

ICMR 2015: Telecoms and networks

Chart pack

Figure 5.1

Key telecoms indicators: 2014

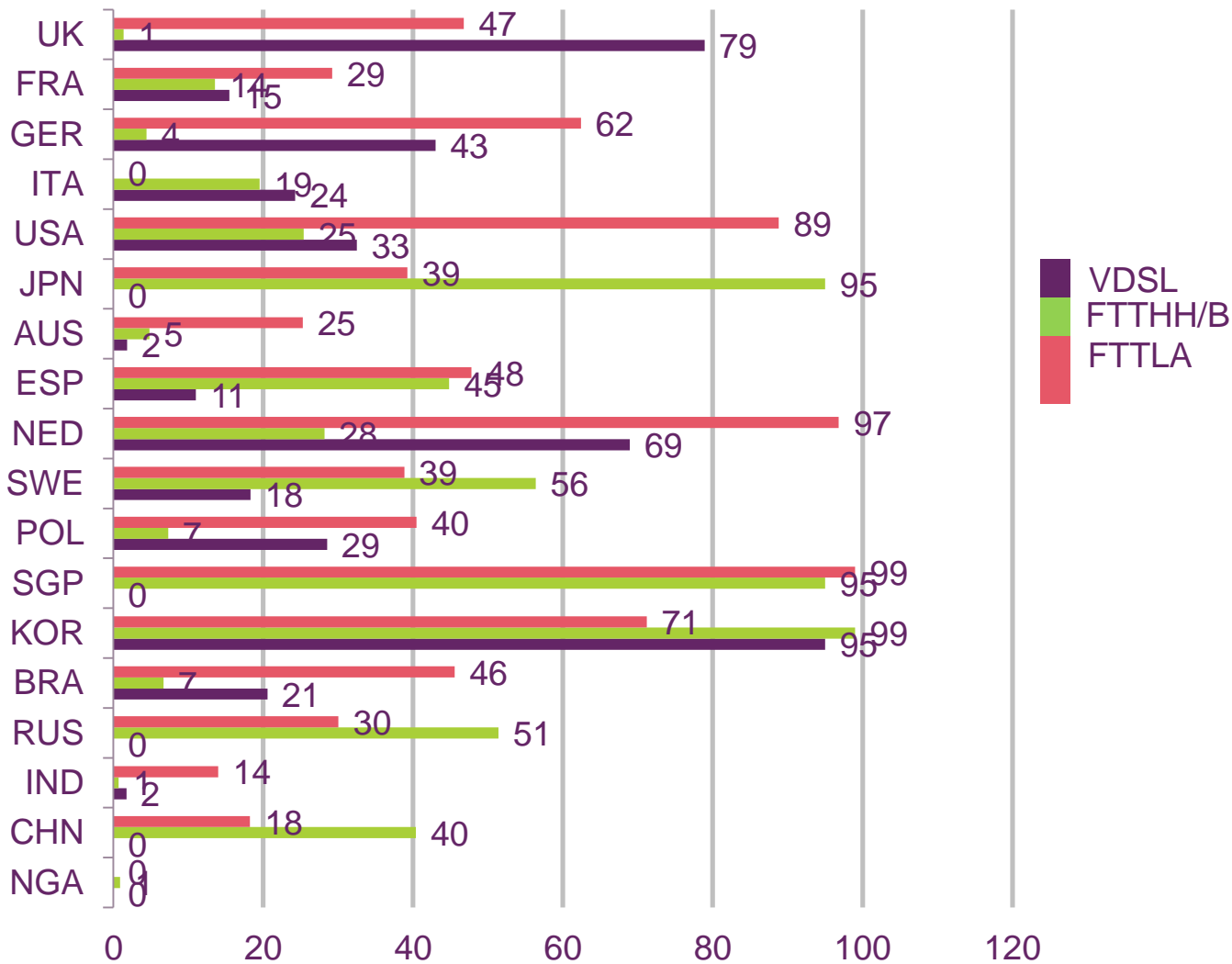
	UK	FRA	GER	ITA	USA	JPN	AUS	ESP	NED	SWE	POL	SGP	KOR	BRA	RUS	IND	CHN	NGA
Telecoms service revenues (£bn)	29	19	25	16	172	79	15	14	7	4	6	3	20	30	19	15	110	6
Monthly telecoms revenues per capita (£)	37	25	25	22	45	52	53	24	34	36	14	49	33	12	11	1	7	3
Fixed voice connections per 100 population (inc. managed VoIP)	61	60	45	37	41	45	38	40	42	39	16	36	54	23	27	2	19	0
Monthly outbound fixed minutes per capita	131	119	156	77	112	83	121	79	90	100	23	80	99	67	81	4	8	0
Mobile connections per 100 population	130	125	137	154	111	122	131	108	134	151	151	147	116	140	168	74	94	78
Mobile data connections per 100 population	87	67	64	71	104	124	114	77	69	116	117	183	109	78	66	6	41	43
4G mobile network availability (% of population coverage of at least one operator)	84	75	92	77	98	99	87	76	100	99	80	99	100	42	51	2	73	11
4G as % of all mobile connections	28	14	12	4	40	37	39	13	19	27	7	39	63	2	5	0	8	0
Monthly outbound mobile minutes per capita	178	191	113	226	315	132	161	141	129	231	180	257	209	181	309	133	179	62
Average mobile data volumes per person (Mbyte)	362	397	398	684	1771	1495	481	370	313	3097	529	1537	2024	197	181	18	126	53
Fixed broadband connections per 100 population	37	40	35	23	30	39	29	28	41	34	21	33	39	11	19	1	18	0
Average monthly fixed broadband data volumes per person (Gbyte)	22	13	10	7	19	32	11	9	17	31	5	23	49	3	4	0	4	0
NGA connections per 100 population	13	4	10	1	22	26	10	10	25	22	8	22	34	5	13	0	8	0
Dedicated data-only mobile broadband connections per 100 population	8	6	10	11	9	12	26	4	6	23	15	2	1	3	14	1	1	3
Managed VoIP connections per 100 population	9	39	21	5	16	22	3	7	31	18	4	10	20	4	1	0	1	0

Source: HIS / industry data / Ofcom

Figure 5.2

Population availability of NGA networks, by country and technology: 2014

Population coverage (%)



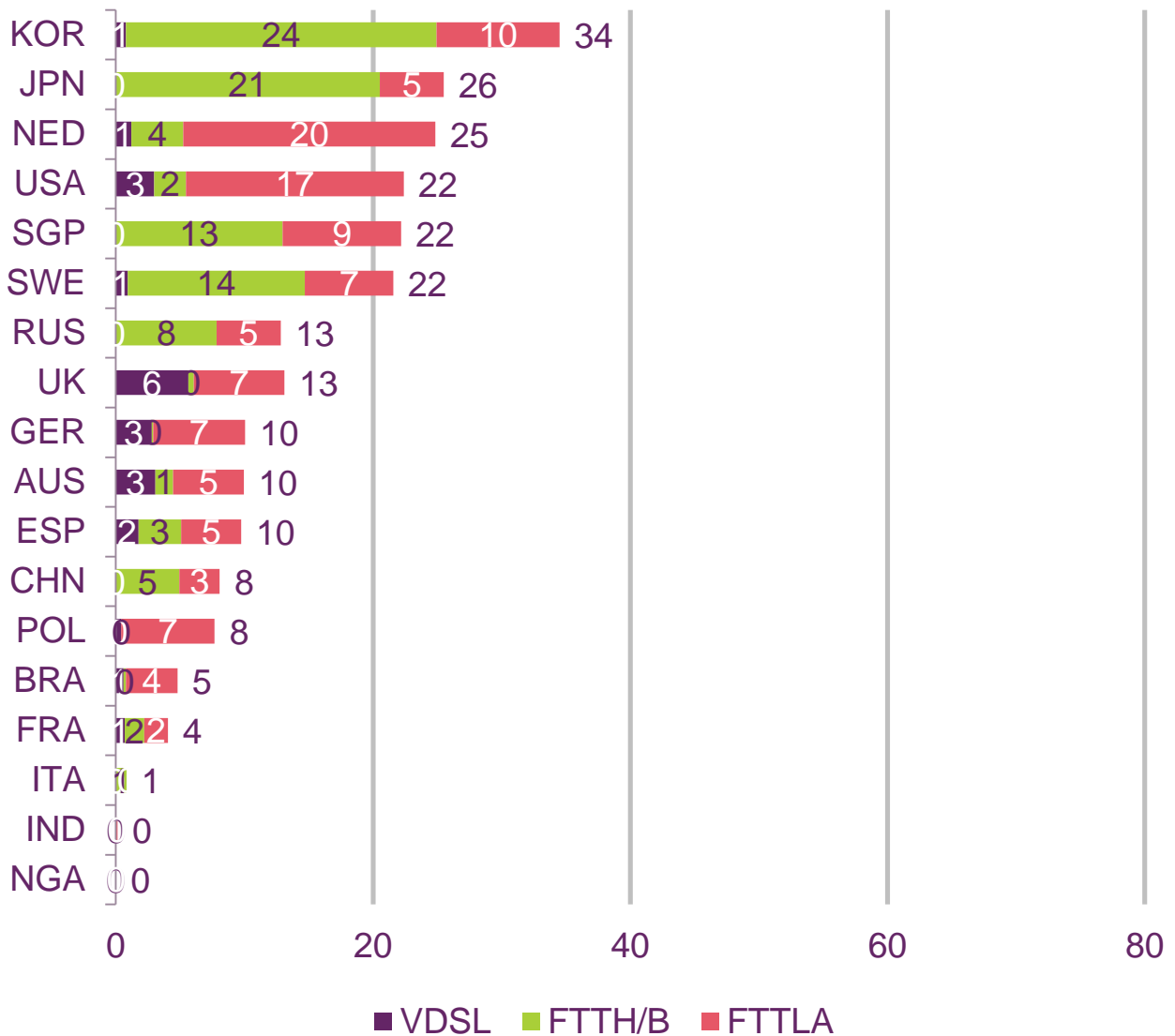
Source: IHS

Note: NGA on the left hand side of the chart is the country code for Nigeria, and does not refer to next generation access technologies

Figure 5.3

NGA broadband connections per 100 people, by technology: 2014

Connections per 100 people



Source: IHS

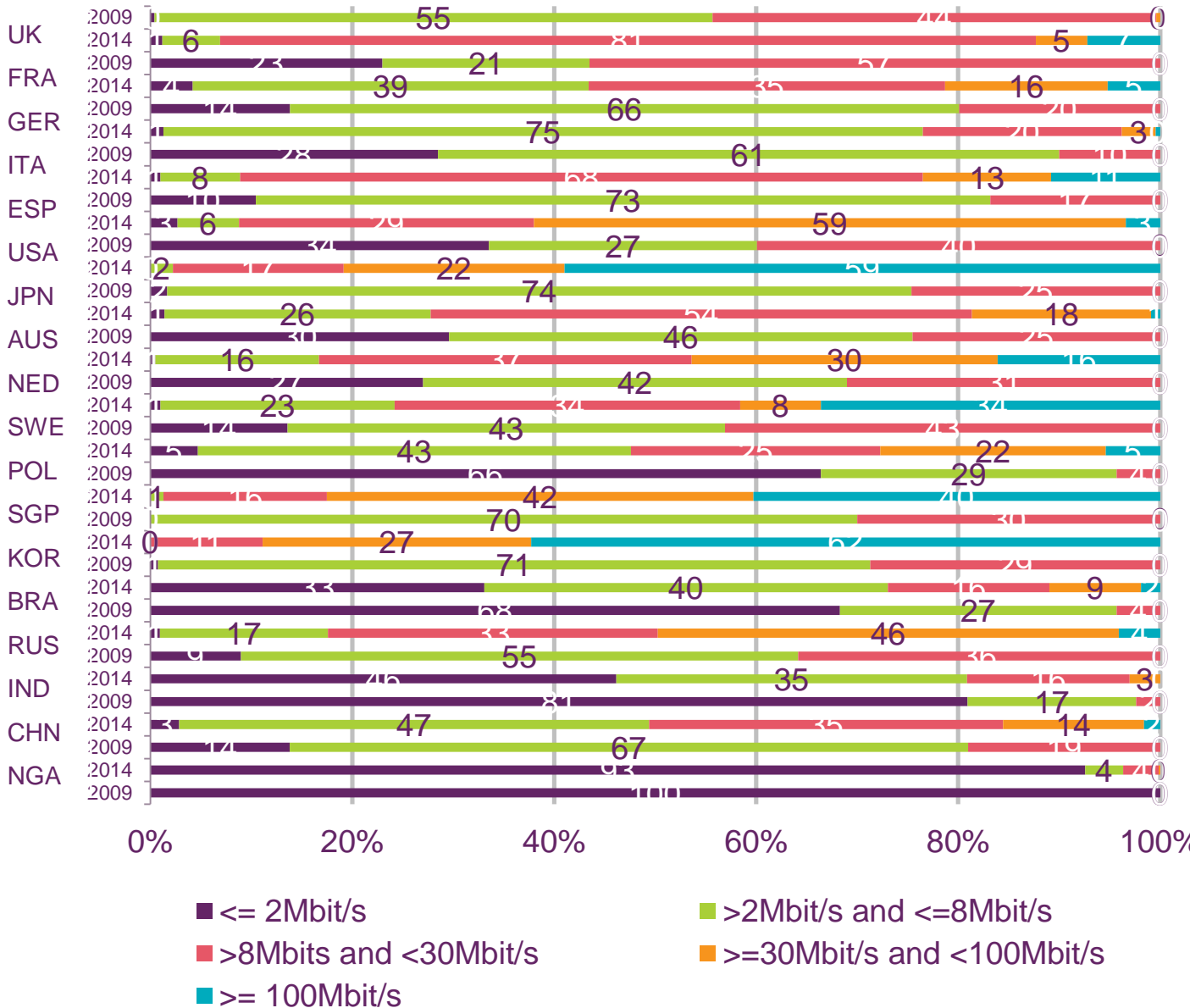
Note: NGA on the left hand side of the chart is the country code for Nigeria, and does not refer to next generation access technologies.

