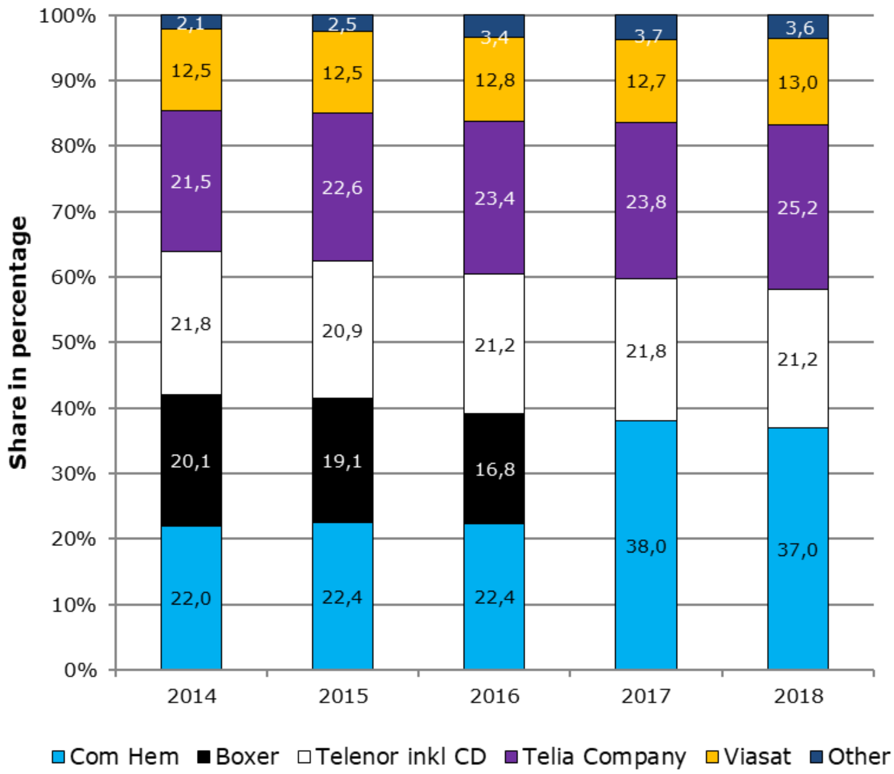
can only see certain terrestrial channels , which we call the free TV channels (SVT's channels and TV4 and TV6). Since free TV viewers do not have a subscription to watch the programmes, it is not clear exactly how many households receive free TV. A survey has been carried out for PTS on the use of free TV by households.[6] The result shows that of 1,893 interviews conducted, 158 people stated that they only have free TV in their normal residence, which is equivalent to 8.3 per cent and is unchanged compared to the 2017 survey (8.3%).

The proportions for digital TV services are based on the number of pay TV subscriptions by digital distribution methods. The five biggest companies, Com Hem including Boxer, Telenor, Telia Company and Viasat[7] accounted between them for 96.4 per cent of subscriptions, which is at the same level as the previous year.

[6] https://statistik.pts.se/undersoekning-om-fri-tv/

[7] In the survey in the first half of 2018, Viasat stated a new name: Nordic Entertainment Group Sweden AB

