

Telecommunication Markets in the Nordic Countries

Per 31.12.2010



**Finnish Communications
Regulatory Authority**



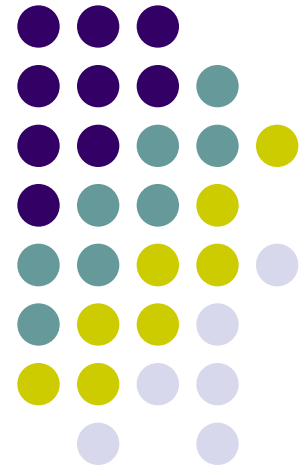
IT- og Telestyrelsen
Ministeriet for Videnskab
Teknologi og Udvikling



Post- og teletilsynet
Norwegian Post and Telecommunications Authority



**THE POST AND TELECOM
ADMINISTRATION IN ICELAND**

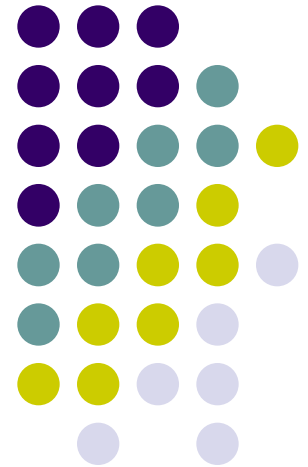


About the Nordstat database

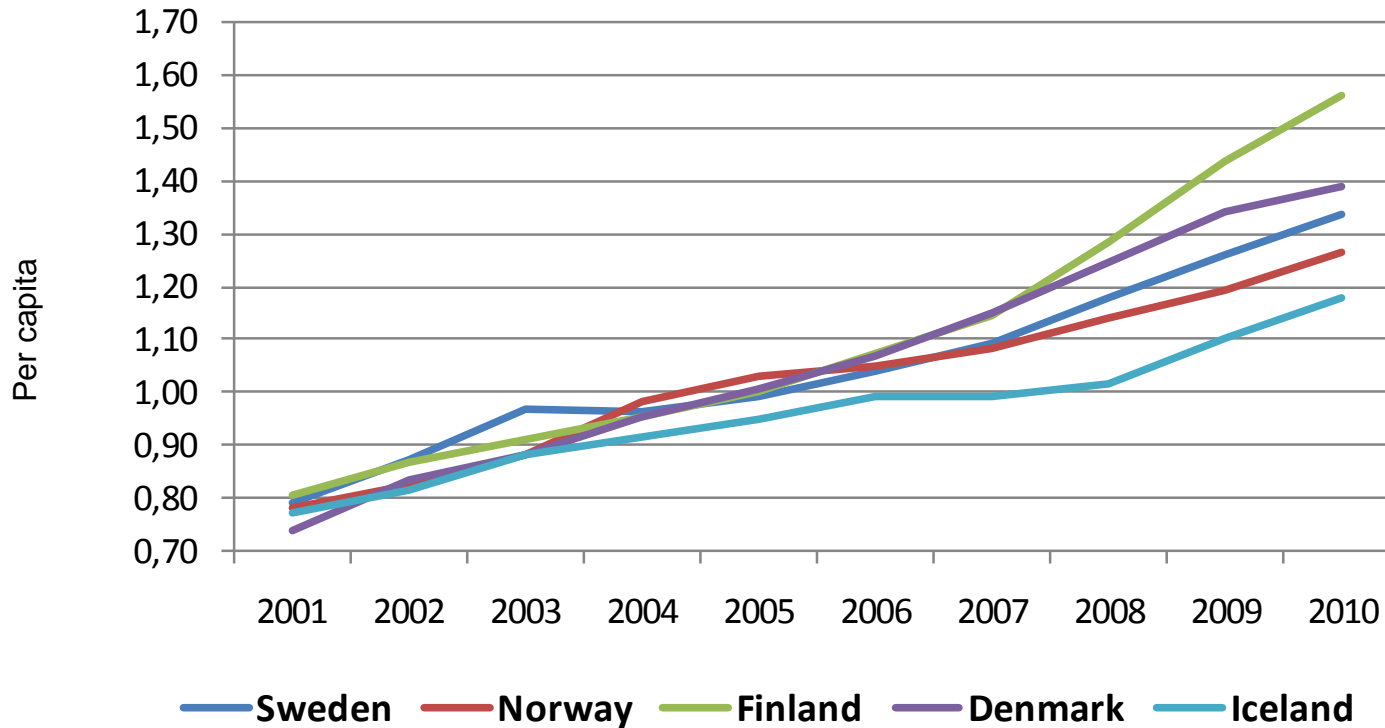
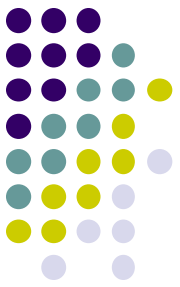


- Established 2007
- A descriptive database
- A selected number of variables that is comparable between the Nordic countries
- A dynamic database that will change and grow with developments in the telecom markets
- If not stated otherwise the sources for all figures are the NRA and national statistical agency of each country
- If not stated otherwise graphs includes figures for both private and business
- The figures are collected and controlled by the Nordic working group on statistics and definitions - Nordstat

Mobile Services



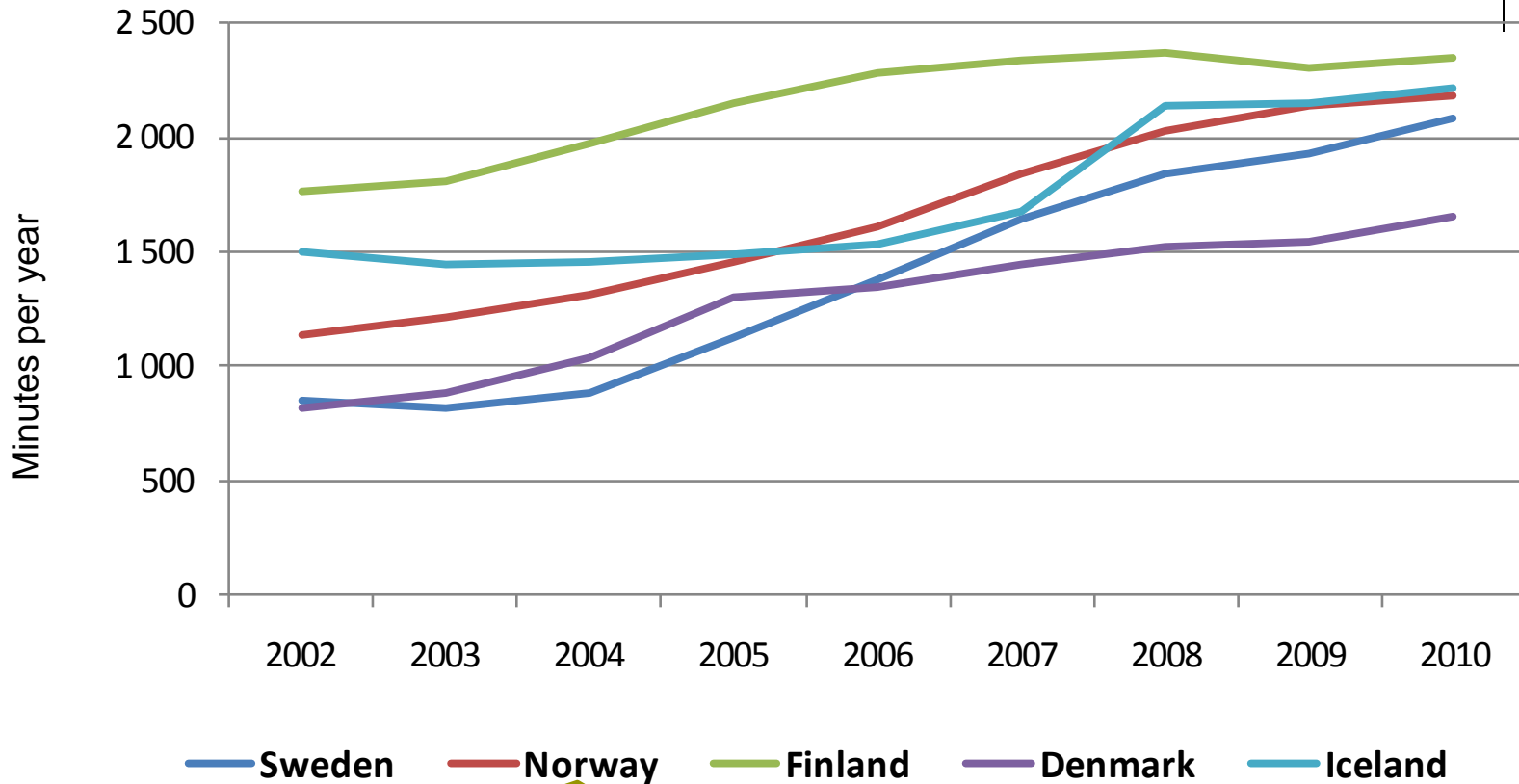
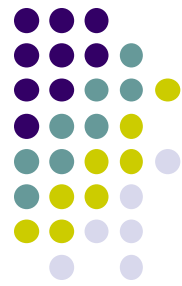
Mobile subscriptions¹ per capita



Number of mobile subscriptions is still growing smoothly in every Nordic country. The increase in difference between the countries can be explained by the development of mobile broadband subscriptions. Iceland was adopting mobile broadband later than other Nordic countries.

¹Includes both private and business GSM/UMTS subscriptions. Pre-paid subscriptions should be active last 3 months .