Figure 5.4



Fixed broadband connections, by headline speed: 2009 and 2014

Proportion of connections (%)

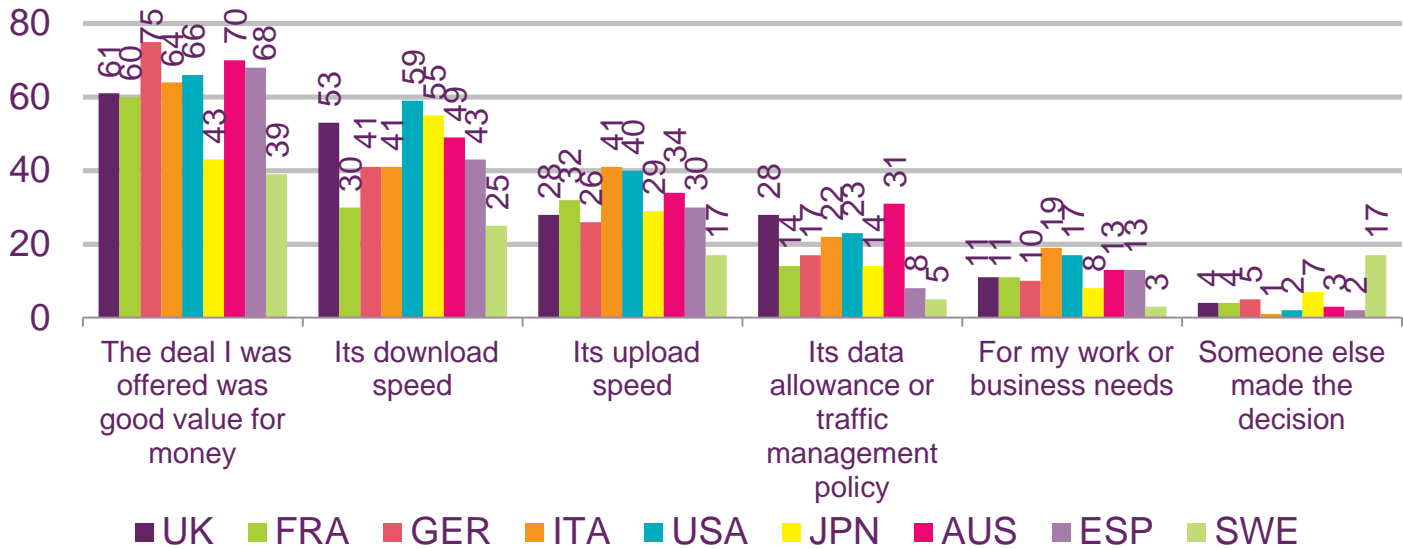


Source: IHS / Ofcom / operator data

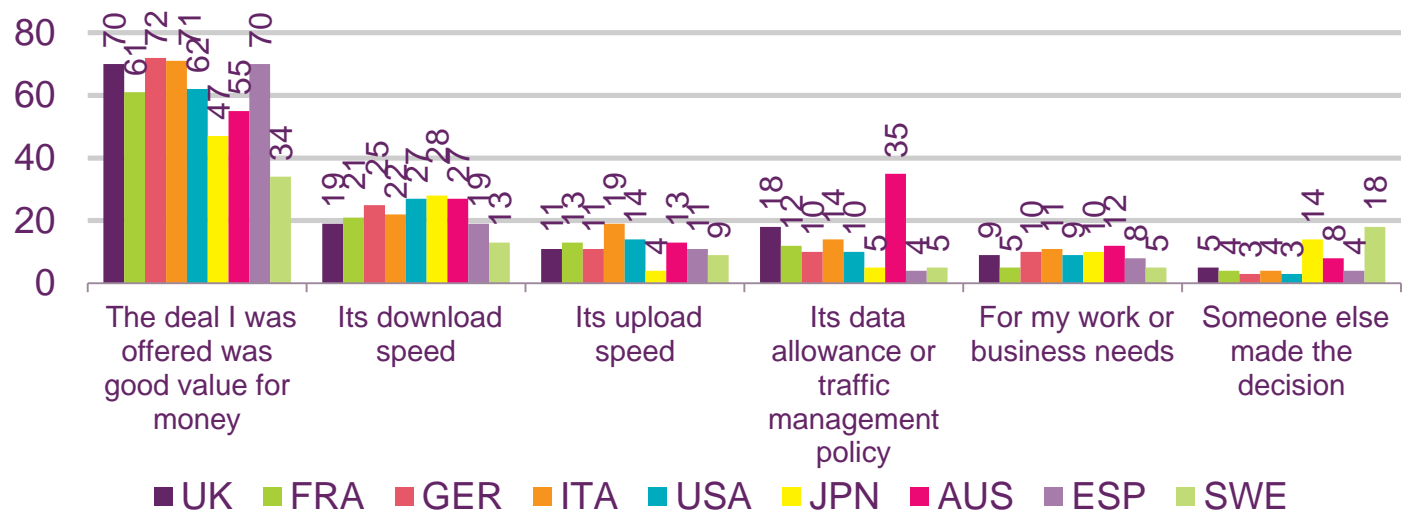
Figure 5.5

Reason for choosing current fixed broadband service

Proportion (%) of respondents with broadband and a headline speed of 30Mbit/s or more



Proportion (%) of respondents with broadband with a headline speed of less than 30Mbit/s



Source: Ofcom consumer research September – October 2015

Base: All respondents with superfast broadband, UK=305, FRA=212, GER=273, ITA=151, USA=170, JPN=327, AUS=128, ESP=316, SWE=358

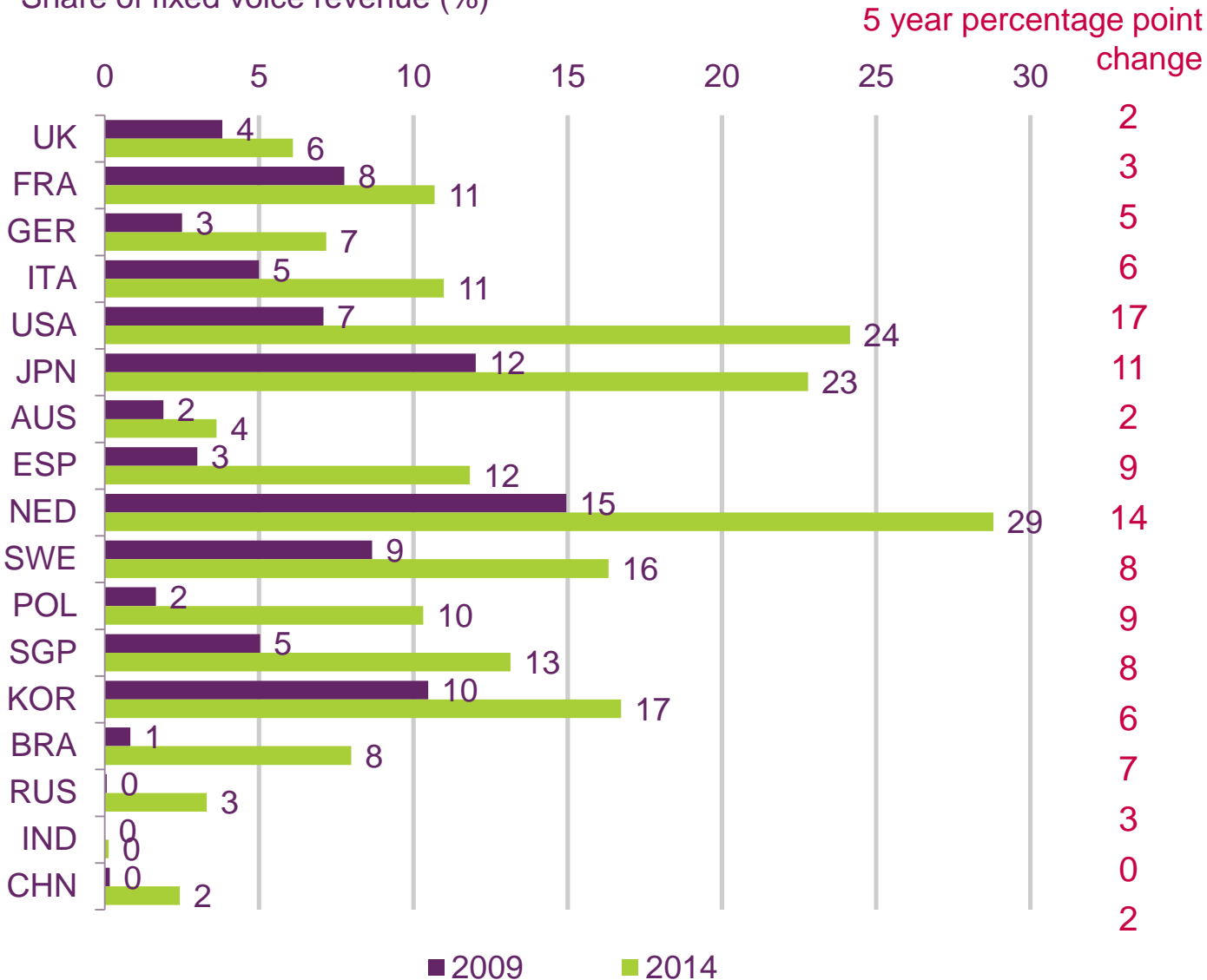
Base: All respondents with non-superfast broadband, UK=218, FRA=205, GER=229, ITA=334, USA=142, JPN=101, AUS=154, ESP=280, SWE=190

Q.29 Why did you choose your home broadband service?

Figure 5.6

Managed VoIP revenues as a proportion of fixed voice revenues: 2009 and 2014

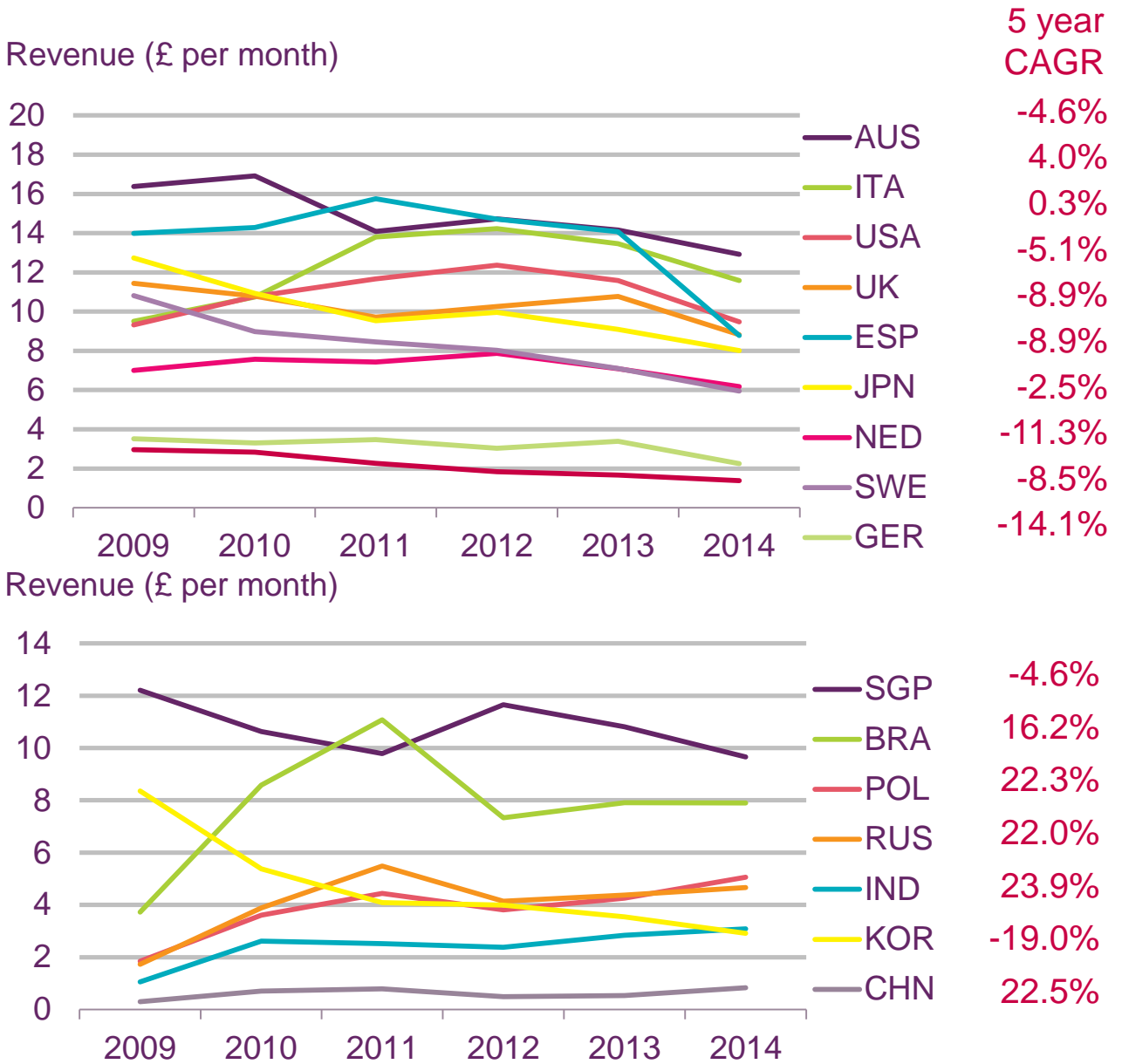
Share of fixed voice revenue (%)