**Figure 16 Proportion of pay-TV subscriptions by operator**

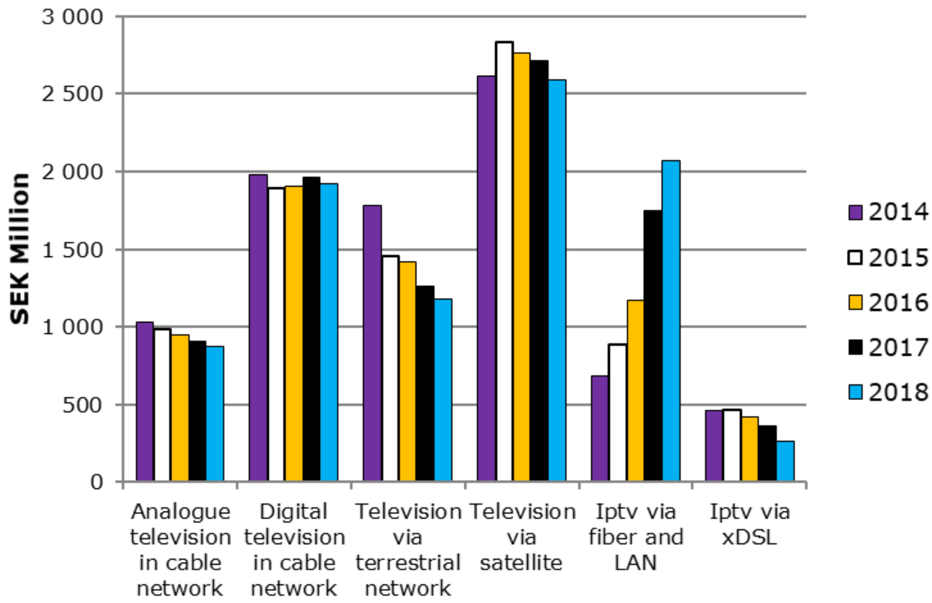



## Income from TV subscriptions decreased

The total income from TV services for basic and supplementary subscriptions amounted to SEK 10.1 billion at the end of December 2018, which is a decrease of 1 per cent compared with the previous year. The total average income generated per household per month for TV services in 2018 was SEK 180, which SEK 5 less than the previous year. Income from basic subscriptions[8] amounted to SEK 8.6 billion, which is 1 per cent less than the previous year. Income from basic subscriptions has been at the same level since 2012.

[8] For the period 2009 to 2014, income from terrestrial TV services for both basic and supplementary packages was reported as a basic package, since they could not be separated. This means that for these years income from basic packages was somewhat too high, while income from supplementary packages was somewhat too low.

**Figure 17 Income from traditional TV subscriptions**




The reported income from supplementary packages decreased by 5 per cent and amounted to SEK 1.2 billion. With effect from 2016, transaction-based VOD[9] (video-on-demand) and pay-per-view[10] are not included, which means that income figures for supplementary packages before and after 2016 are not entirely comparable. VOD and PPV have been removed because this income does not include income from all companies that offer VOD services in the market, but only those who respond to The Swedish Telecommunications Market.

[9] VOD means distributing films and TV programmes to viewers exactly when the viewer wishes to watch them.

[10] Pay-per-view means paying to be able to watch a single film or TV programme.