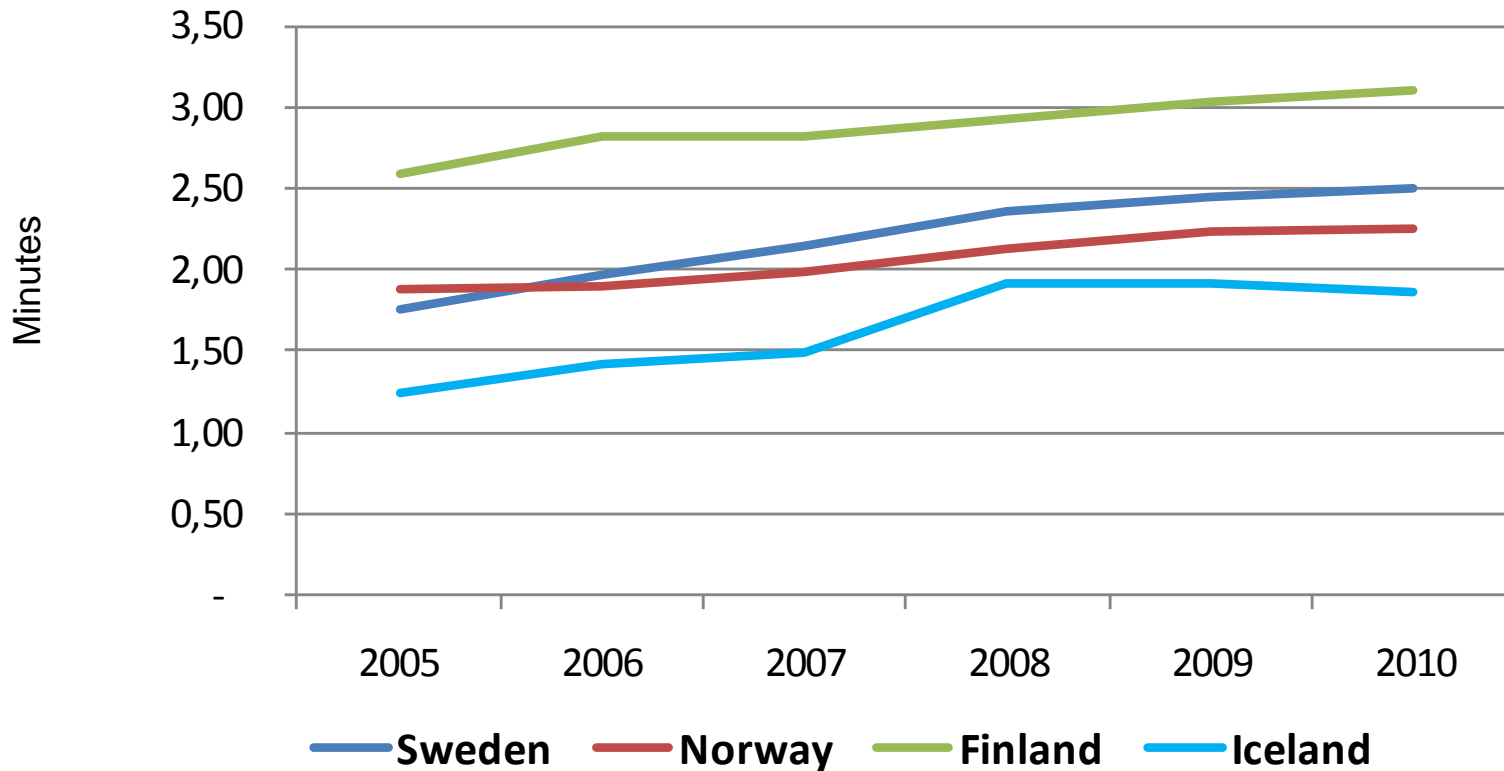
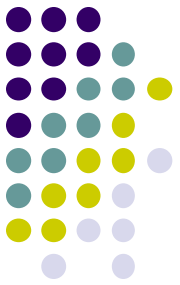
Mobile call minutes per subscription¹ in a year



Finland has a significant higher usage of mobile telephony for speech. Finland has the lowest penetration and usage of fixed telephony and of broadband telephony (VoIP). Denmark has the lowest minutes per subscription, but the highest use of SMS messages.

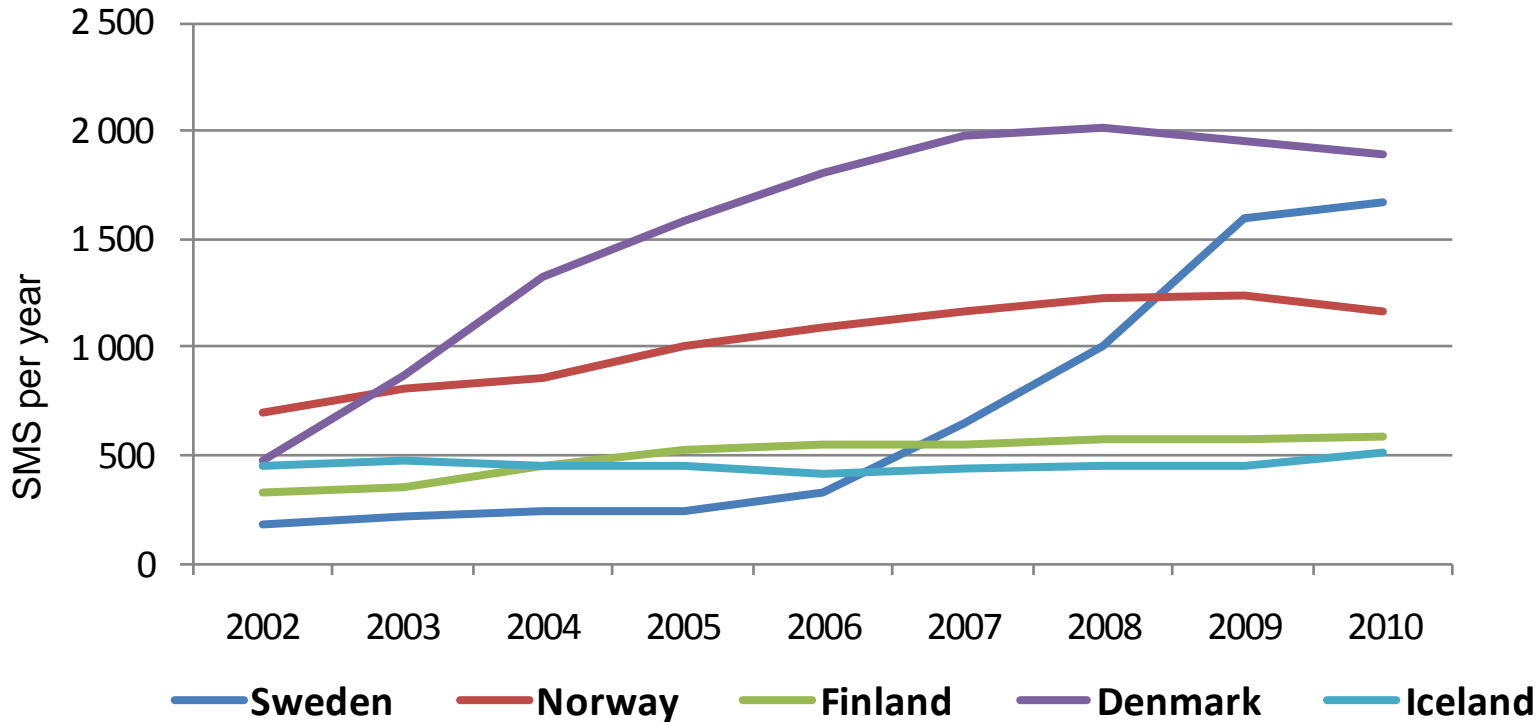
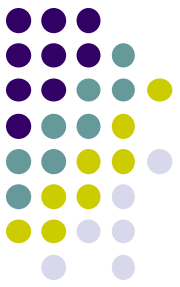
¹ Subscriptions is the average of the number of subscriptions at the beginning and end of each year. Exclusive mobile broadband subscriptions

The average length of a mobile call



The average length of a mobile calls are increasing slowly and getting closer to the average length of a fixed telephone calls in the Nordic countries.

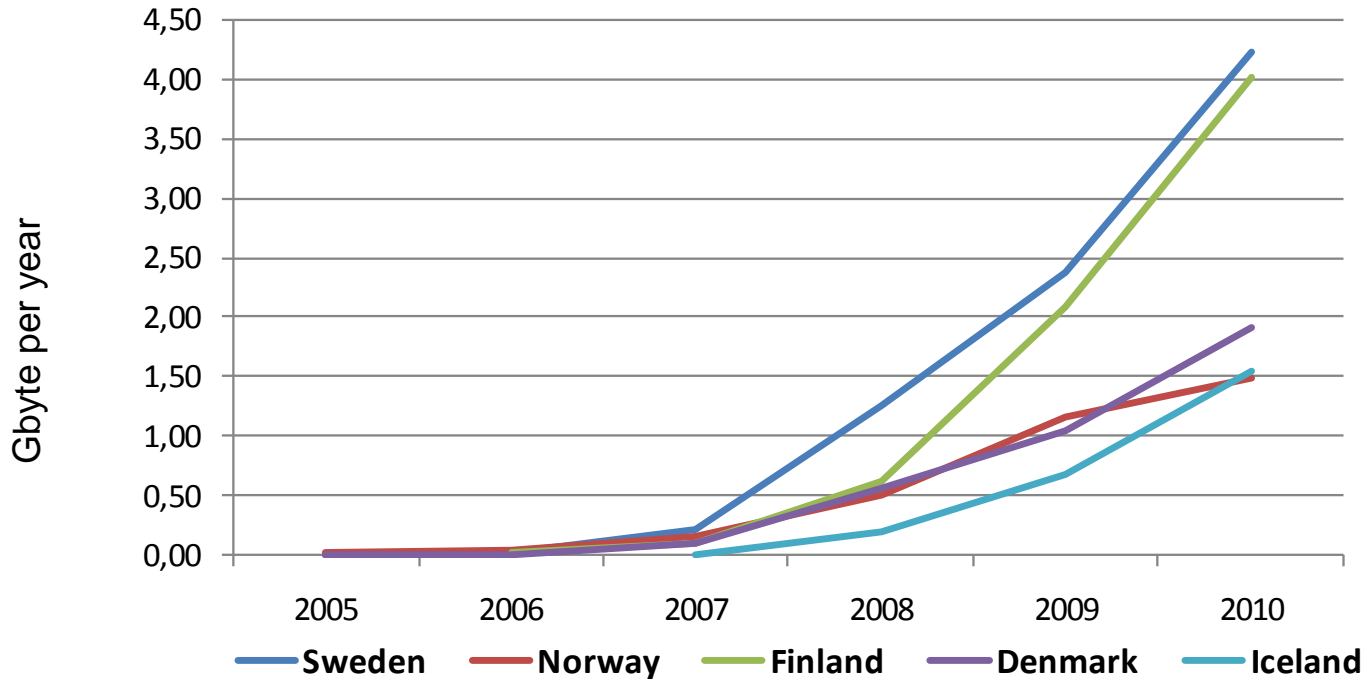
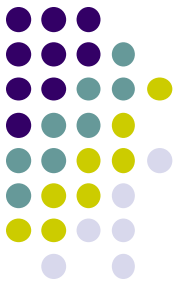
Average number of SMS messages sent per subscription¹ in a year



Average number of SMS messages sent per subscription in a year are decreasing in Denmark after a strong growth during the beginning of the decade. Number of SMS are also decreasing in Norway. Number of SMS messages sent has been increasing fast in Sweden, but the last year shows slower growth. In Finland and Iceland the use of SMS messages have been quite modest.