Source: IHS / industry data / Ofcom

Figure 5.7

Monthly managed VoIP revenue per connection

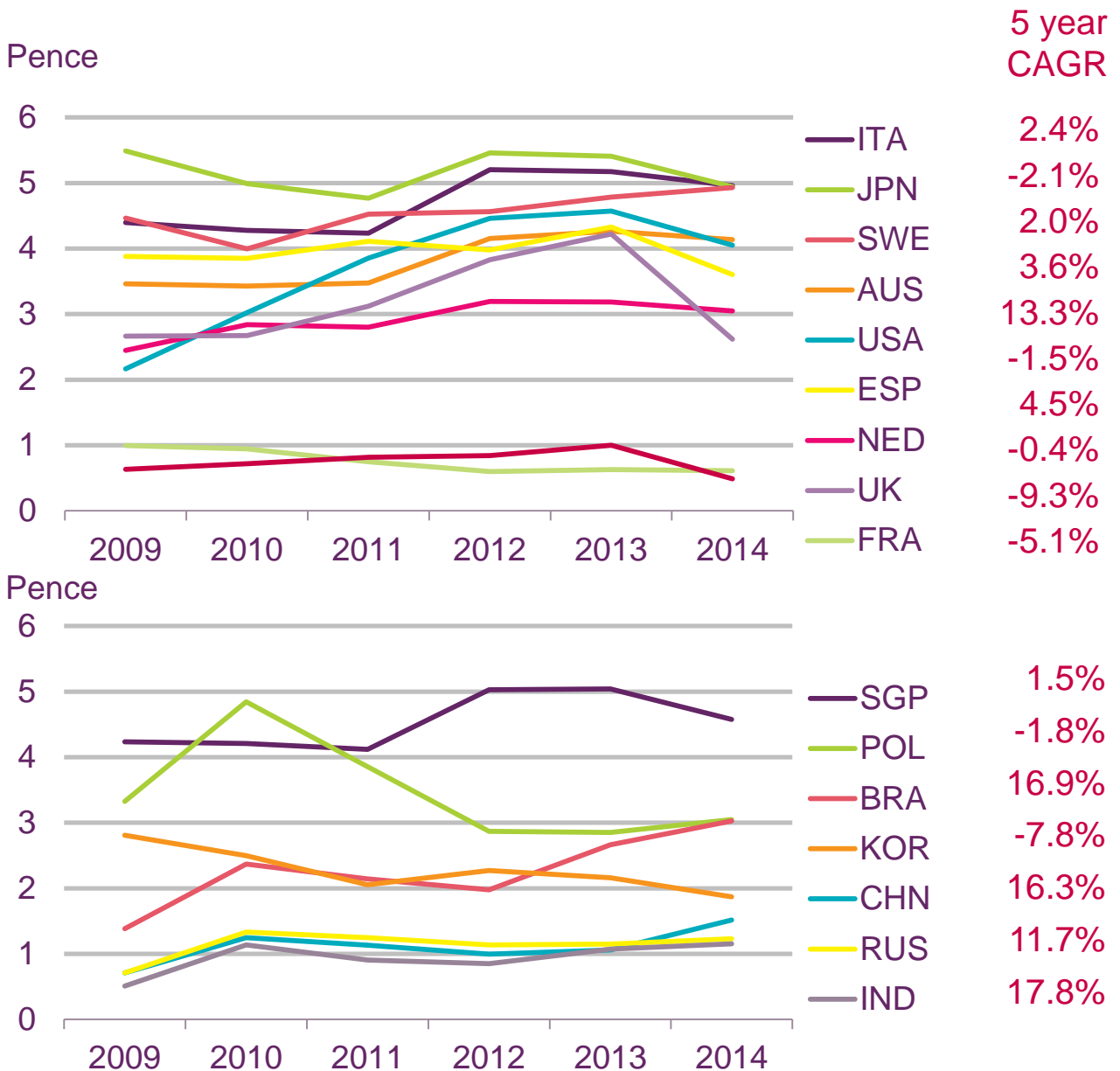


Source: IHS / industry data / Ofcom

Note: All figures expressed in nominal terms

Figure 5.8

Average price per managed VoIP minute



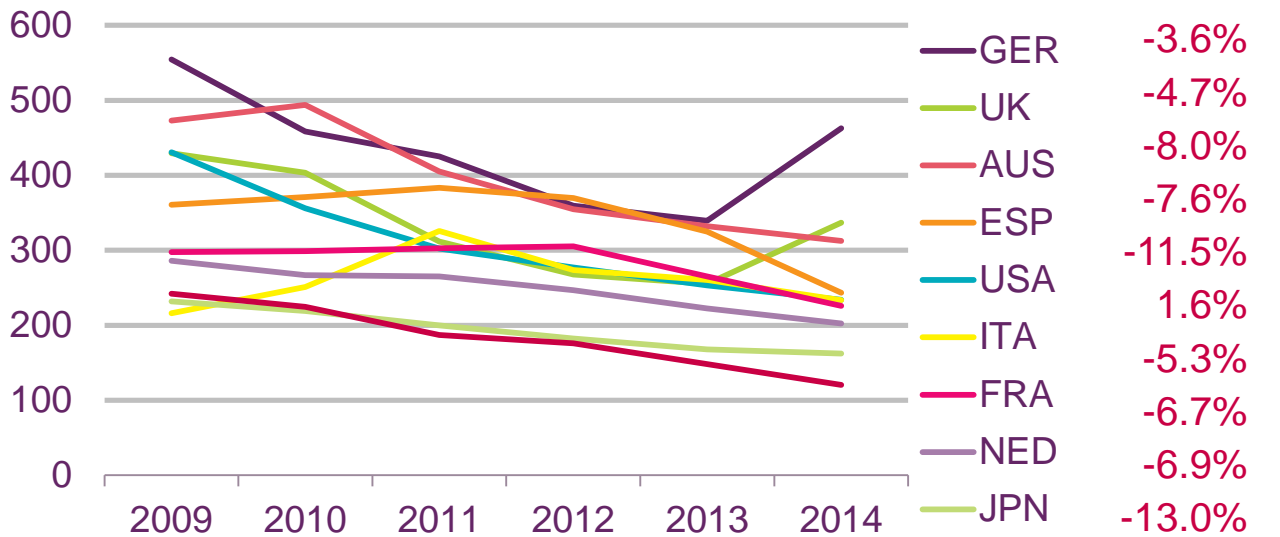
Source: IHS / industry data / Ofcom

Note: All figures expressed in nominal terms

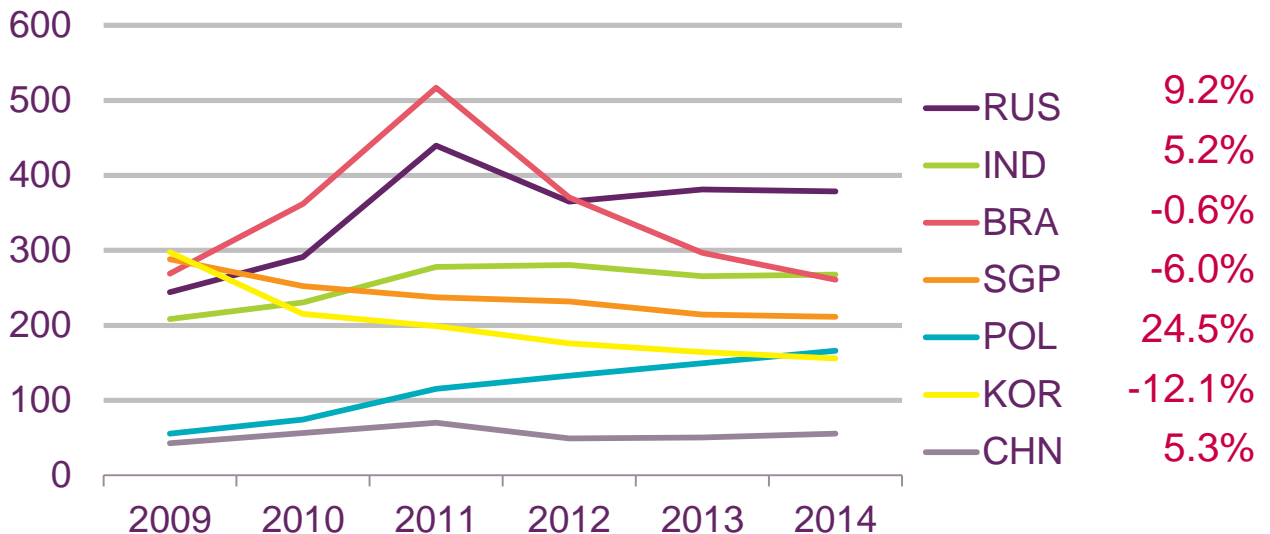
Figure 5.9

Average monthly managed VoIP call minutes per connection

Minutes per month



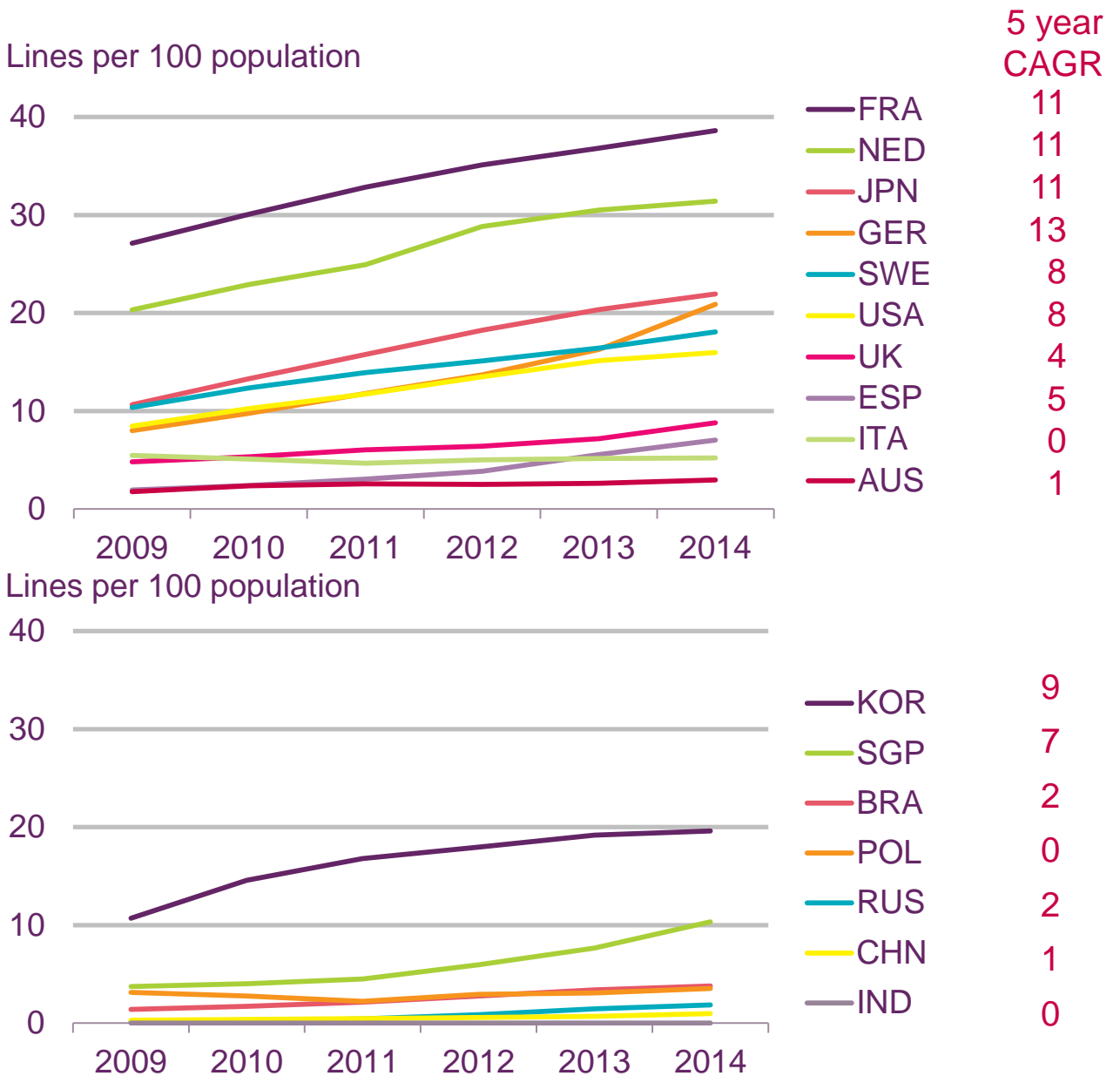
Minutes per month



Source: IHS / industry data / Ofcom

Figure 5.10

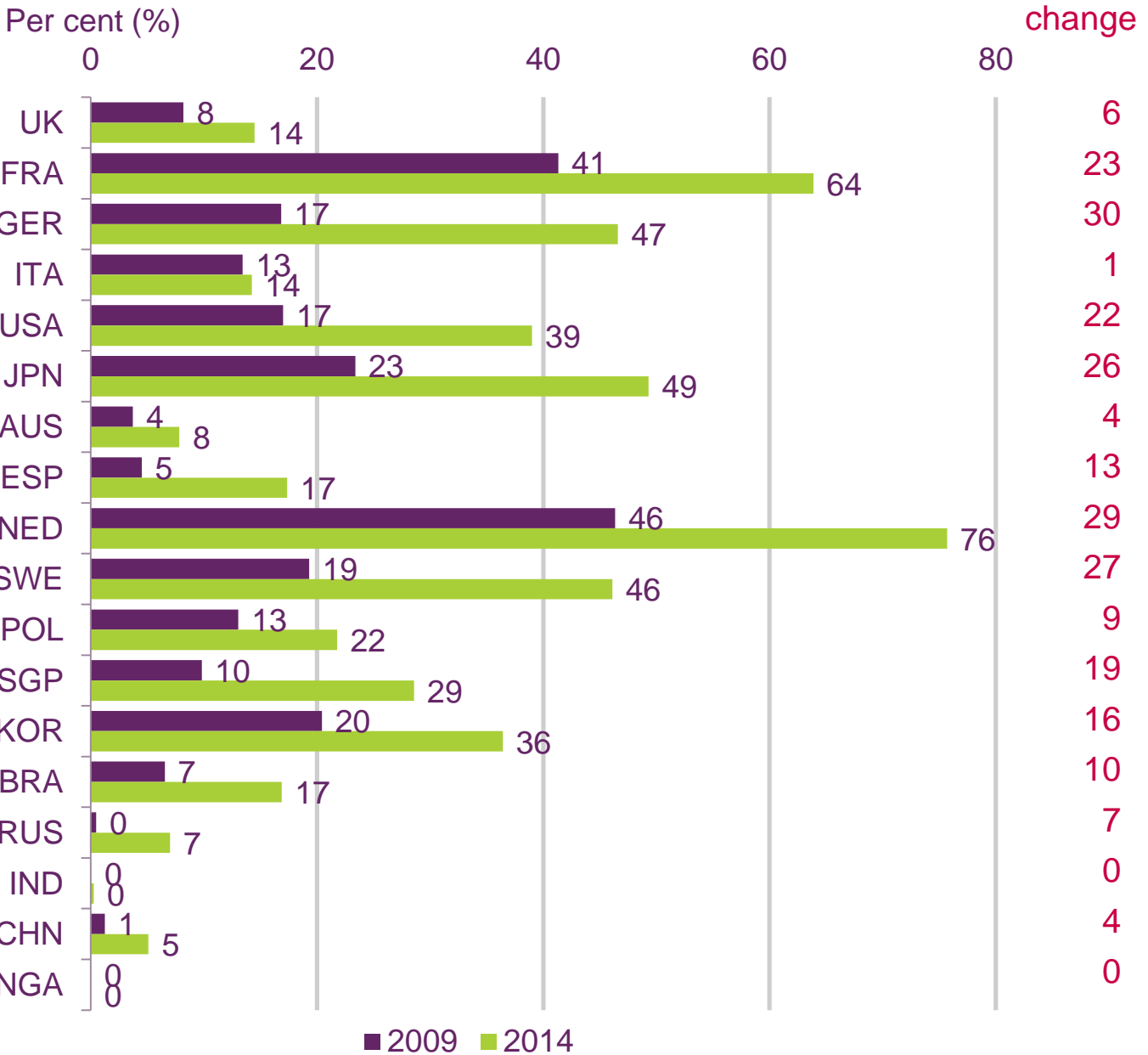
Managed VoIP connections per 100 people



Source: IHS / industry data / Ofcom

Figure 5.11