# 7 Bundled subscriptions

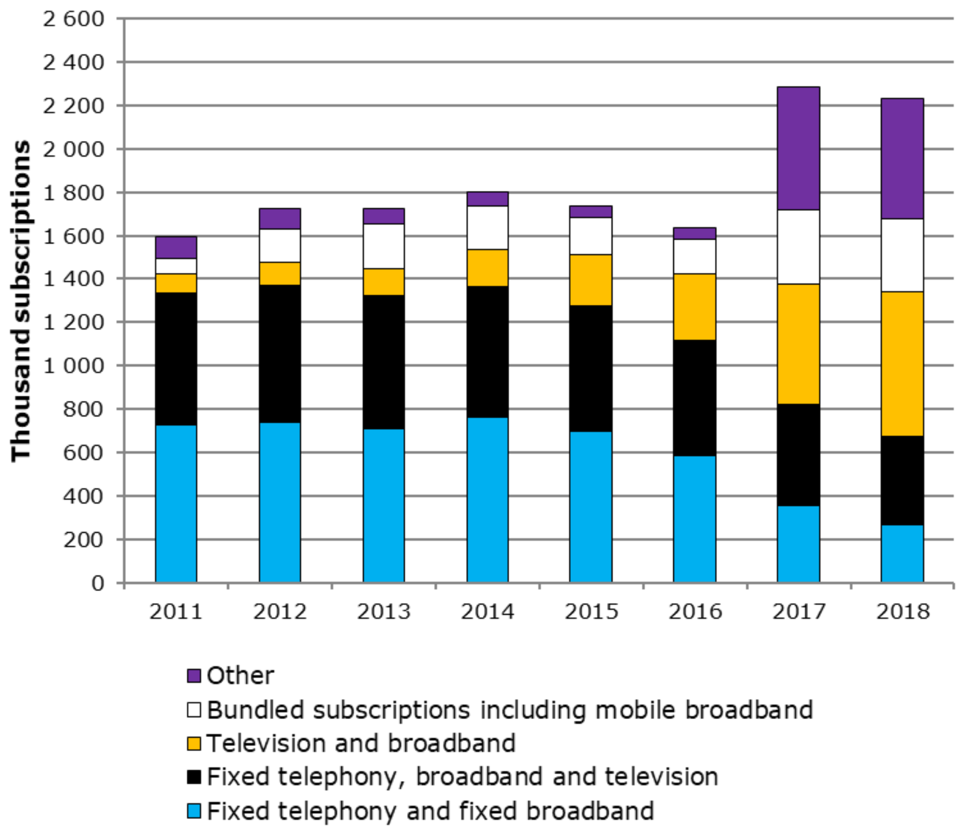
## Bundled subscriptions

The number of bundled subscriptions was 2.2 million, which is 2 per cent lower than at the same time the previous year. Although the number of bundled subscriptions decreased compared to 2017, the number remains significantly higher than in the period before 2017. The increase in 2017 was mainly due to changes in the definition of bundled subscriptions and to the fact that Telia Company reported 650,000 more bundles than in the previous year. [11] The company has indicated that the change in definition has affected reporting.

Telia Company, Com Hem, Telenor and Three together had 94 per cent of the bundled subscriptions.

[11] The definition in previous surveys was "subscriptions offered and marketed as an offer or with a price list for the bundled services". Surveys from 2017 also included "services that are not marketed together as a special offer, for example when an end customer buys two or more services separately, may be on different occasions".

**Figure 18 Number of bundled subscriptions**

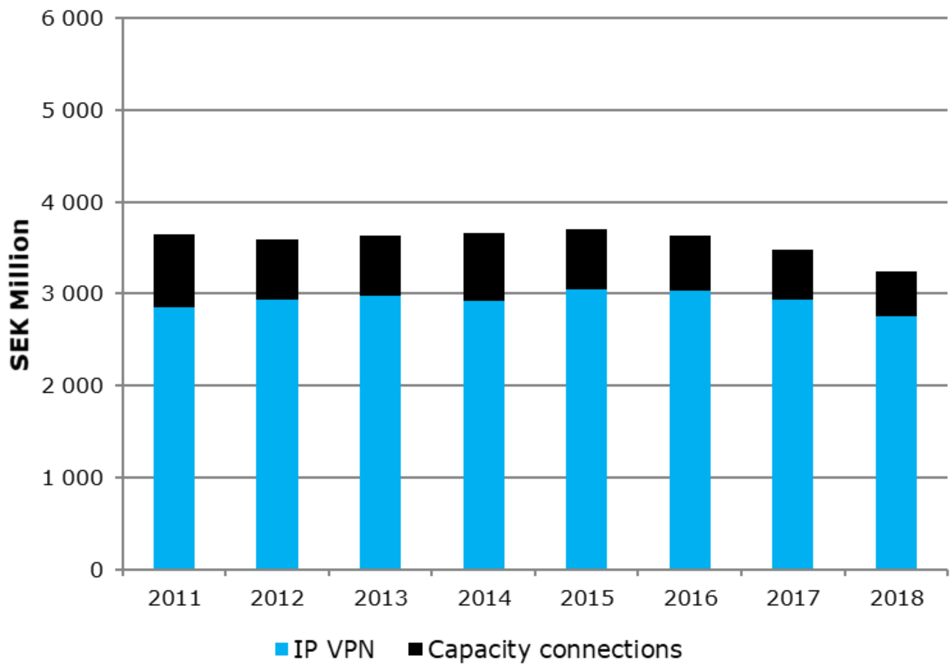


# 8 Data communication services to end customers

Data communication services refers here to data services that are used, for example, to connect companies' and agencies' working locations and various IP based systems with each other. The total income from data communication services to end customers in 2018 was SEK 3.24 billion, a decrease of 7 per cent compared with 2017.