¹ Subscriptions is the average of the number of subscriptions at the beginning and end of each year. Exclusive mobile broadband subscriptions

Data volume transferred over mobile networks, average Gbyte per subscription¹

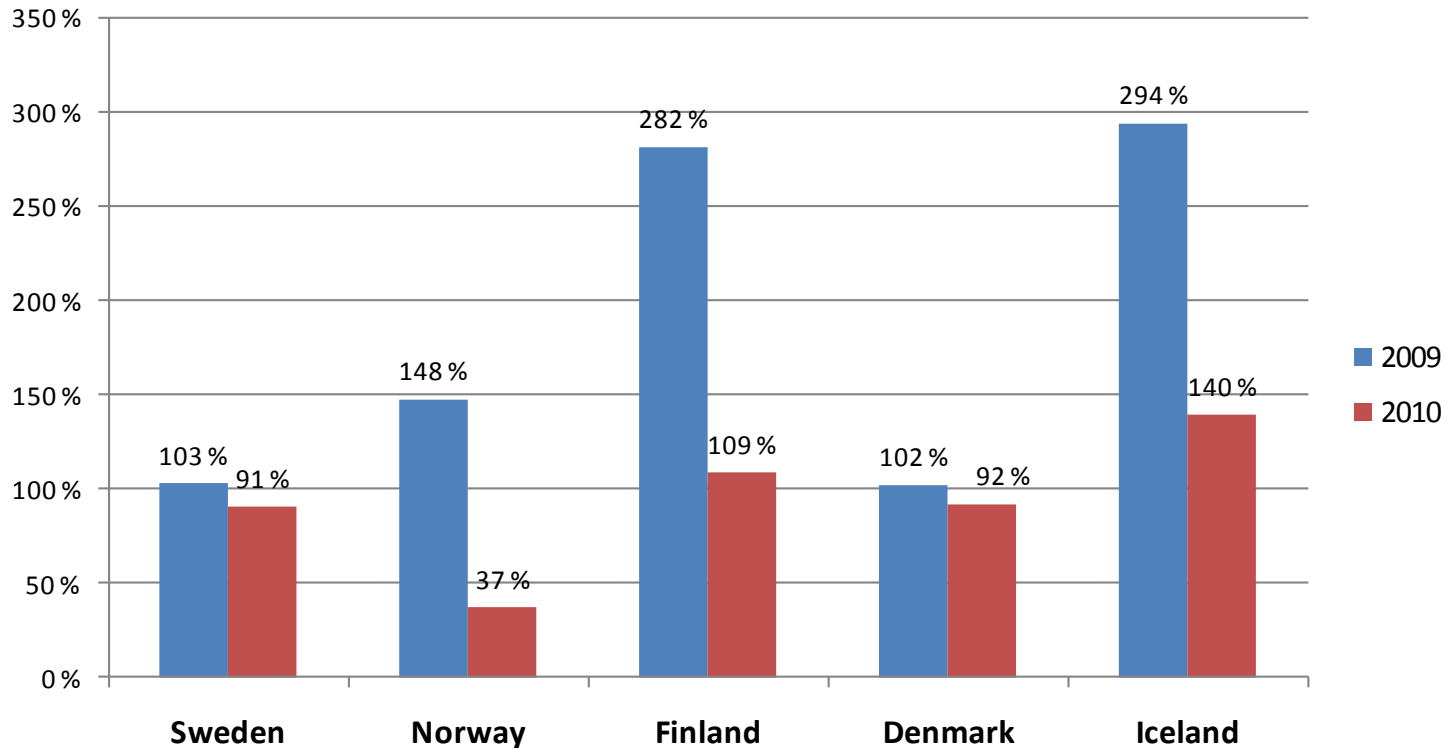
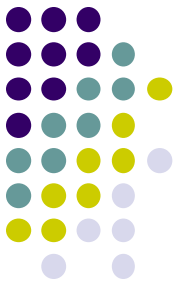


Data volume transferred over mobile networks have increased fast in every Nordic country. The growth in data traffic is close to or above 100 percent in all the countries except in Norway. It is the dedicated data subscriptions that generates most of the data traffic in mobile networks. Norway and Iceland has the lowest number of these types of subscriptions per capita, and Finland and Sweden the highest. This may be one of the reasons behind the relatively large difference in Gbyte per subscription. Sweden and Finland has a lower number of fixed broadband subscriptions per capita than the other countries, and possibly a larger share of customers that has substituted their fixed broadband with mobile broadband.

¹Includes subscriptions and traffic for both mobile and mobile broadband.

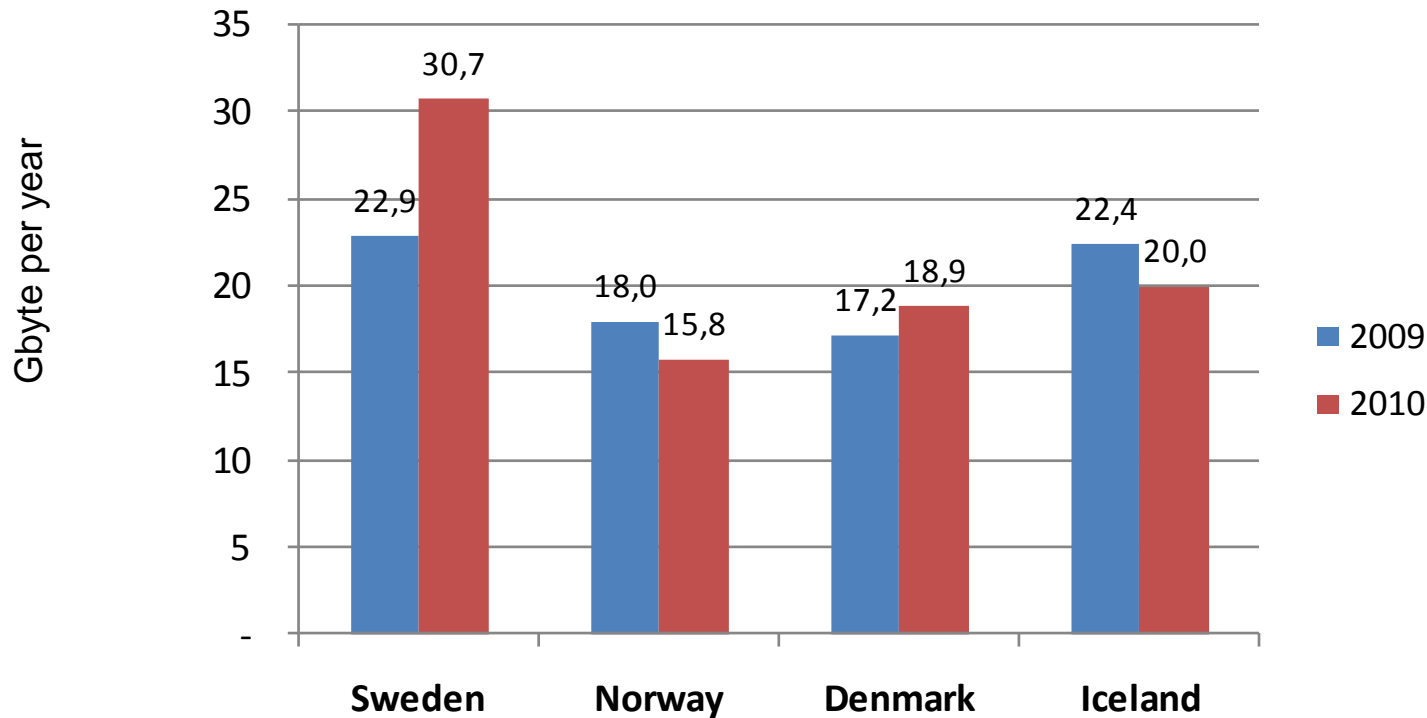
Growth in data traffic in mobile networks

(% growth in number of Gbytes)



Substantially slower growth in Norway in 2010 than in the other Nordic countries.