Managed VoIP connections as a proportion of total voice connections

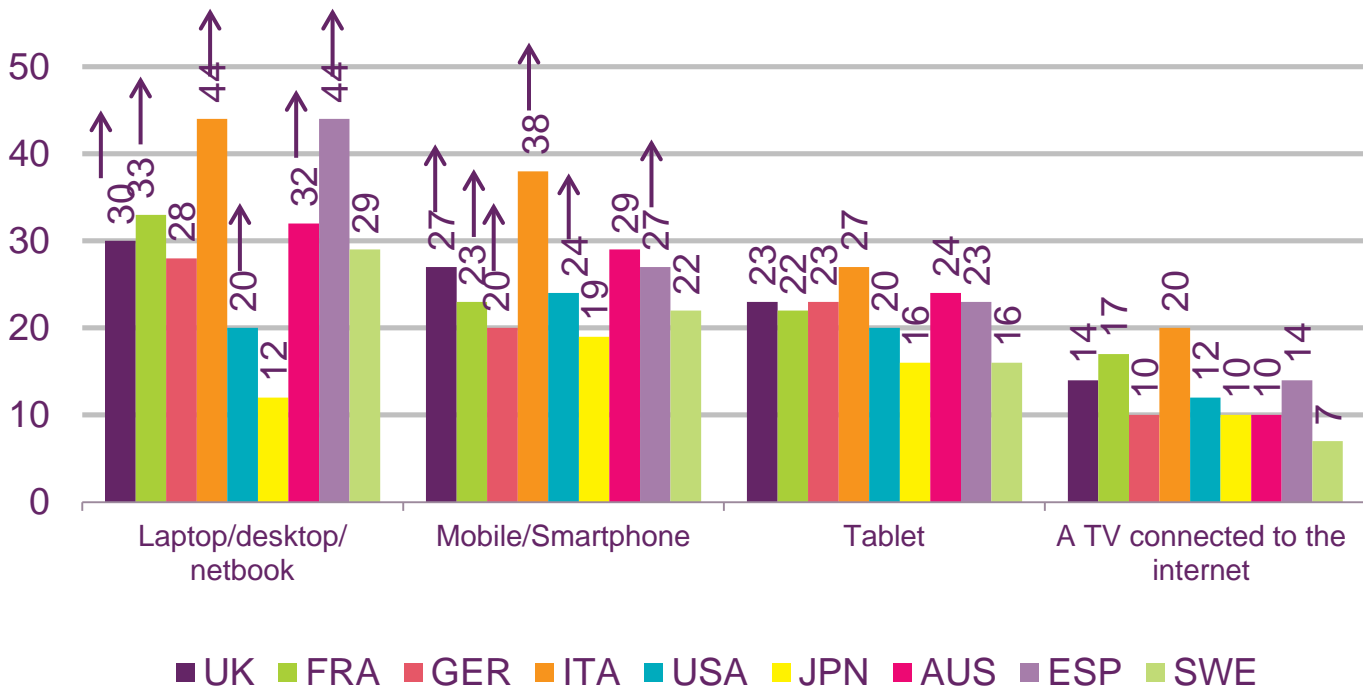


Source: IHS / industry data / Ofcom

Figure 5.12

OTT VoIP use, by device type

Proportion (%) of all respondents with each device



↑ Direction of arrow indicates a statistically significant difference compared to last year

Source: Ofcom consumer research September - October 2015

Base: All who own each device, UK=879/594/398/235, FRA=913/568/335/122,

GER=923/623/318/176, ITA=876/779/460/185 USA=904/523/319/195 JPN=840/573/234/98,

AUS=906/610/370/191, ESP=897/803/435/194, SWE=879/678/343/213.

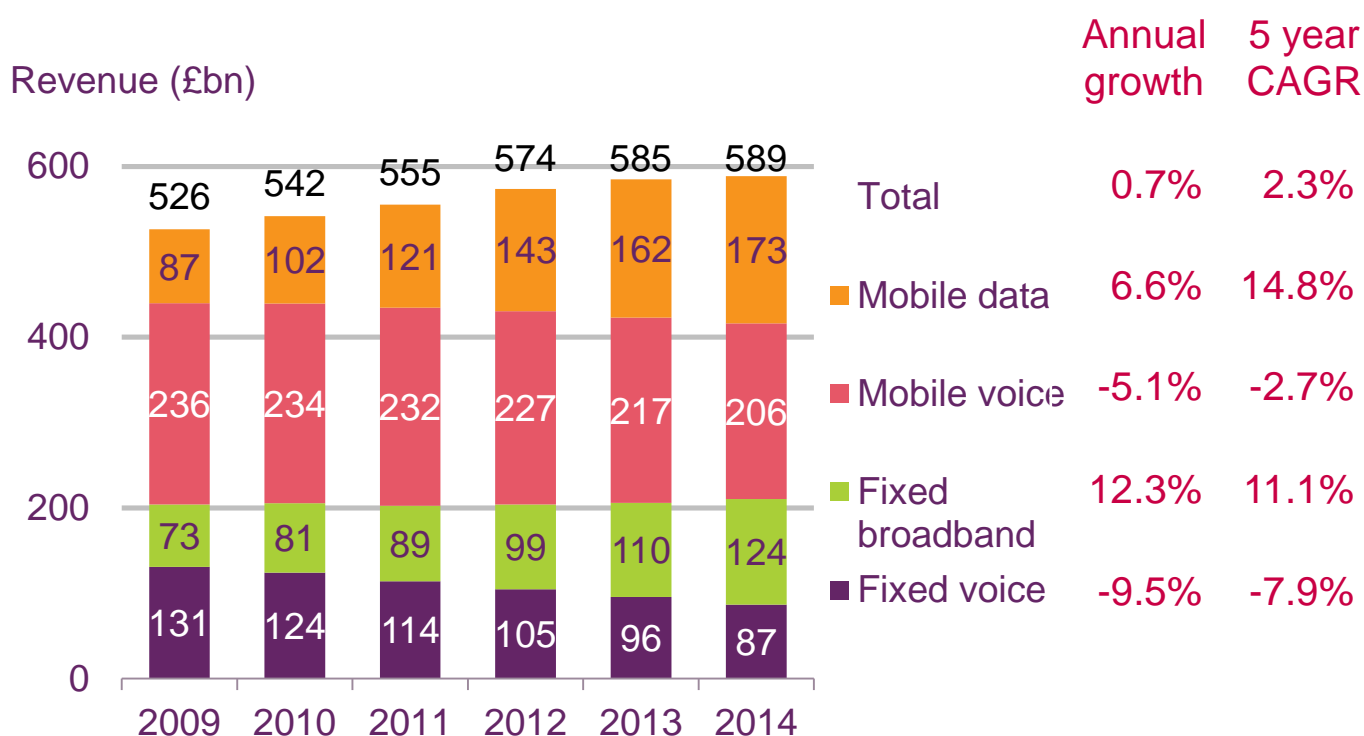
(Japan* - Caution low base size less than 100).

Q.9b Which, if any, of the following ways of communicating over the internet do you use each of your devices for?