Between 2017 and 2018 income from IP VPN services decreased by 6 per cent to SEK 2.75 billion, while income from capacity services to end customers decreased by approximately 10 per cent to SEK 486 million. However, income from the sale of capacity services to operators (wholesale customers) are not included in these figures.

**Figure 19 Income from data communication services to end customers**

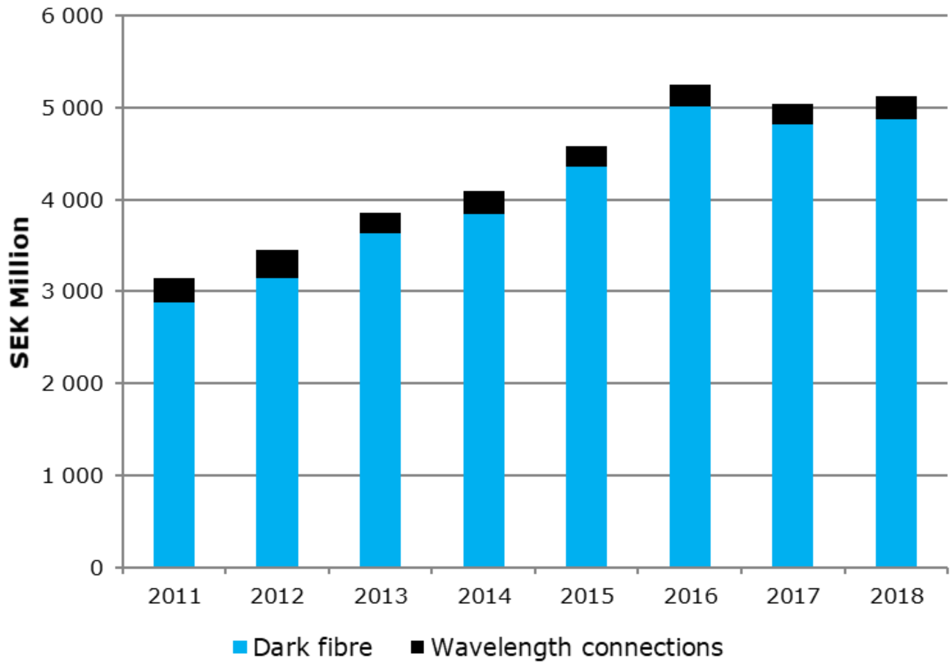


# 9 Dark fibre and wavelengths

Dark fibre refers to fibre cable rented out without electronic equipment. Dark fibre is usually sold to wholesale customers, but in some cases also to end customers, such as larger companies or authorities. Income from dark fibre connections increased by 1 per cent, from SEK 4.82 billion to SEK 4.87 billion between 2017 and 2018.

The optical light in a fibre can be divided into wavelengths so that each wavelength functions as a channel. Wavelengths are purchased, as with dark fiber, mainly by wholesale customers. In 2018, income from wavelength connections was SEK 248 million, an increase of 8 per cent compared to the previous year.