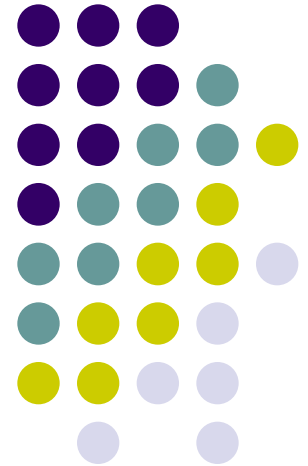
Data volume transferred over mobile networks, average Gbyte per mobile broadband subscription¹



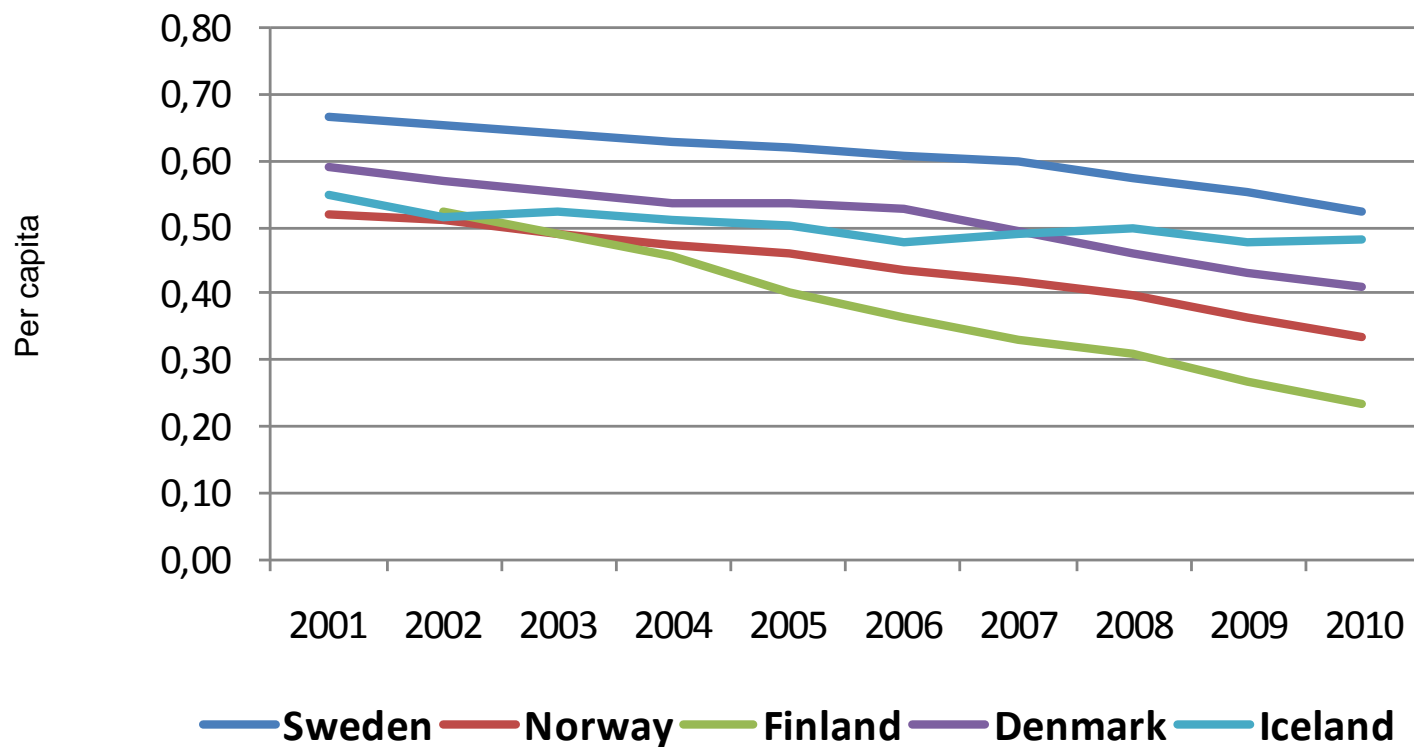
Data volume transferred by mobile broadband subscriptions. The Swedish users are using twice as much data as users in Norway.

¹Includes only dedicated data or mobile broadband subscriptions

Fixed Call Services



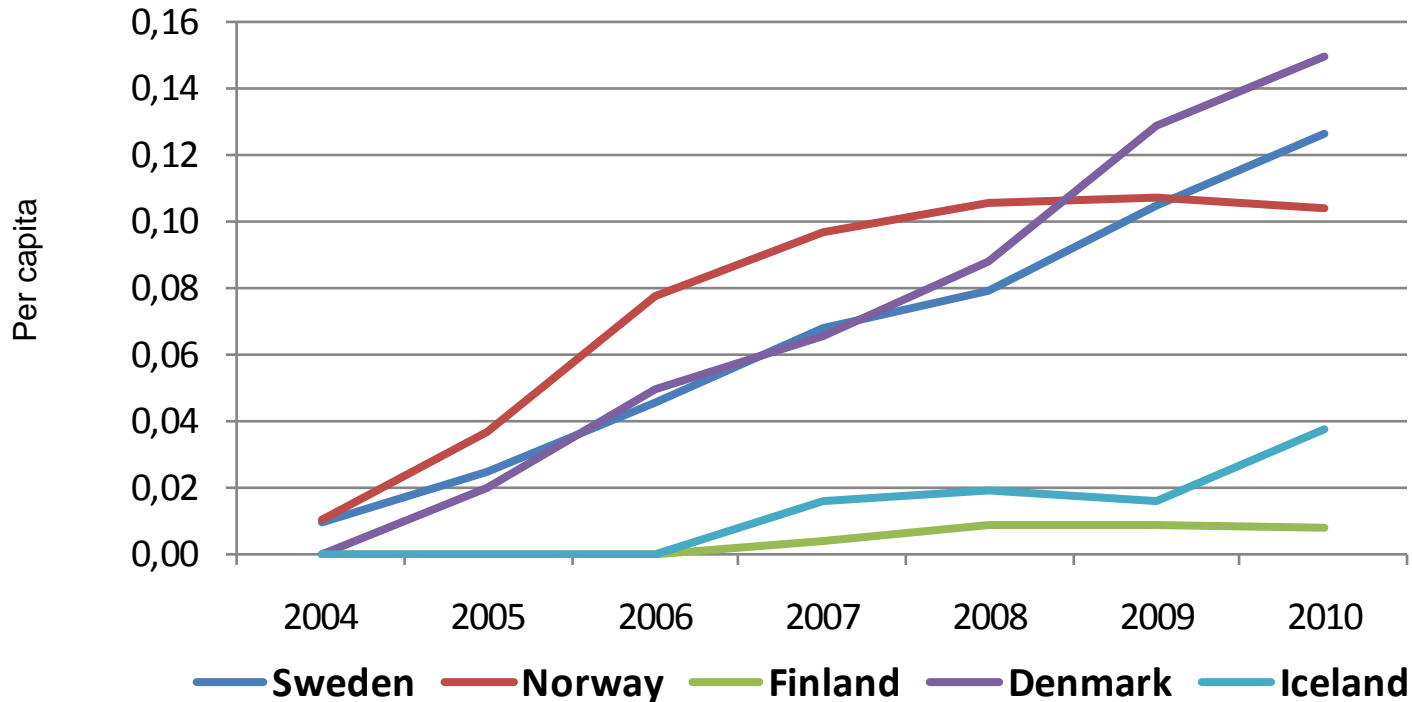
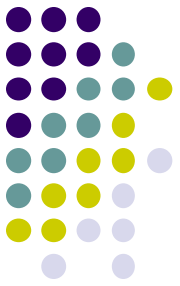
Fixed telephony subscriptions¹ per capita



The number of fixed telephone subscriptions per capita is decreasing in every Nordic country. The decrease is less apparent in Iceland.

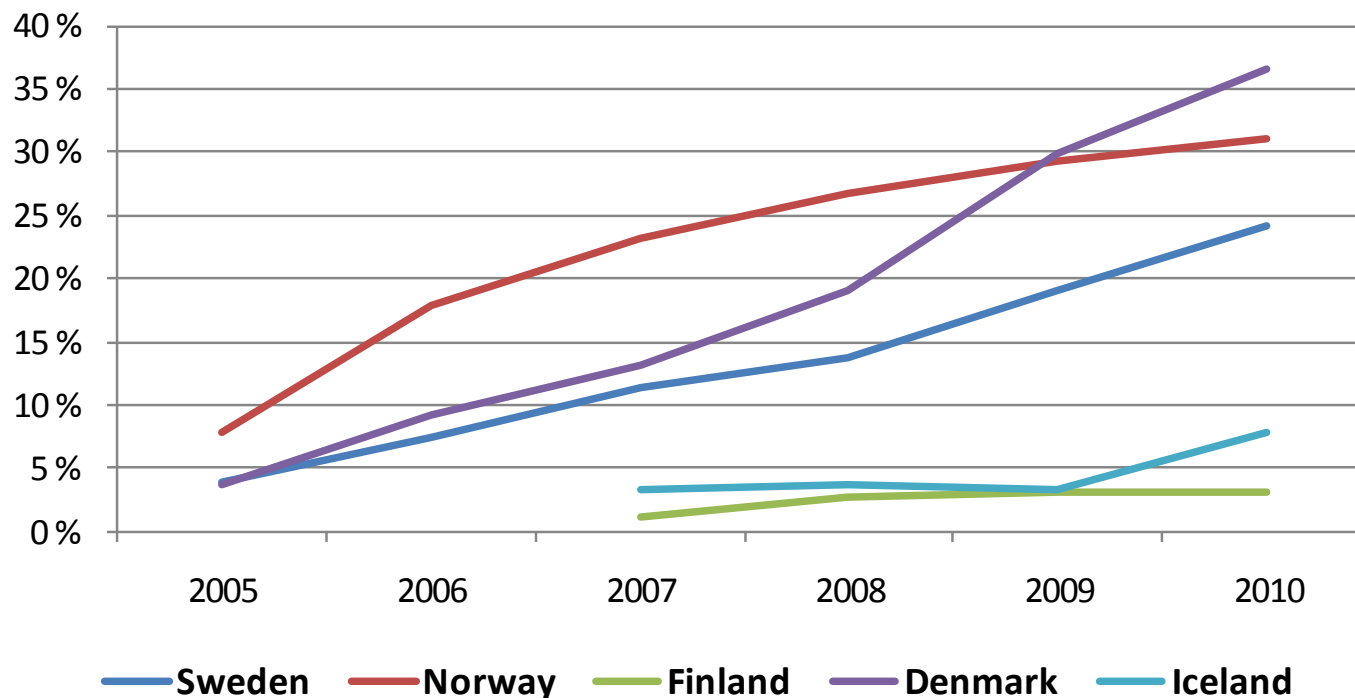
¹Includes both private and business suscriptions. Includes PSTN, ISDN and broadband telephony (VoIP)

Broadband telephony (VoIP) subscriptions per capita



The number of broadband telephony subscriptions per capita is increasing fast in Denmark and Sweden. In Norway the growth has stopped. In Iceland there has been a strong growth the last year. In Finland the number of broadband telephony are relatively modest.