Figure 5.13



Total comparator country retail telecoms revenue, by sector: 2009-2014

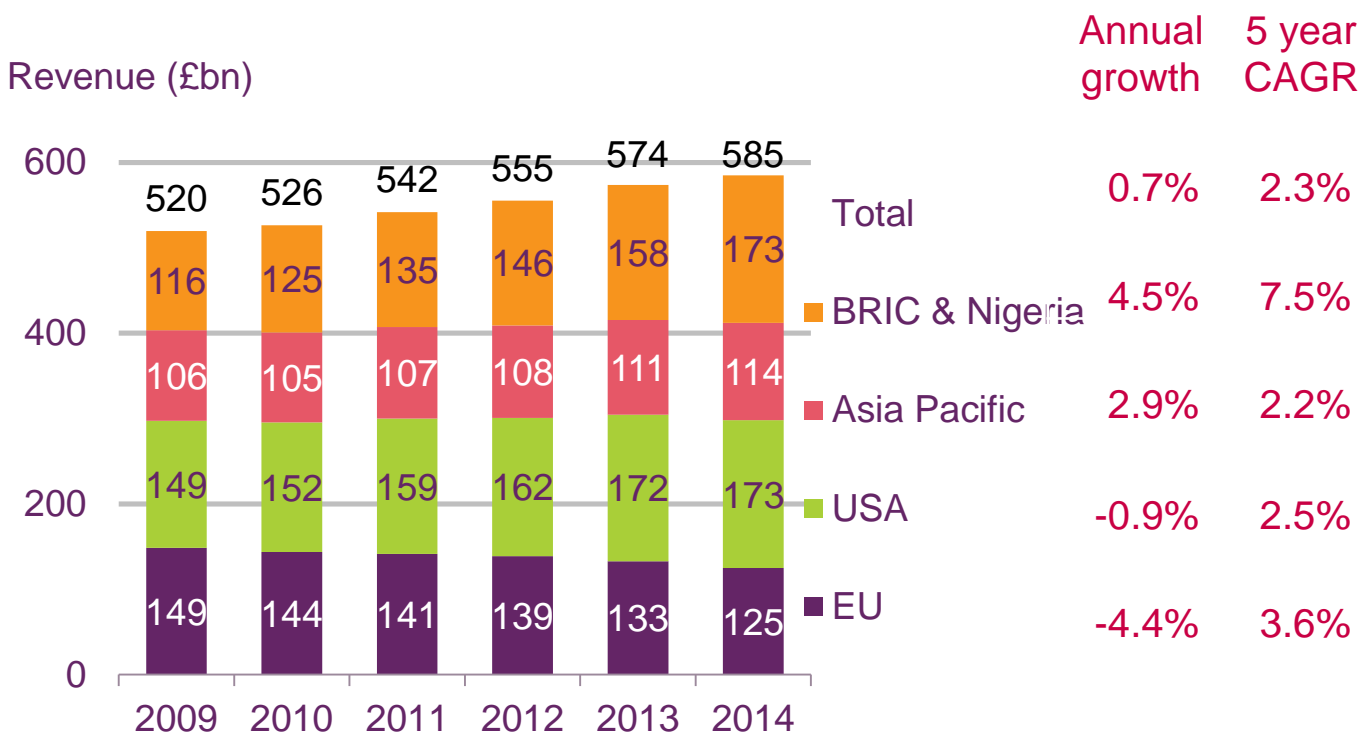


Source: IHS / industry data / Ofcom

Note: Fixed voice revenues include managed VoIP revenues; voice revenues include access/line rental revenues and may include revenues relating to bundled data services. Mobile internet excludes mobile messaging services. All figures expressed in nominal terms.

Figure 5.14

Total comparator country retail telecoms revenue, by country type: 2009-2014

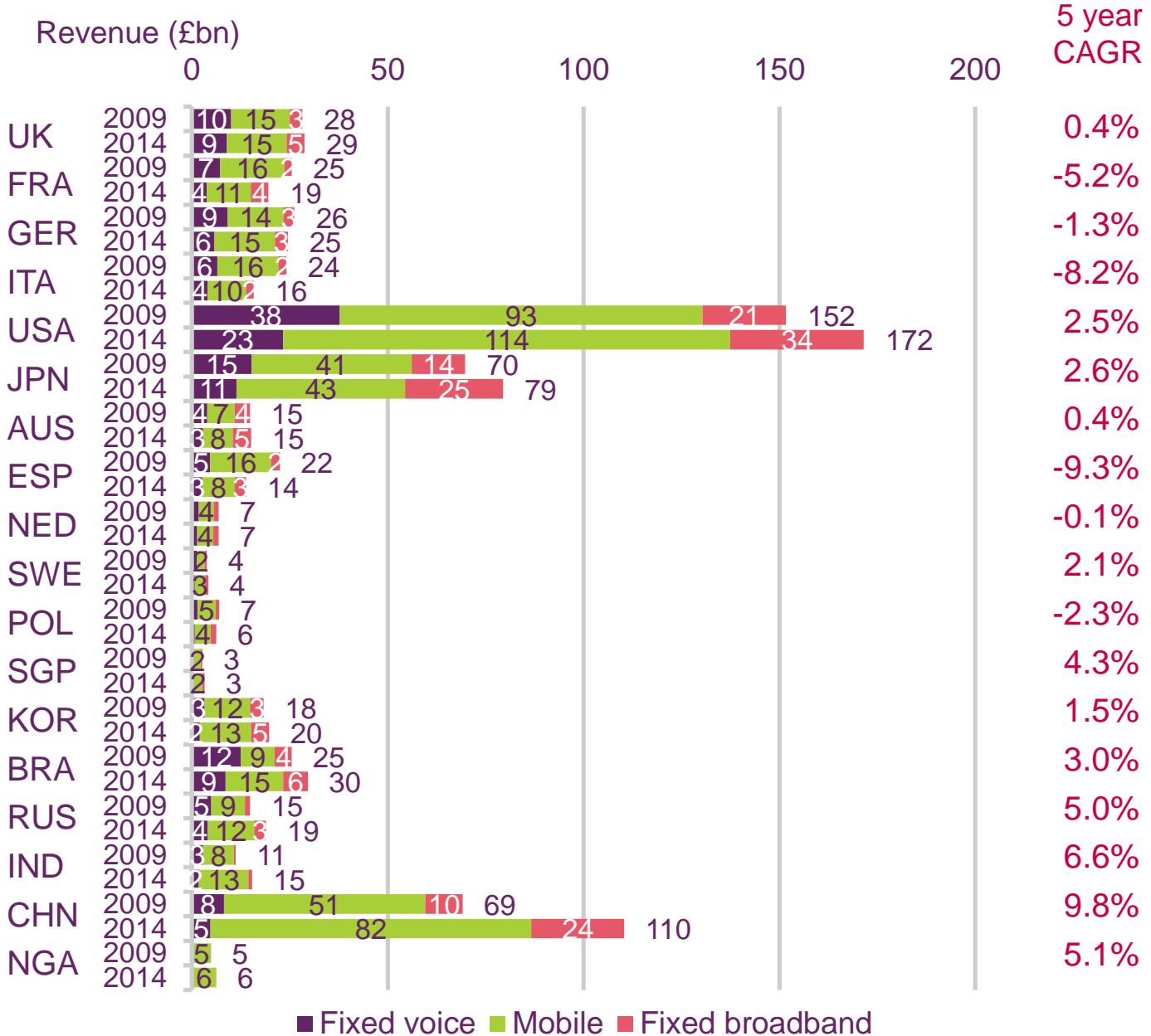


Source: IHS / industry data / Ofcom

Note: All figures expressed in nominal terms

Figure 5.15

Telecoms service retail revenues, by country and sector: 2009 and 2014

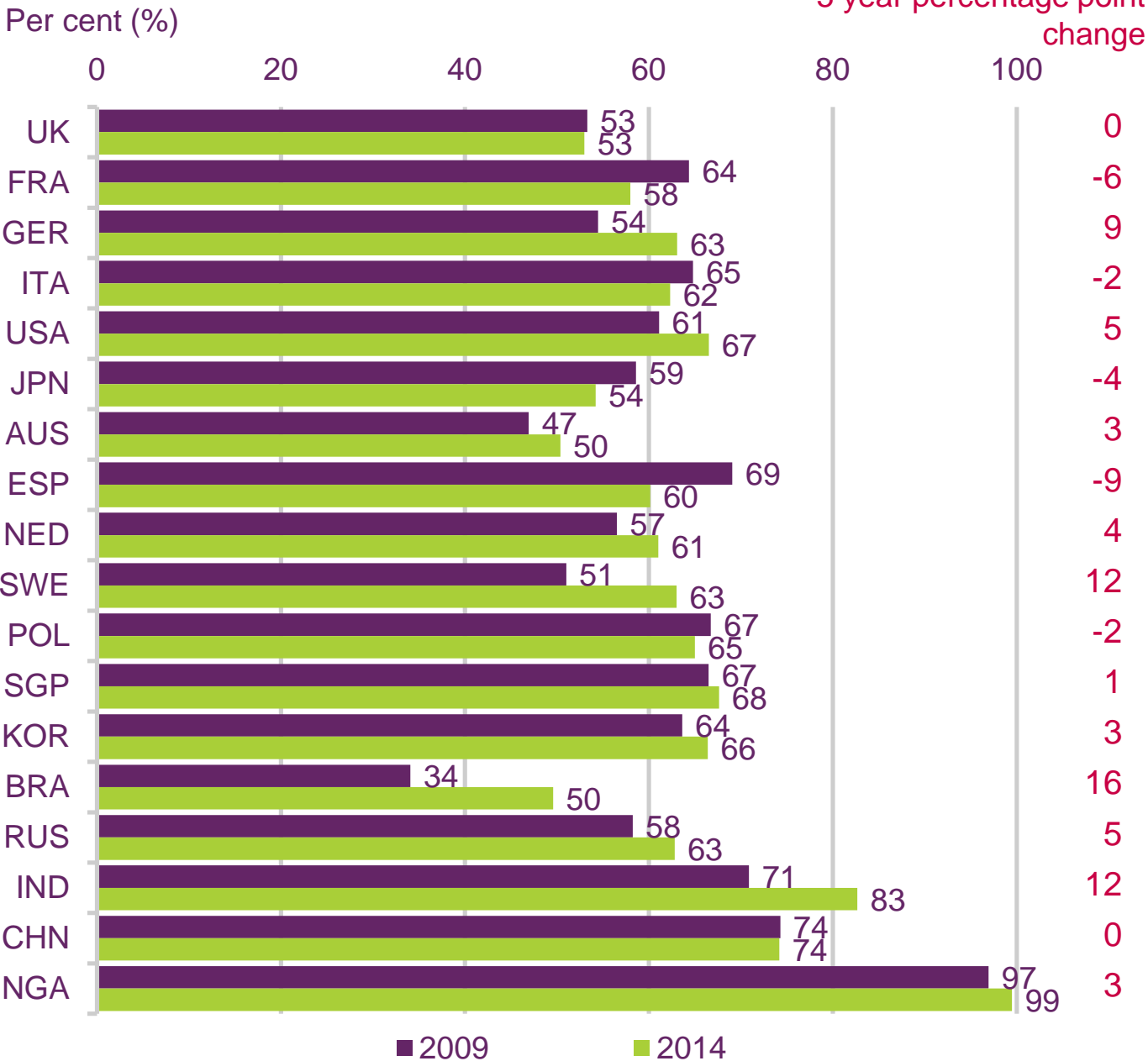


Source: IHS / industry data / Ofcom

Note: Fixed voice revenues include managed VoIP revenues. All figures expressed in nominal terms.

Figure 5.16

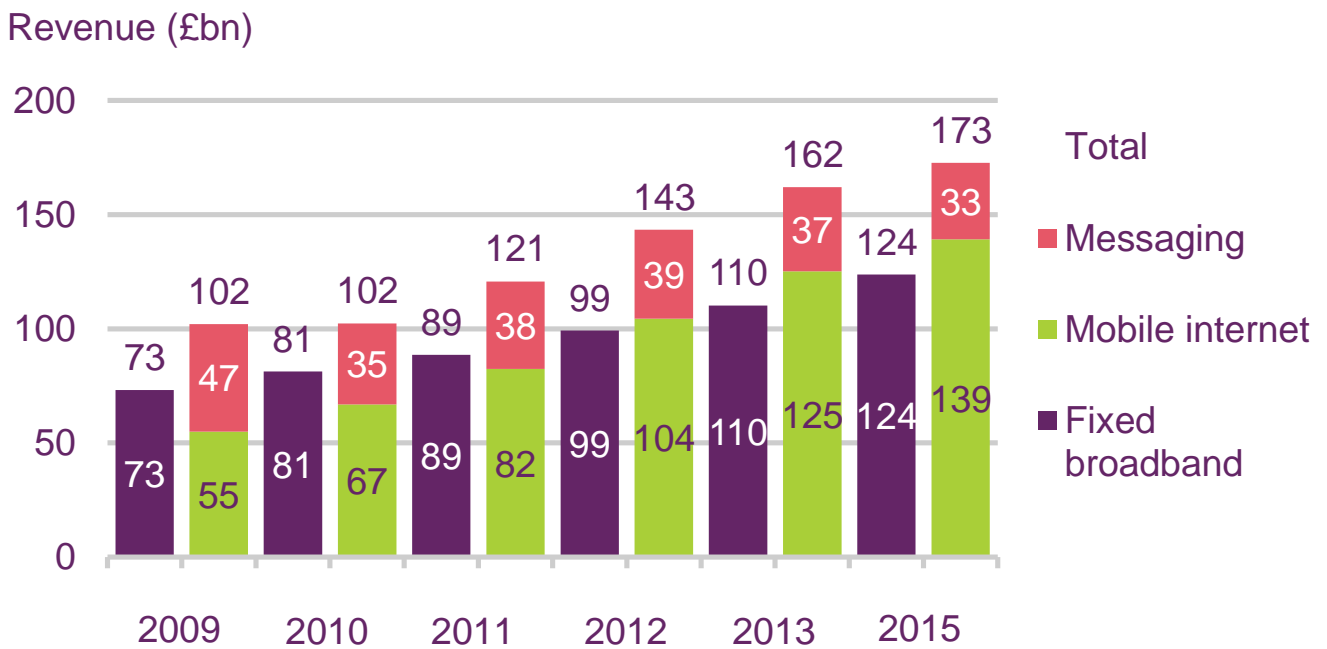
Mobile as a proportion of total telecoms revenues: 2009 and 2014



Source: IHS / industry data / Ofcom

Figure 5.17

Total fixed broadband and mobile data revenues across all comparator countries: 2009-2014