**Figure 20 Income from dark fibre and wavelengths**



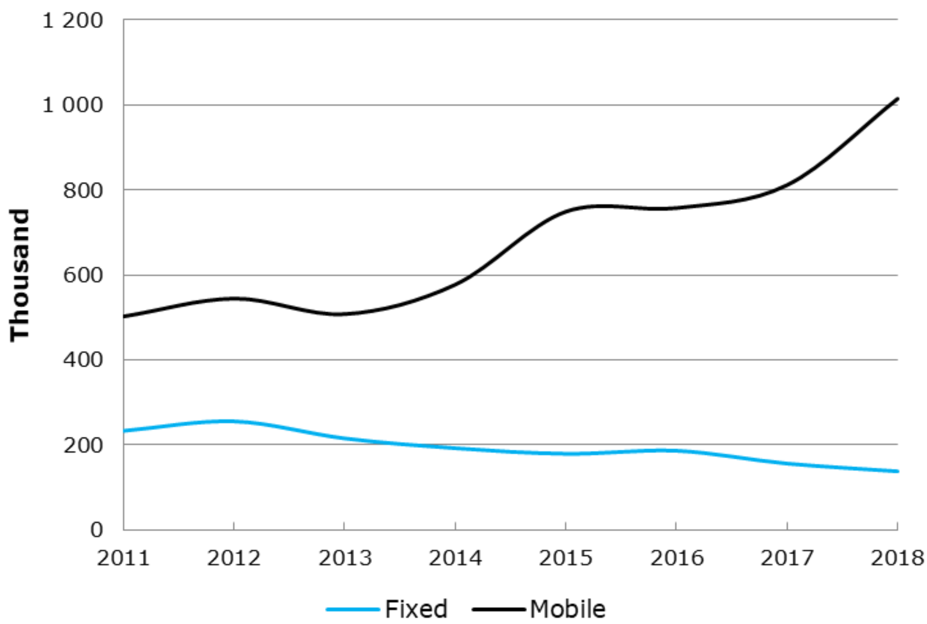
# 10 Number porting

Information about number porting comes from the Swedish Number Portability Administrative Centre (SNPAC)[12].

The number of mobile numbers that were ported amounted to 1,189,000 at the end of December 2018, which is an increase of 31 per cent. The number of porting instances for mobile numbers amounted to 1,015,000 in Sweden, which was an increase of 25 per cent. This represents 7 per cent of the total number of mobile subscriptions.

The SNPAC statistics do not include figures for fixed line numbers. For this reason the number of *porting instances* is shown below, which is lower than the number of ported telephone numbers. The number of porting instances for fixed (geographical) telephone numbers amounted to 137,000 in Sweden, which was a decrease of 12 per cent. This represents 6 per cent of the total number of fixed line telephone subscriptions.

**Figure 21 Number of portings of mobile and fixed line telephone numbers**




[12] https://www.snpac.se/?q=sv/content/statistik

# 11 About the survey

The Swedish Post and Telecom Authority (PTS) has been tasked with monitoring service developments in the market for electronic communication, promoting competition within this market and providing information aimed at consumers. As a part of this assignment, PTS collects and publishes market data in this report, The Swedish Telecommunications Market. The data is used in PTS' analysis work within the authority's area of responsibility.

The Swedish Telecommunications Market is Sweden's most important operator surveys on subscriptions, income and data traffic in the fields of broadband (fixed and mobile), calls (fixed and mobile) and traditional TV services. The survey is carried out twice a year: first half and full year. This report is for the full year 2018 and, as in previous years, is based on PTS' own data collection. The statistics have been collected with the aid of an online questionnaire. The selection for the Swedish Telecommunications Market was based partly on the selection of organisations in previous years and partly on organisations of which PTS has been notified according to the Act (2003:389) regarding electronic communication (LEK). The survey is sent out to 606 organisations (operators, municipalities and other organisations). All respondents have an obligation to provide information. Of these, 586 replied, giving a response rate of 97 per cent. The number of participants in the survey is increasing annually: in 2008 there were just over 500.

However collection and adjustment of operator data continues after the report the Swedish Telecommunications Market has been published, so that the PTS database for operator statistics is always updated.

All figures refer to the situation on 31 December 2018, and comparisons are made with the same date in 2017 unless otherwise stated.

### Want to find out more?

On the PTS statistics portal (http://www.statistik.pts.se/), you can search for and sort statistics in the different areas. Data and market shares for the individual operators are also available. For further information, see the statistics portal and the appendices:

- tables with statistics
- quality declaration,
- change log with historical changes,
- list of participants