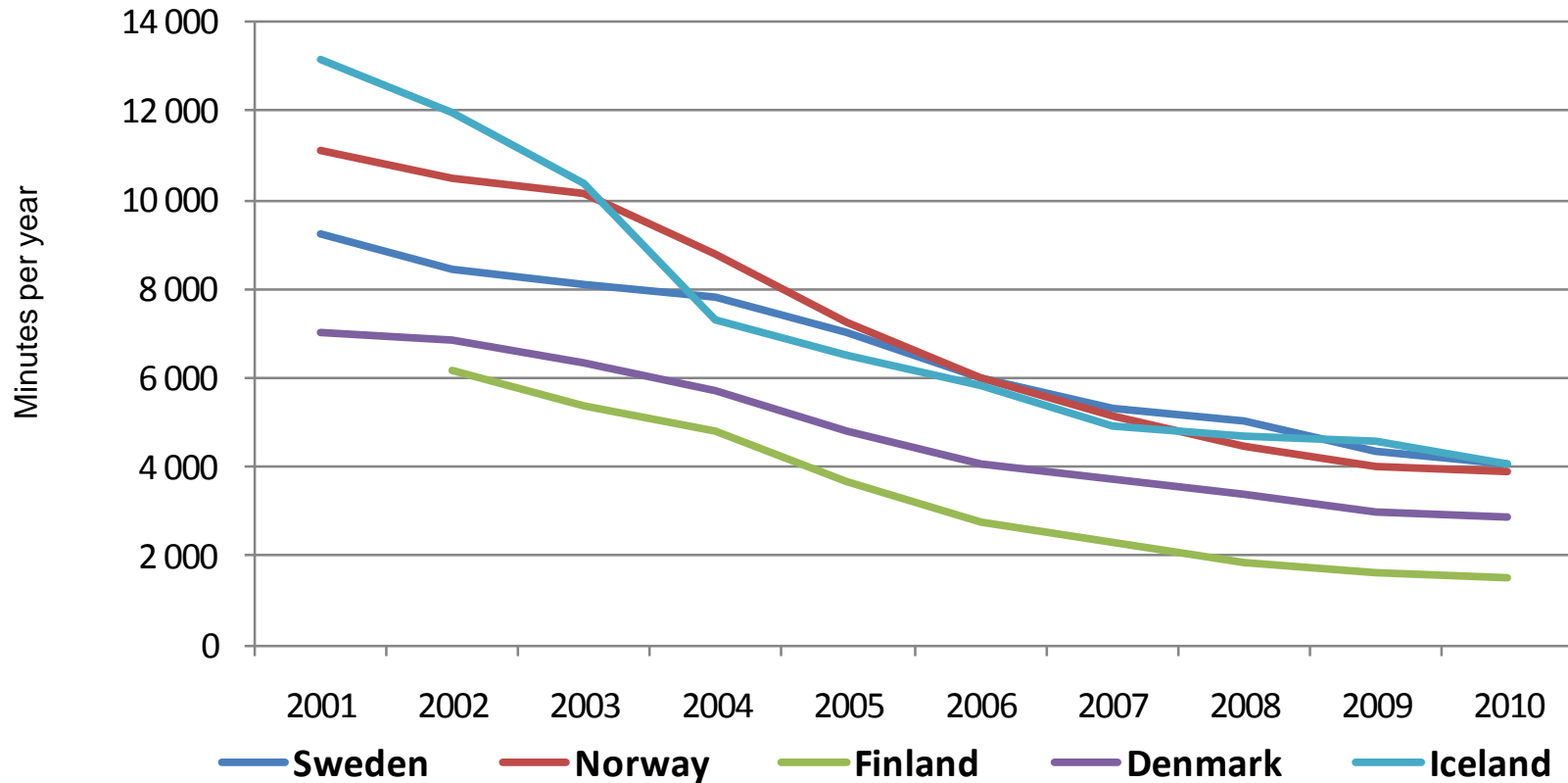
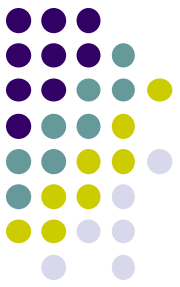
Share of broadband telephony (VoIP) of all fixed telephony subscriptions¹



The share of broadband telephony of all fixed telephony subscriptions in the end of the year were over 35 percent in Denmark, over 30 per cent in Norway and almost 25 per cent in Sweden. In Finland and Iceland the share of broadband telephony of all fixed telephony subscriptions were relatively modest.

¹All fixed telephony subscriptions is PSTN+ISDN+broadband telephony

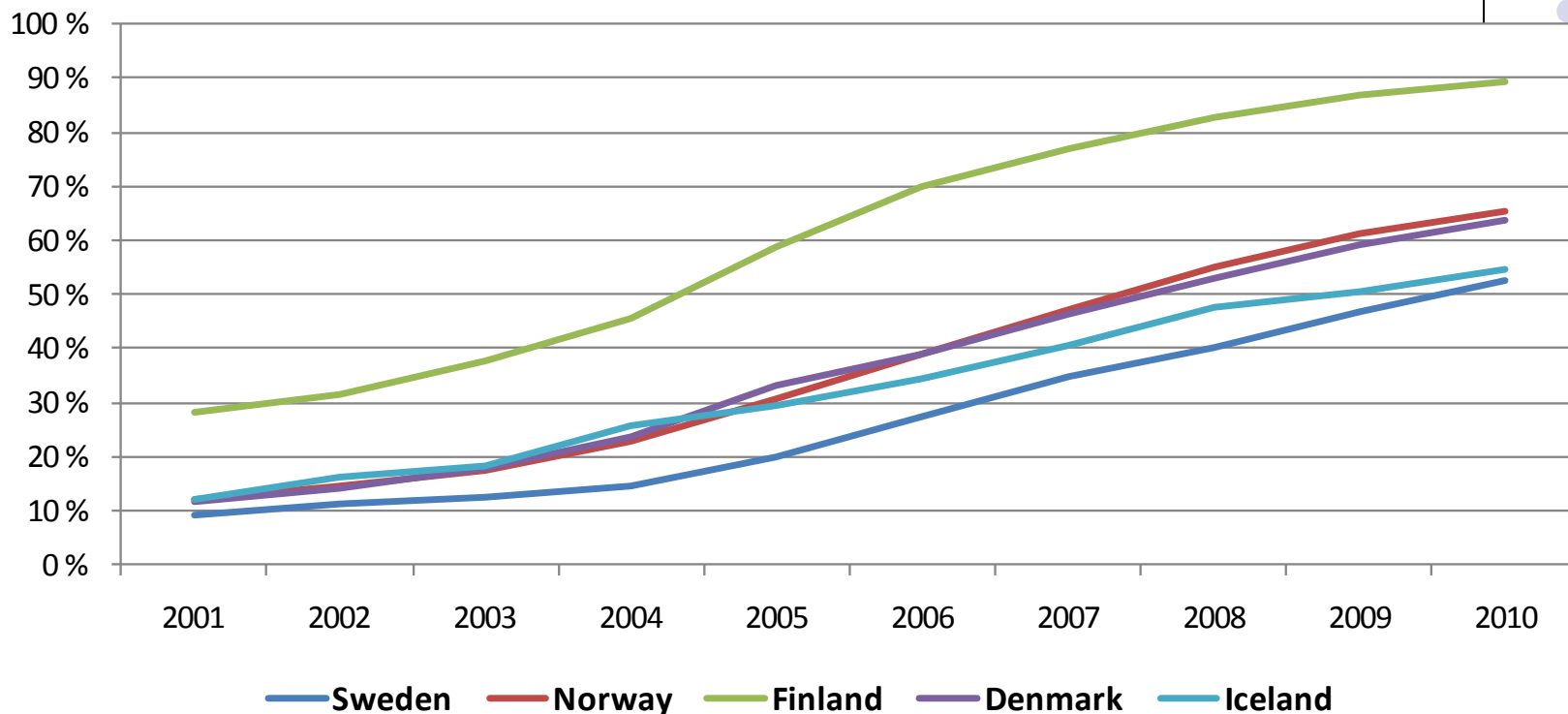
Number of fixed call minutes per subscriptions¹ in a year



The usage is declining in all countries. Finland has the lowest usage, but has the highest usage of mobile telephony.

¹ Subscriptions is the average of the number of subscriptions at the beginning and end of each year.