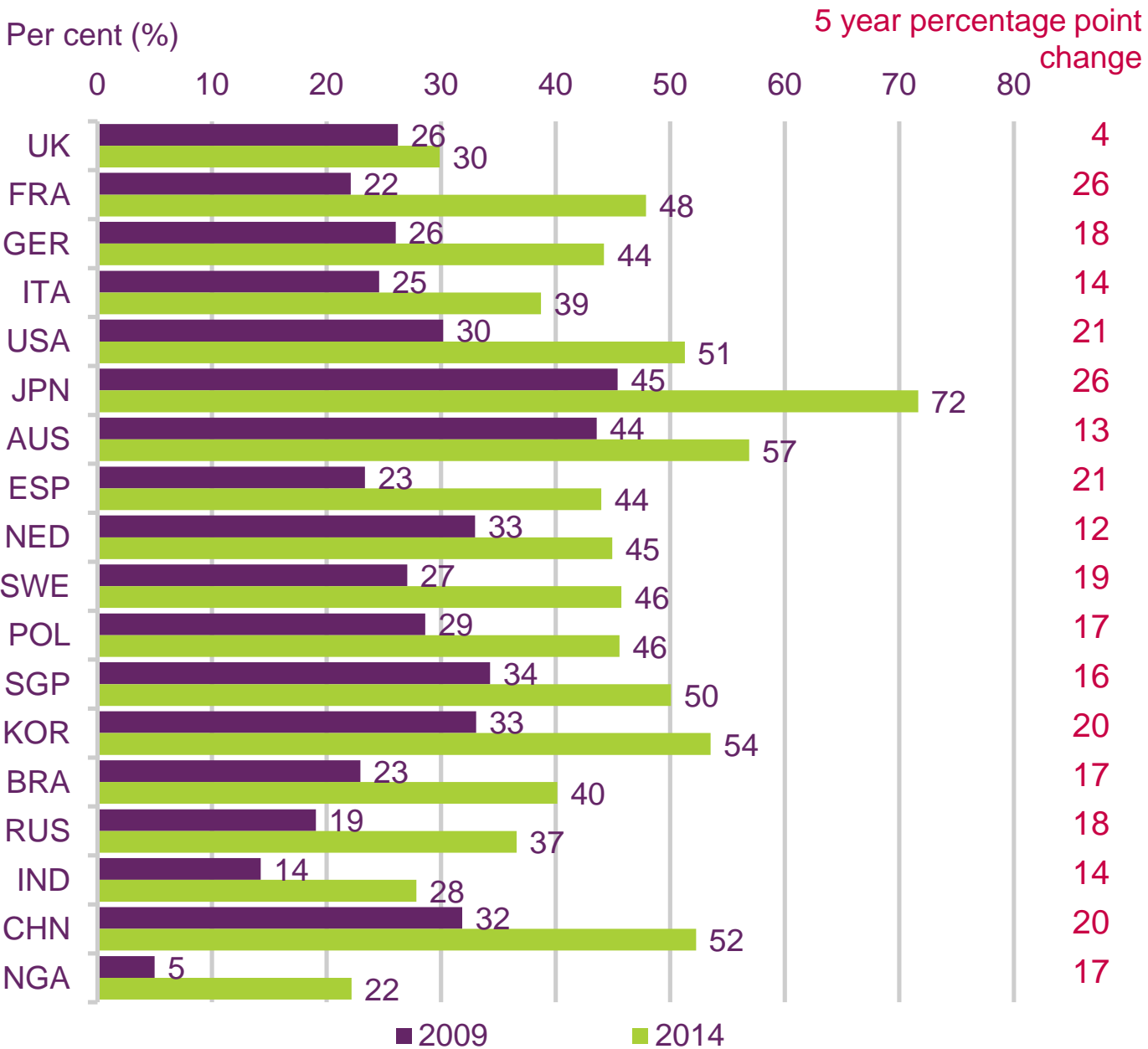


Source: IHS / industry data / Ofcom

Note: Messaging includes SMS and MMS. All figures expressed in nominal terms.

Figure 5.18

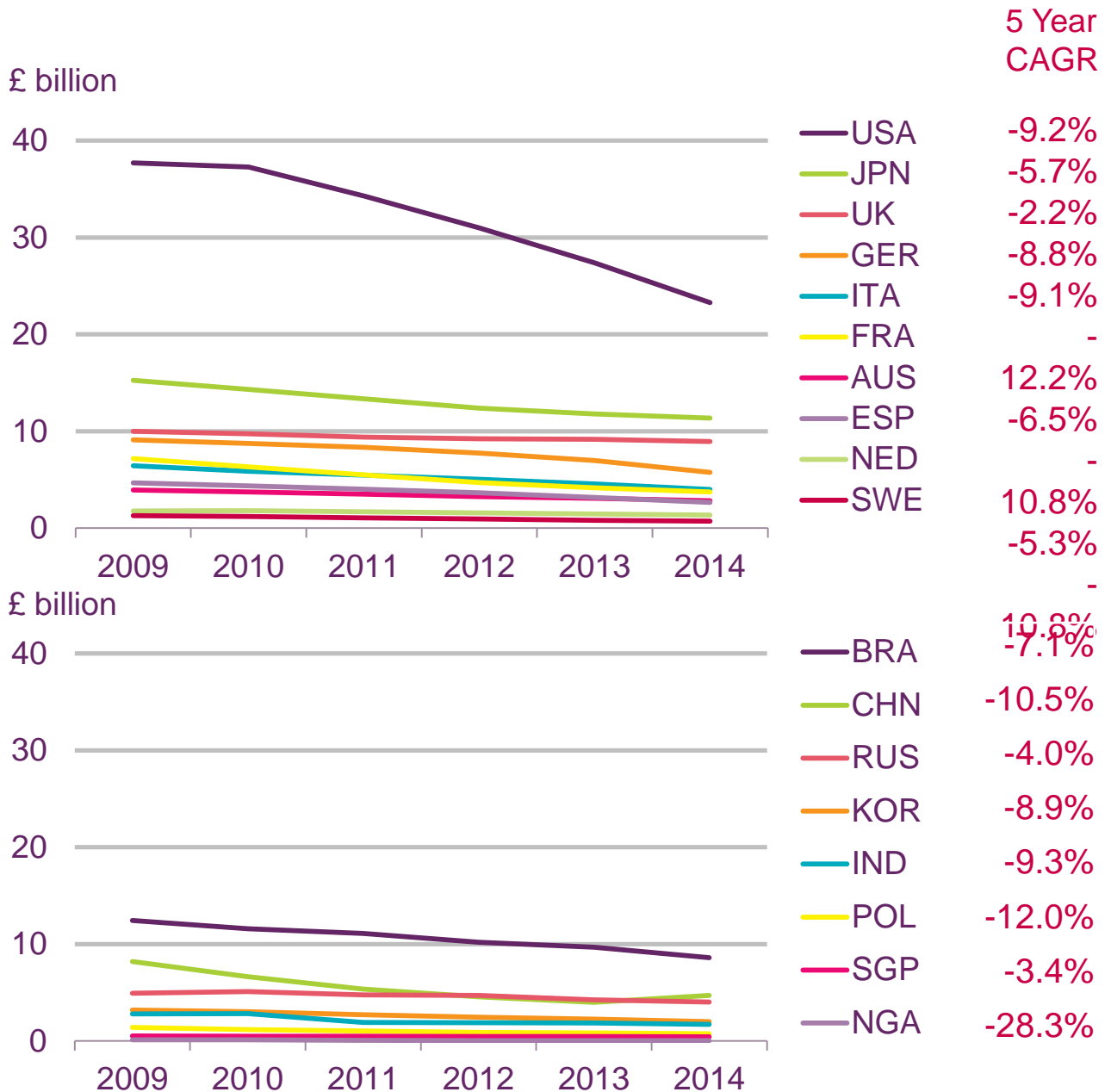
Data revenue as a proportion of total telecoms revenue: 2009 and 2014



Source: IHS / industry data / Ofcom

Figure 5.19

Retail fixed line voice revenues: 2009-2014



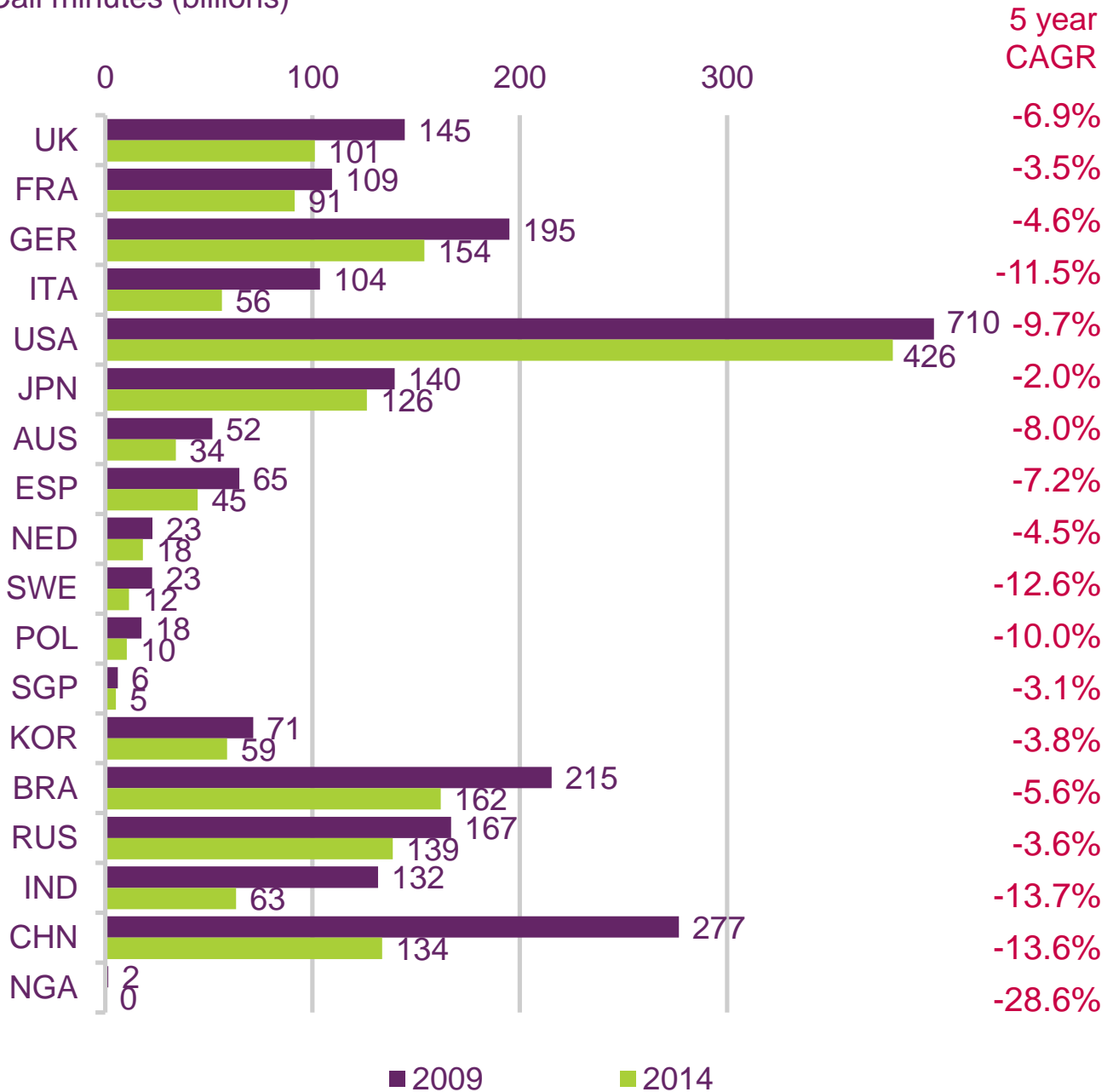
Source: IHS / industry data / Ofcom

Note: Includes managed VoIP revenues. All figures expressed in nominal terms.