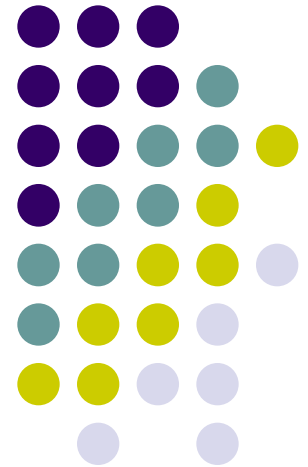
Share of mobile minutes of all originated minutes (incl. dial-up¹)



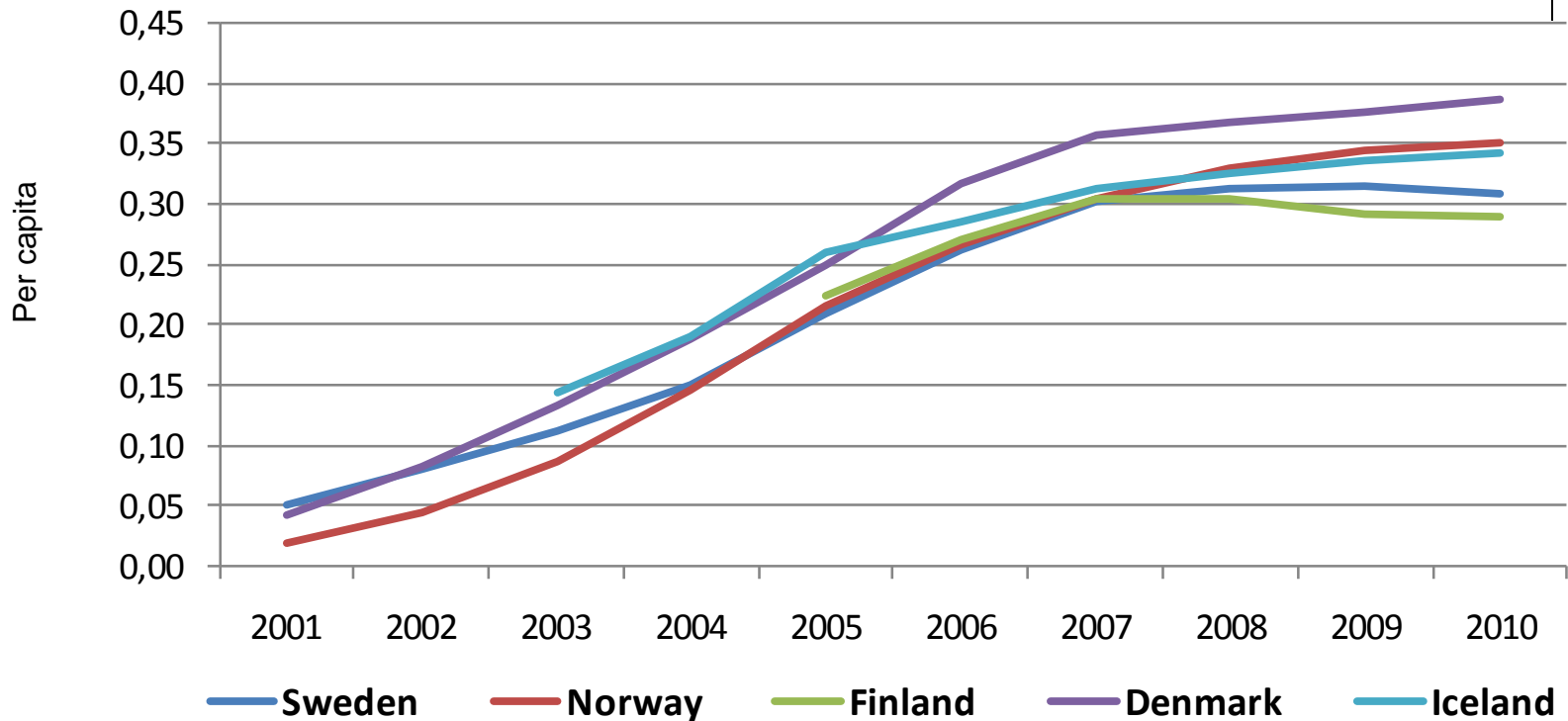
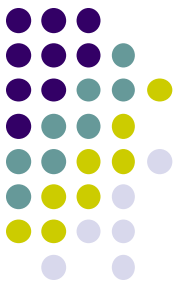
The graph shows that the usage of mobile telephony are more and more dominant in terms of minutes. The share of mobile minutes of all originated minutes is almost 90 percent in Finland. The share of mobile minutes of all originated minutes in Denmark and Norway where approximately 65 percent and in Sweden and Iceland where 53 and 55 percent respectively.

¹All originated minutes are the sum of all fixed minutes including dial-up internet and all mobile minutes

Internet Services



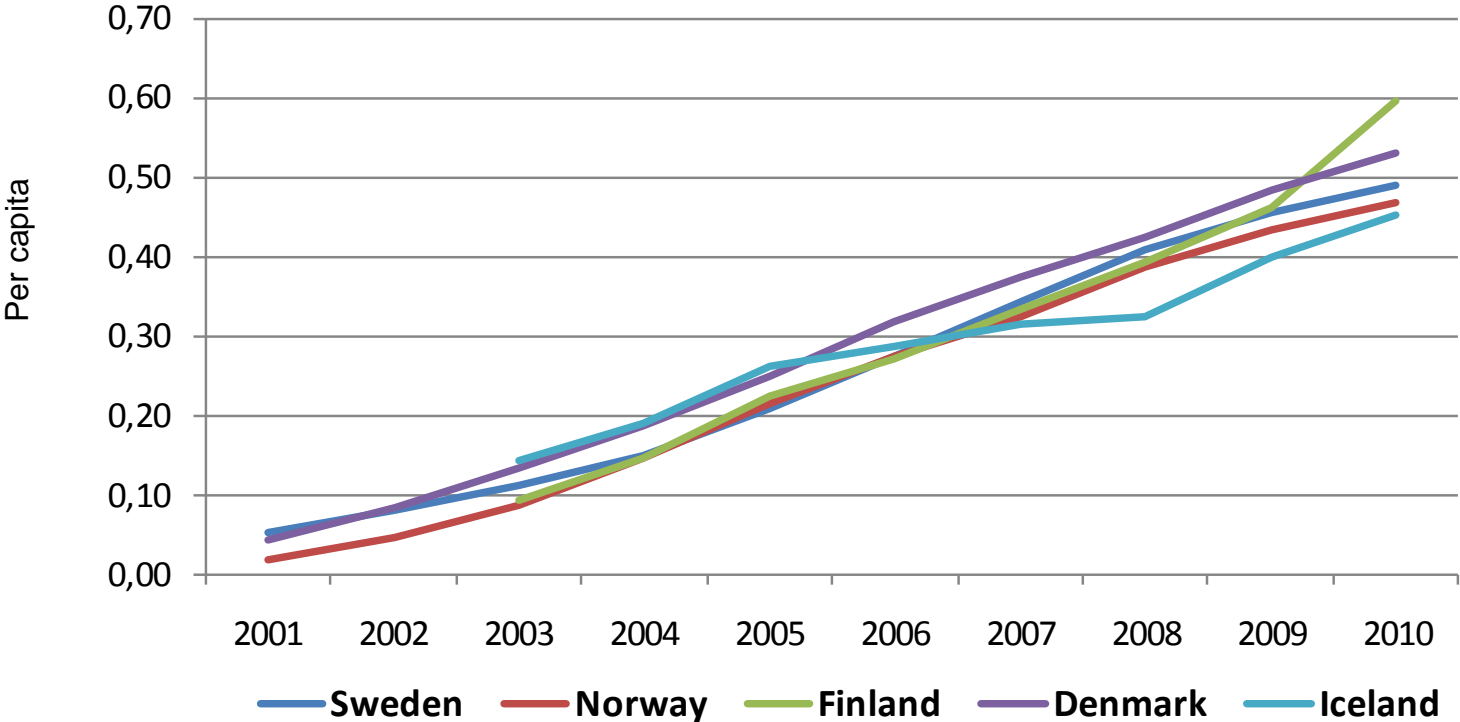
Number of fixed broadband subscriptions¹ per capita



The growth has stagnated in all countries. There is even a decline in Finland and Sweden. This could partly be explained by substitution to mobile broadband. All Nordic countries are within the OECD top 10 on broadband penetration.

¹Including both private and business subscriptions

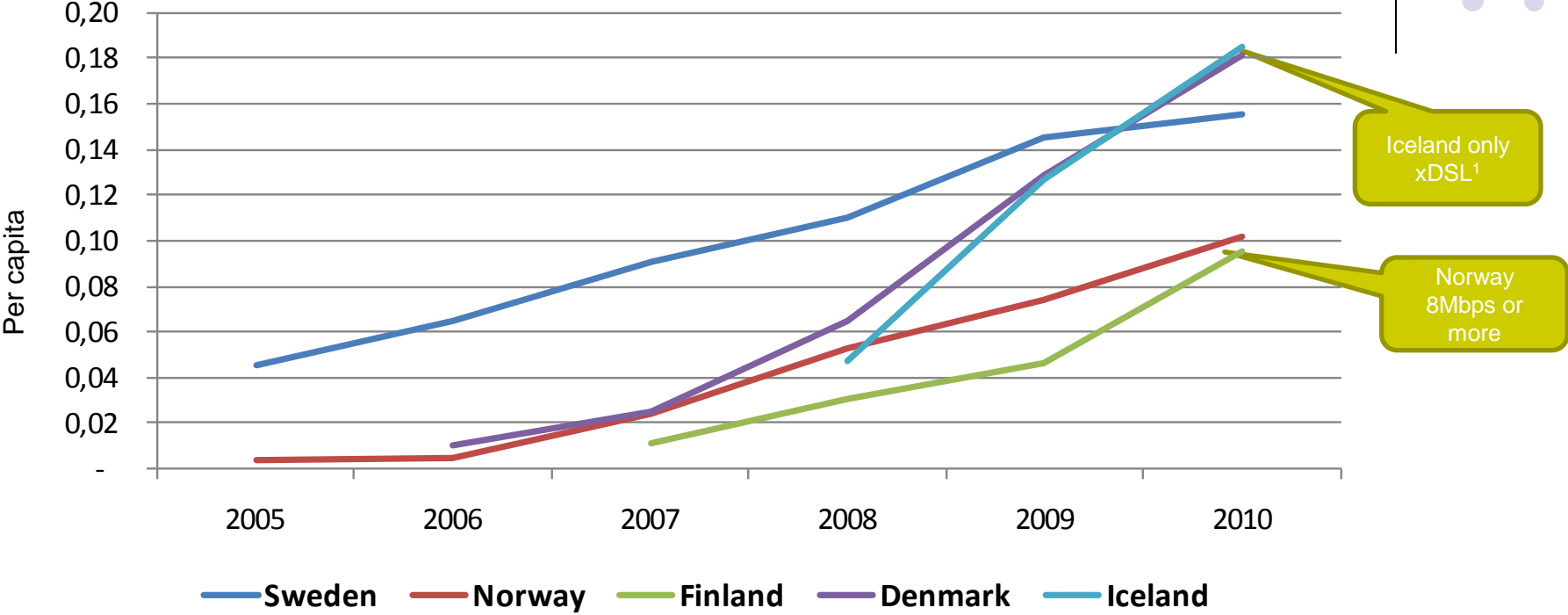
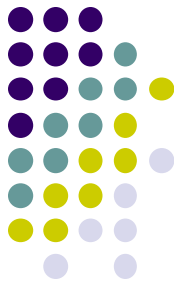
Number of broadband subscriptions¹ per capita (incl. mobile broadband)



When adding the growth in mobile broadband to fixed broadband the graph shows that Finland then has the highest penetratino with almost 0,6 subscriptions per capita.