Figure 5.20

Fixed line voice call volumes: 2009 and 2014

Call minutes (billions)

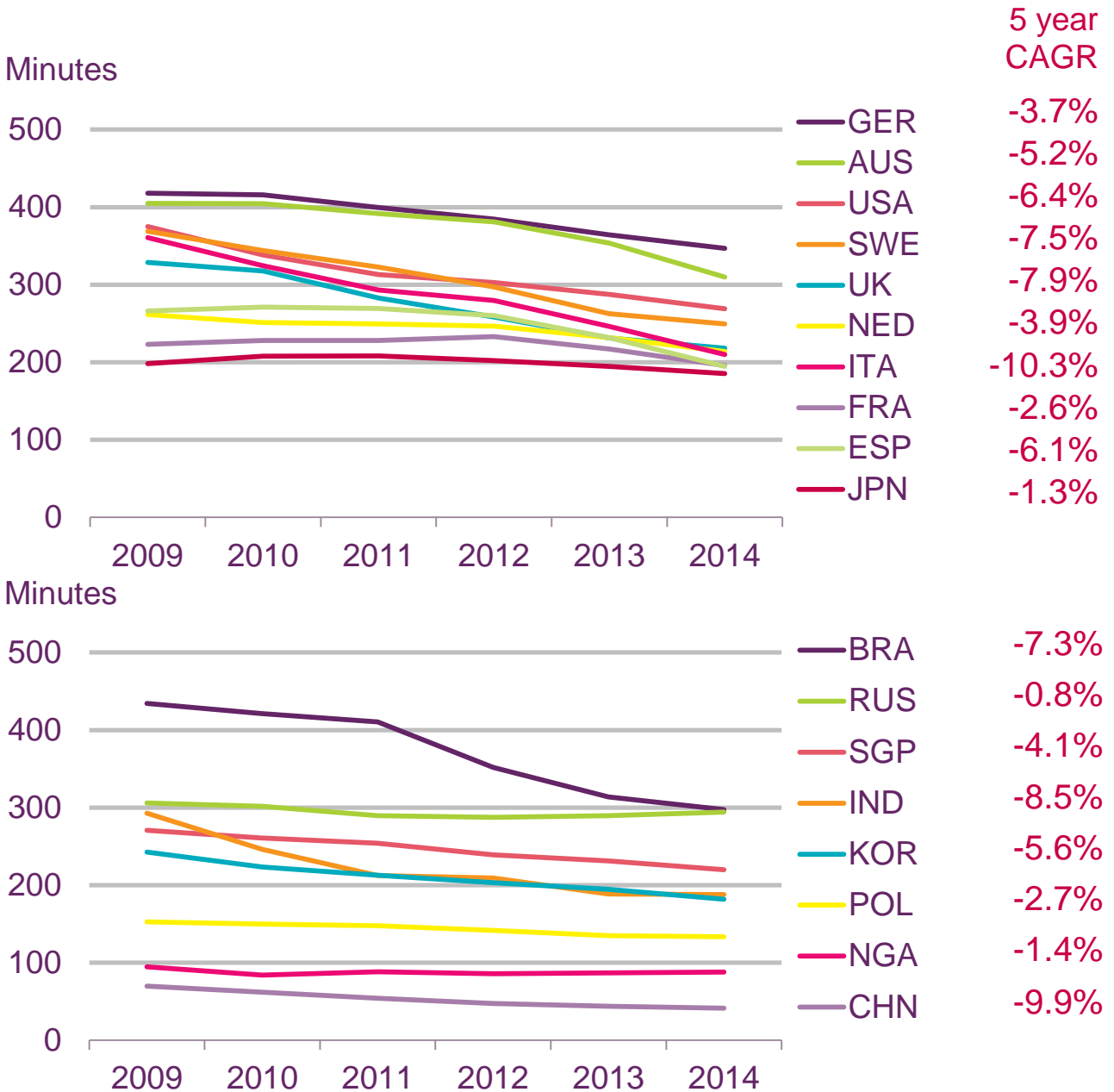


Source: IHS / industry data / Ofcom

Note: Includes managed VoIP calls.

Figure 5.21

Monthly outbound minutes per fixed line: 2009-2014



Source: IHS / industry data / Ofcom

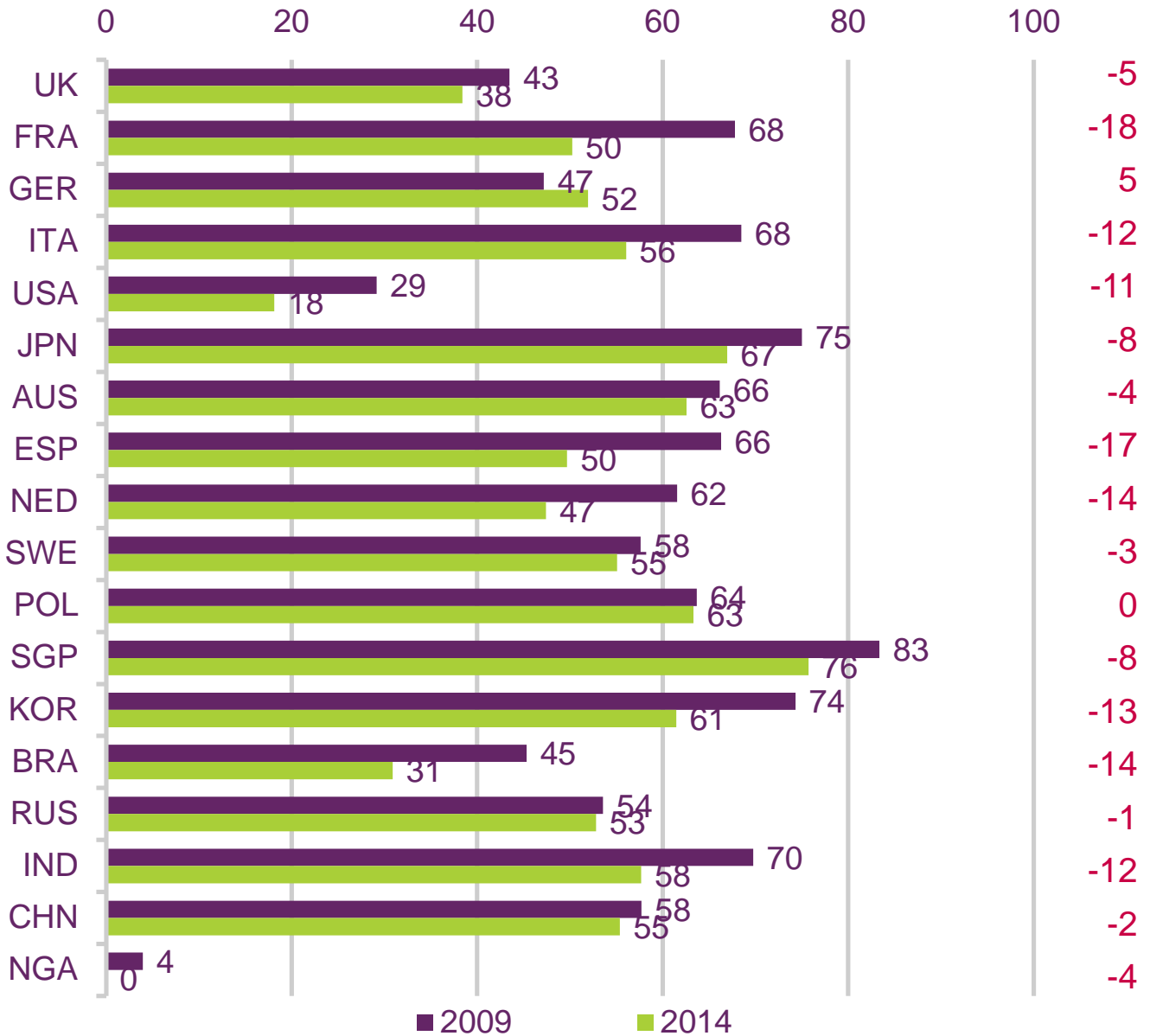
Note: Includes managed VoIP calls.

Figure 5.22

Incumbent operator's share of fixed voice call volumes: 2009 and 2014

Market share (%)