¹Includes both private and business subscriptions

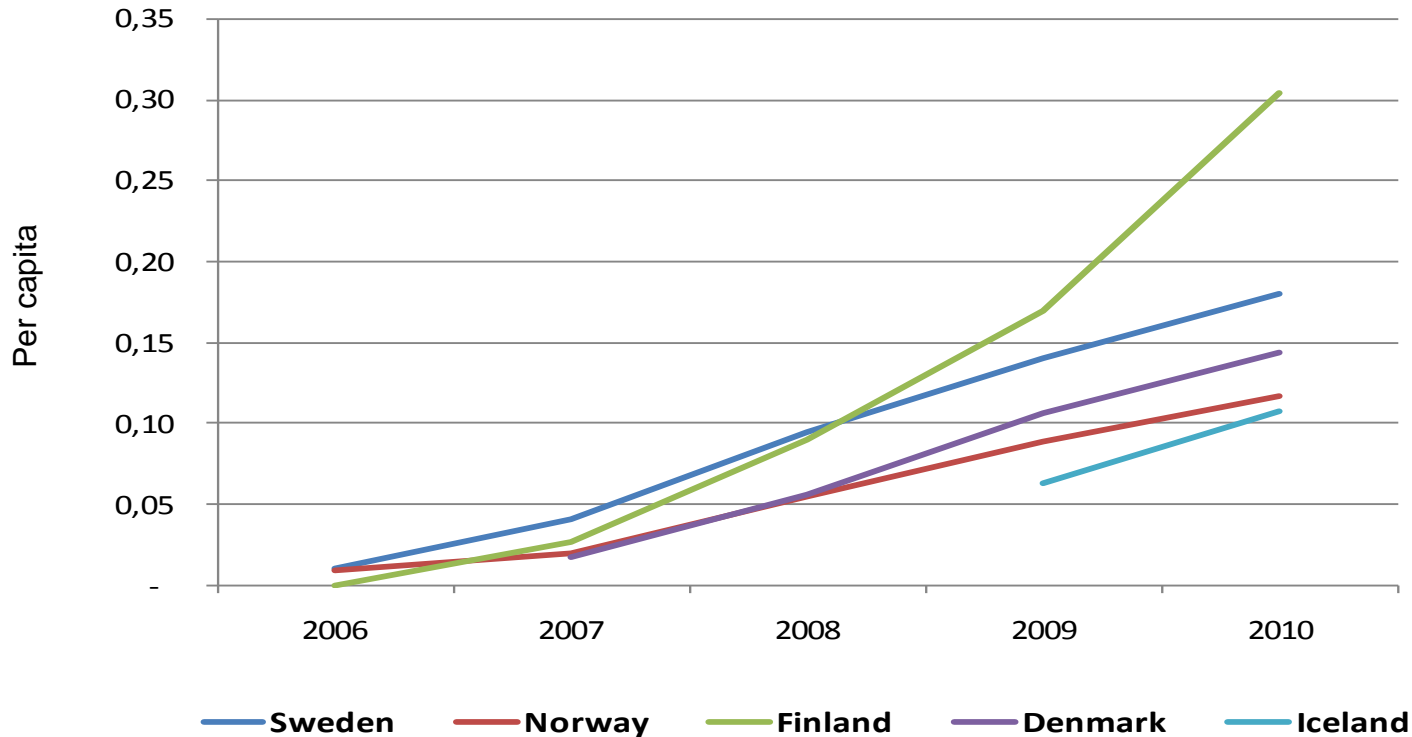
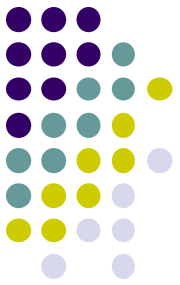
Number of fixed broadband subscription with capacity of 10 Mbps or more per capita



The graphs shows broadband penetration for subscriptions with speeds of 10 Mbps or more downstream.

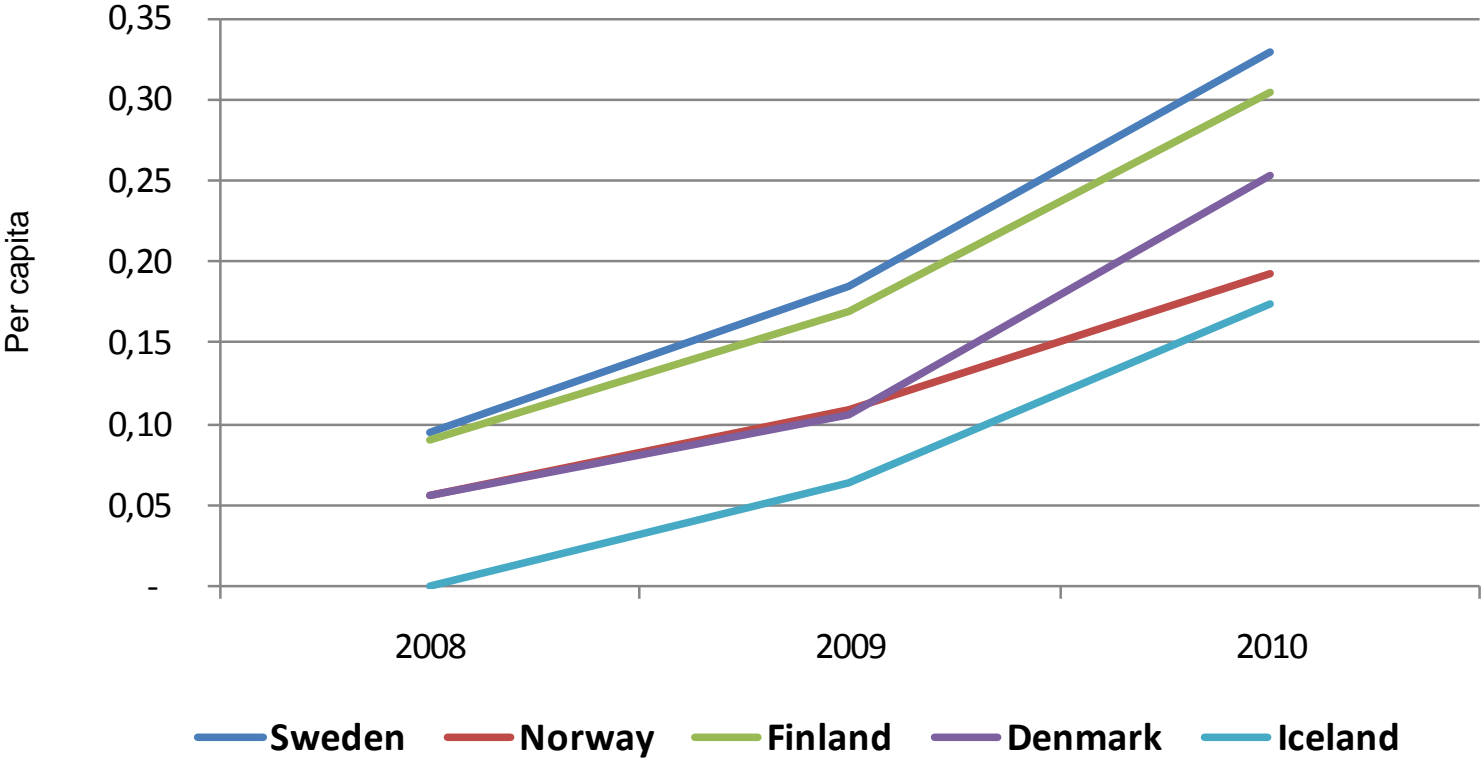
¹Many subscriptions are advertised with speeds up to for example 12 Mbit/s. Actual speed depends on factors like distance from central exchange. We believe that this is the case for xDSL subscriptions also elsewhere in the Nordic countries.

Number of mobile broadband subscriptions per capita



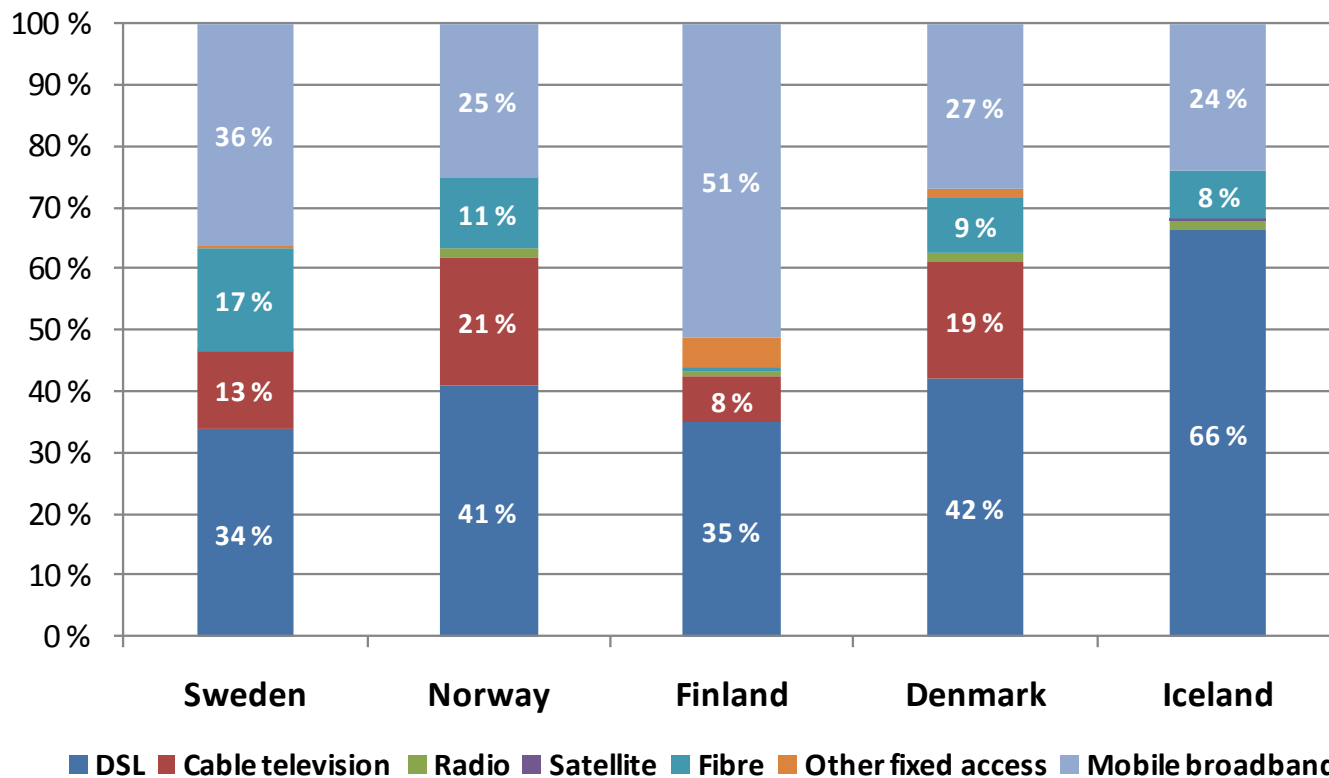
The graph is showing the number of dedicated mobile broadband subscriptions in relation to the total population. About 30 out of a 100 inhabitants has a mobile broadband subscription in Finland, 18 in Sweden, 14 in Denmark, 12 in Norway and 11 in Iceland. The growth rate for subscriptions in 2010 is 80 percent in Finland, 72 percent in Iceland. And in Denmark, Sweden and Norway 36, 30 and 33 percent respectively.

Number of mobile broadband subscriptions+ “add-on” data packages per capita



The graph shows that Finland and Sweden has about the same penetration rate. In Finland only dedicated mobile broadbands are included.

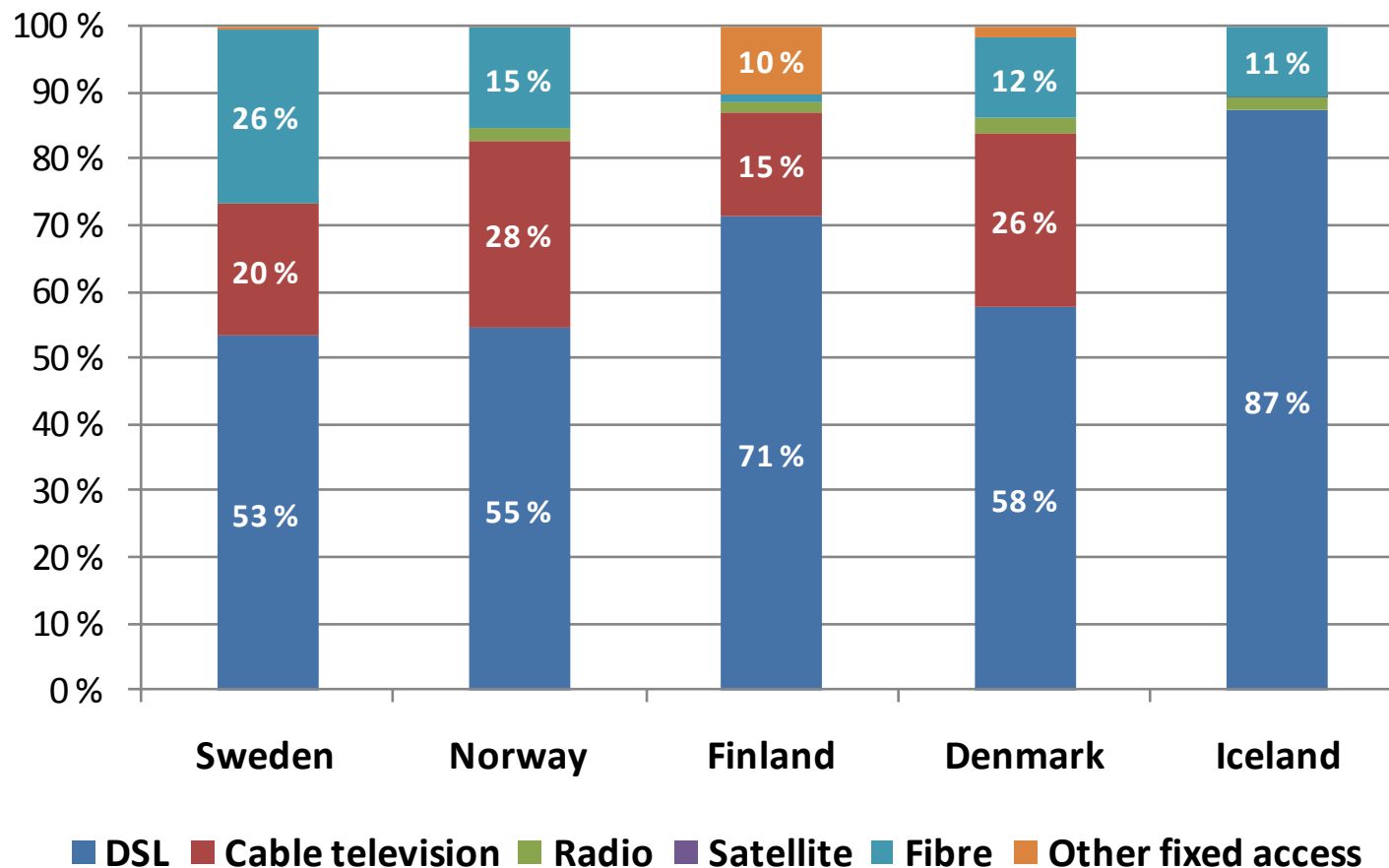
Share of broadband technologies in 2010 (all technologies incl. mobile broadband)



Sweden has the highest share of fibre. The number of xDSL subscriptions has fallen in all the Nordic countries for the first time.

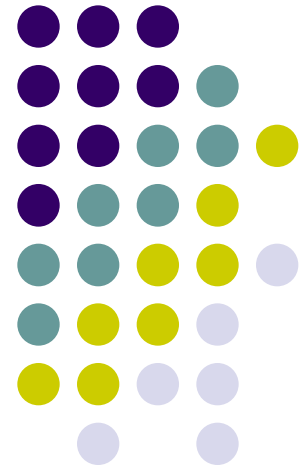
Fibre incl. "fibre + LAN" and "Ethernet + LAN"

Share of broadband technologies end of year 2010 (fixed broadbands)

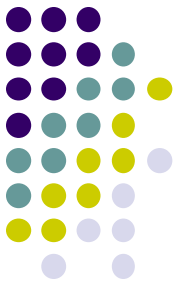


Fibre incl. "fibre + LAN" and "Ethernet + LAN"

Market Shares



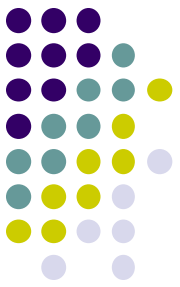
Market shares of mobile subscriptions¹, two largest operators



Sweden		Norway		Finland		Denmark		Iceland	
TeliaSonera	40,5 %	Telenor	50,3 %	Elisa	39,0 %	TDC (incl. subsidiaries)	41,2 %	Síminn	41,8 %
Tele2 (incl. Optimal)	31,7%	NetCom & Chess	26,2 %	TeliaSonera	36,0 %	Telenor (incl. subsidiaries)	26,1 %	Vodafone	30,9%
Sum	72,1 %		76,5 %		75 %		67,3%		72,7 %

¹Includes both private and business subscriptions and mobile broadband subscriptions. Includes subsidiaries

Market shares of fixed broadband subscriptions¹, two largest operators



Sweden		Norway		Finland		Denmark		Iceland	
TeliaSonera AB	37,8%	Telenor	49,3 %	Elisa	34%	TDC (incl subsidiaries)	61,6 %	Síminn	52,2 %
Telenor (incl Glocalnet, B2 Bredband)	17,9 %	NextGenTel	11,3 %	TeliaSonera	32 %	Telenor (incl subsidiaries)	12,1 %	Vodafone	30,4 %
Sum	55,6 %		60,6 %		66 %		73,7 %		82,6 %

¹Includes both private and business subscriptions

Market shares of fixed telephony subscriptions¹, two largest operators



Sweden		Norway		Finland		Denmark		Iceland	
TeliaSonera AB	62,9%	Telenor	66,7 %	Elisa	38%	TDC	73,2 %	Síminn	70,3 %
Tele ^o (incl Optimal)	17,9 %	Telio Telecom	5,9 %	TeliaSonera	22 %	Telia (incl. DLG Tele)	6,7 %	Vodafone	23,6 %
Sum	74,7 %		72,6 %		60 %		79,9 %		93,9 %

¹Includes both private and business subscriptions. Includes VoIP subscriptions.