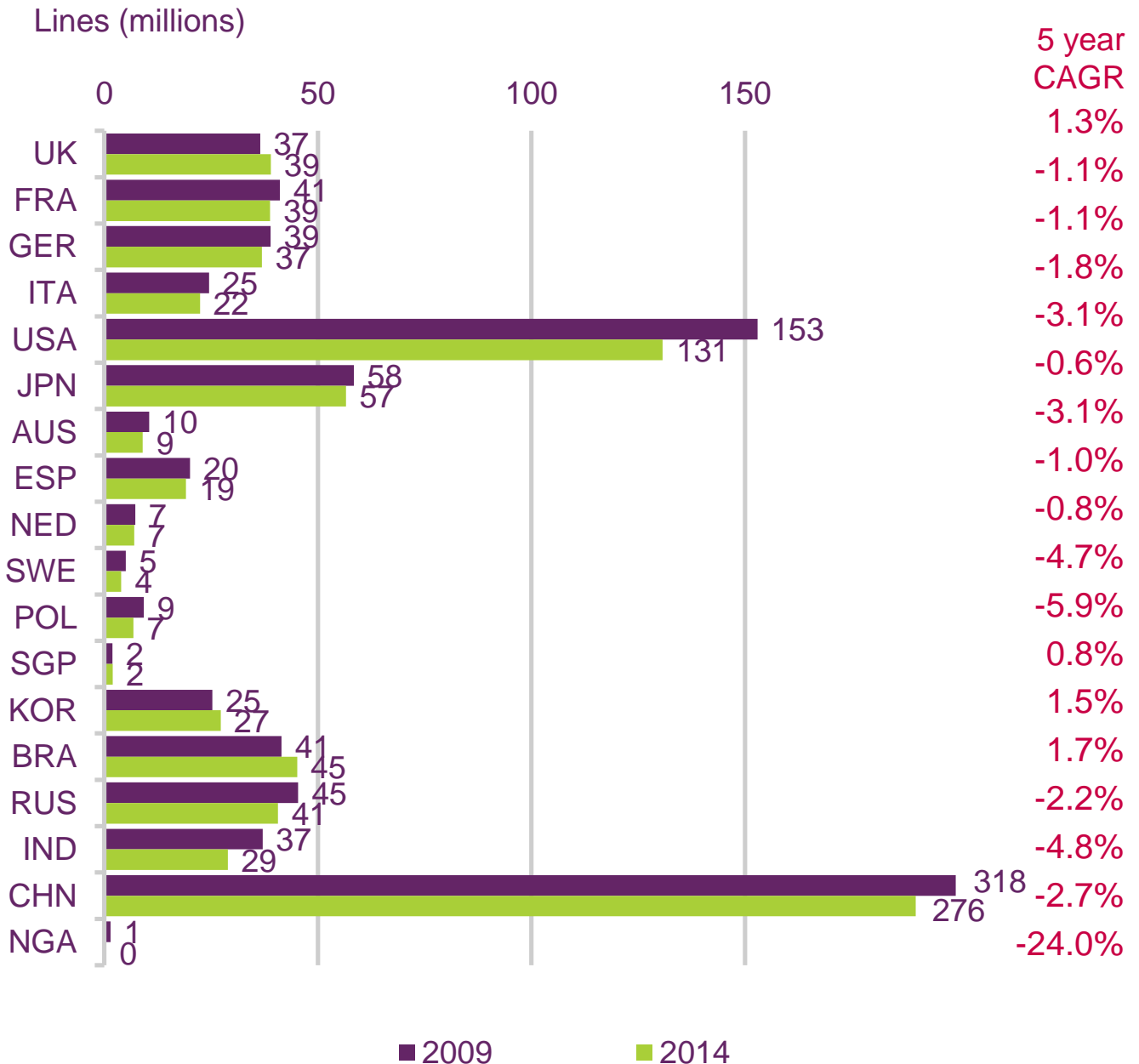
5 year percentage point change



Source: IHS / industry data / Ofcom

Figure 5.23

Fixed exchange lines: 2009 and 2014

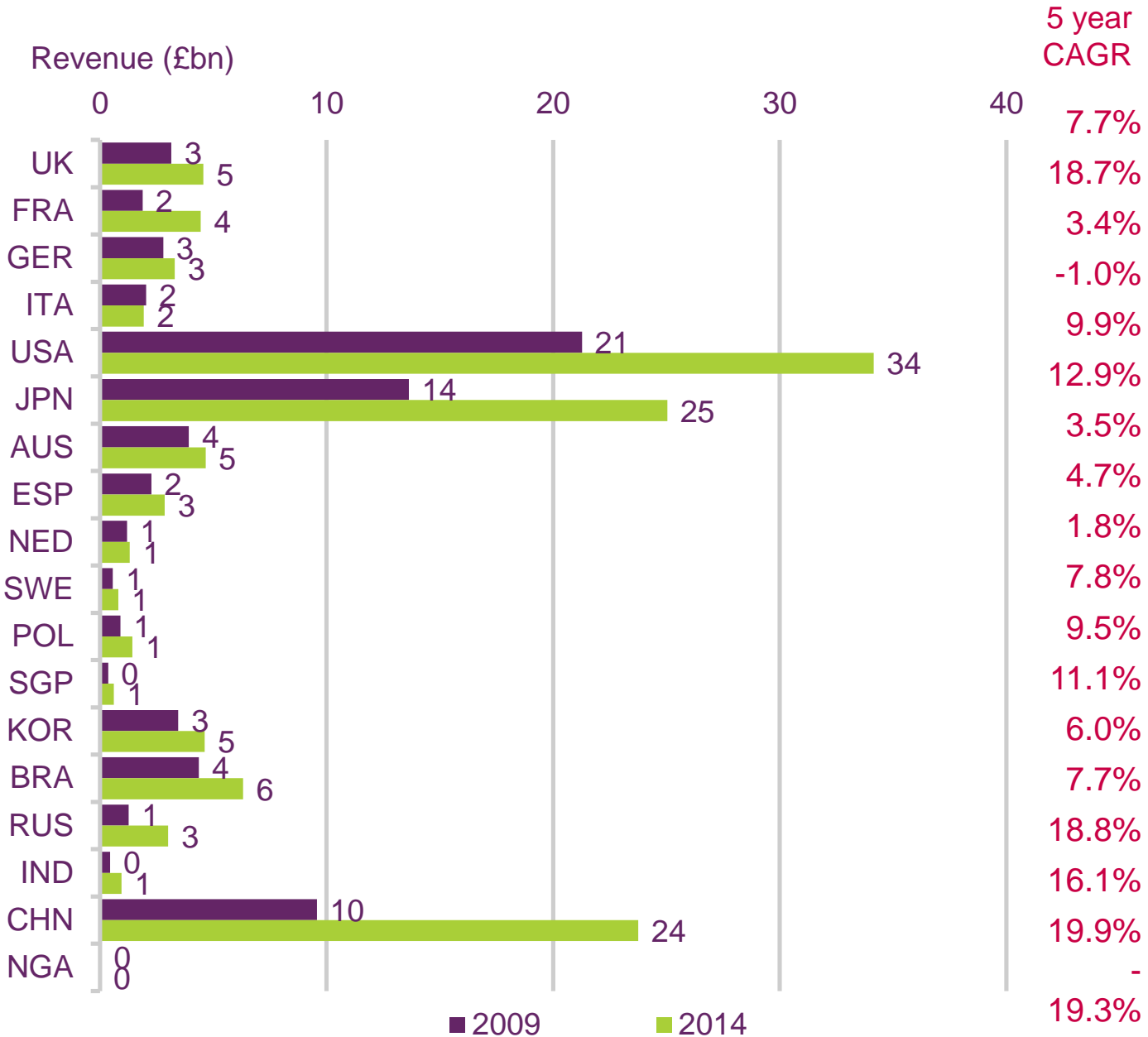


Source: IHS / industry data / Ofcom

Note: Includes managed VoIP connections

Figure 5.24

Fixed broadband revenues: 2009 and 2014

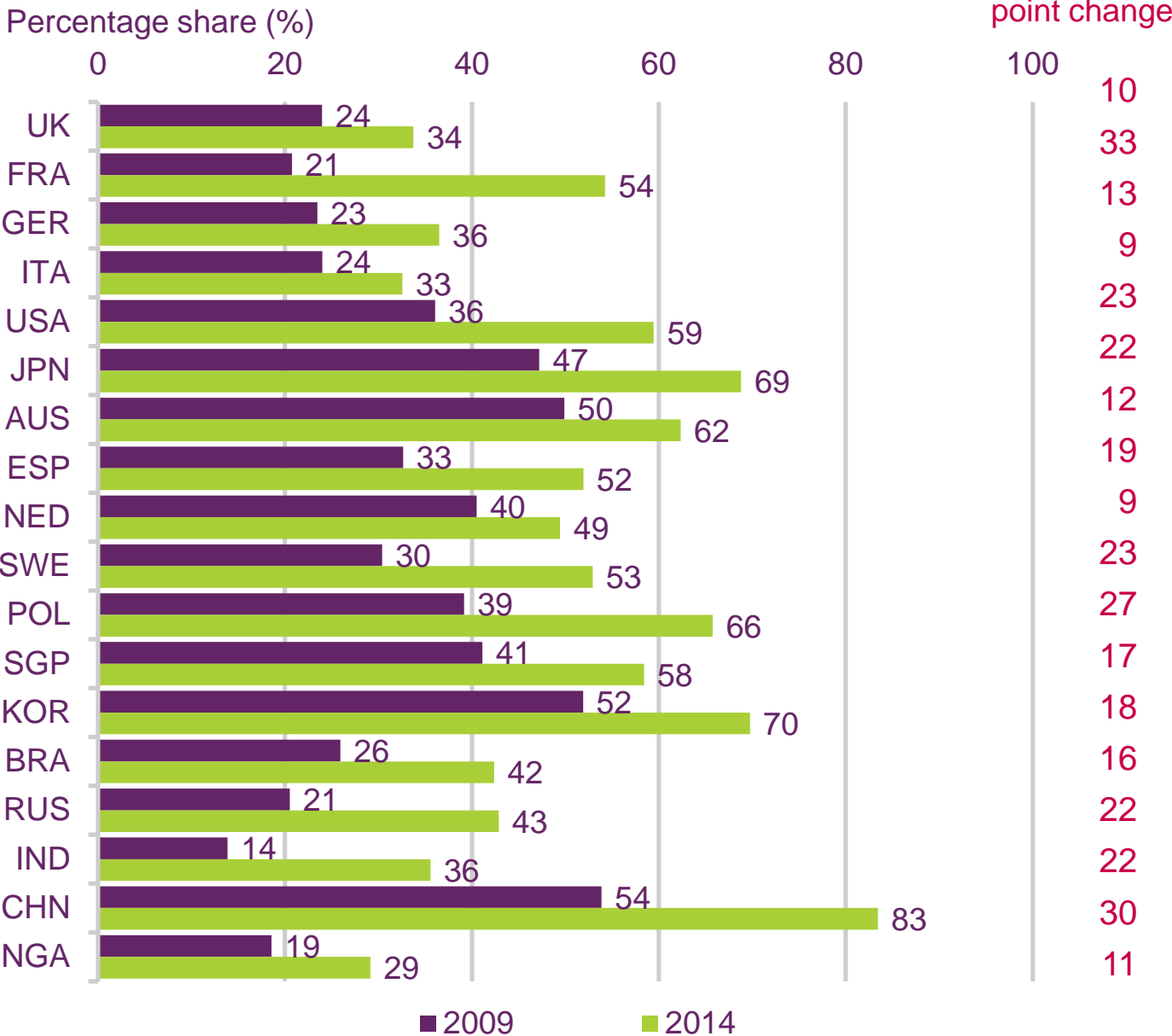


Source: IHS / industry data / Ofcom

Note: All figures expressed in nominal terms.

Figure 5.25

Fixed broadband as a proportion of total fixed revenues: 2009-2014

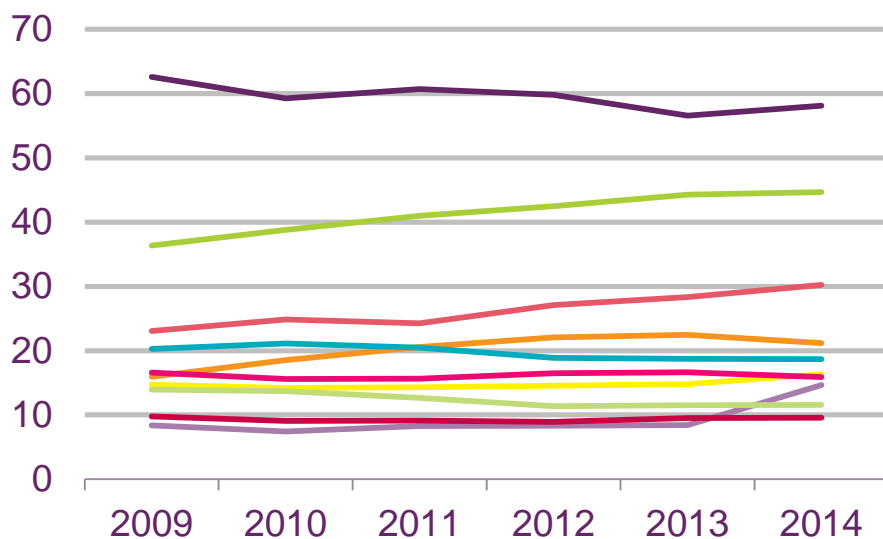


Source: IHS / industry data / Ofcom

Figure 5.26

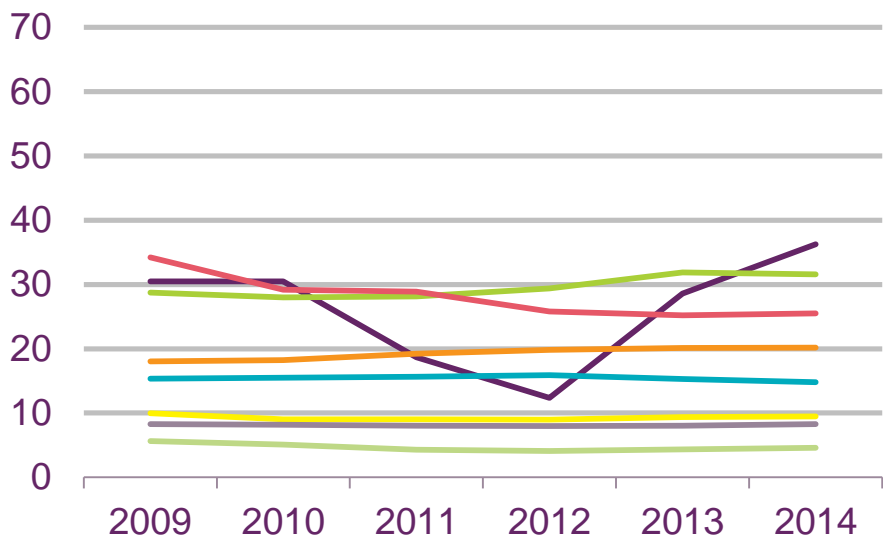
Retail fixed broadband average revenue per connection: 2009-2014

£ per month



	5 year CAGR
AUS	-1.5%
JPN	4.2%
USA	5.5%
SWE	5.8%
ESP	-1.6%
UK	2.1%
NED	-0.8%
FRA	11.8%
ITA	-3.7%
GER	-0.3%

£ per month



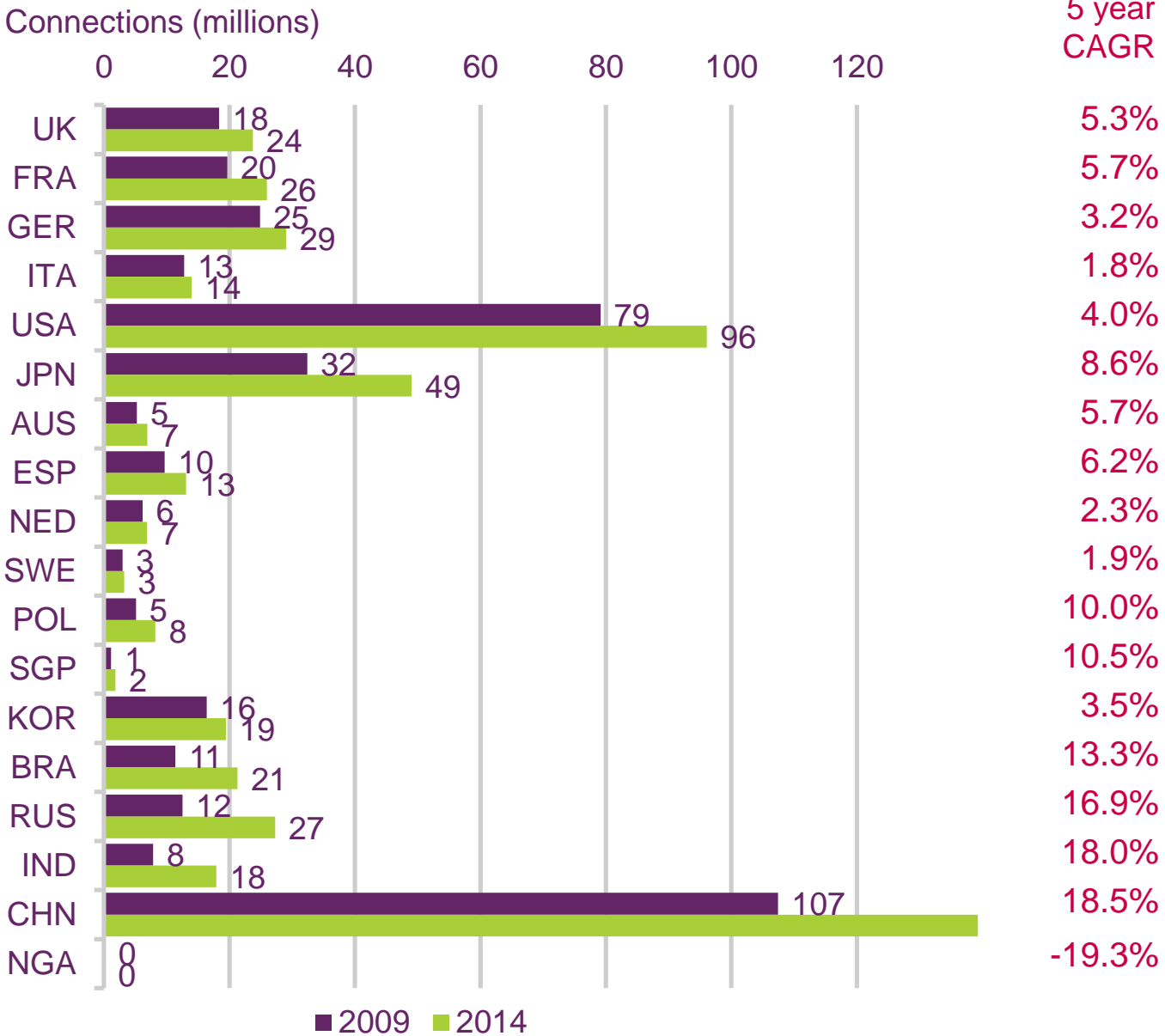
	5 year CAGR
NGA	3.5%
SGP	1.9%
BRA	-5.7%
KOR	2.3%
POL	-0.8%
RUS	-1.0%
CHN	0.0%
IND	-3.9%

Source: IHS / industry data / Ofcom

Note: All figures expressed in nominal terms.

Figure 5.27

Fixed broadband connections: 2009-2014



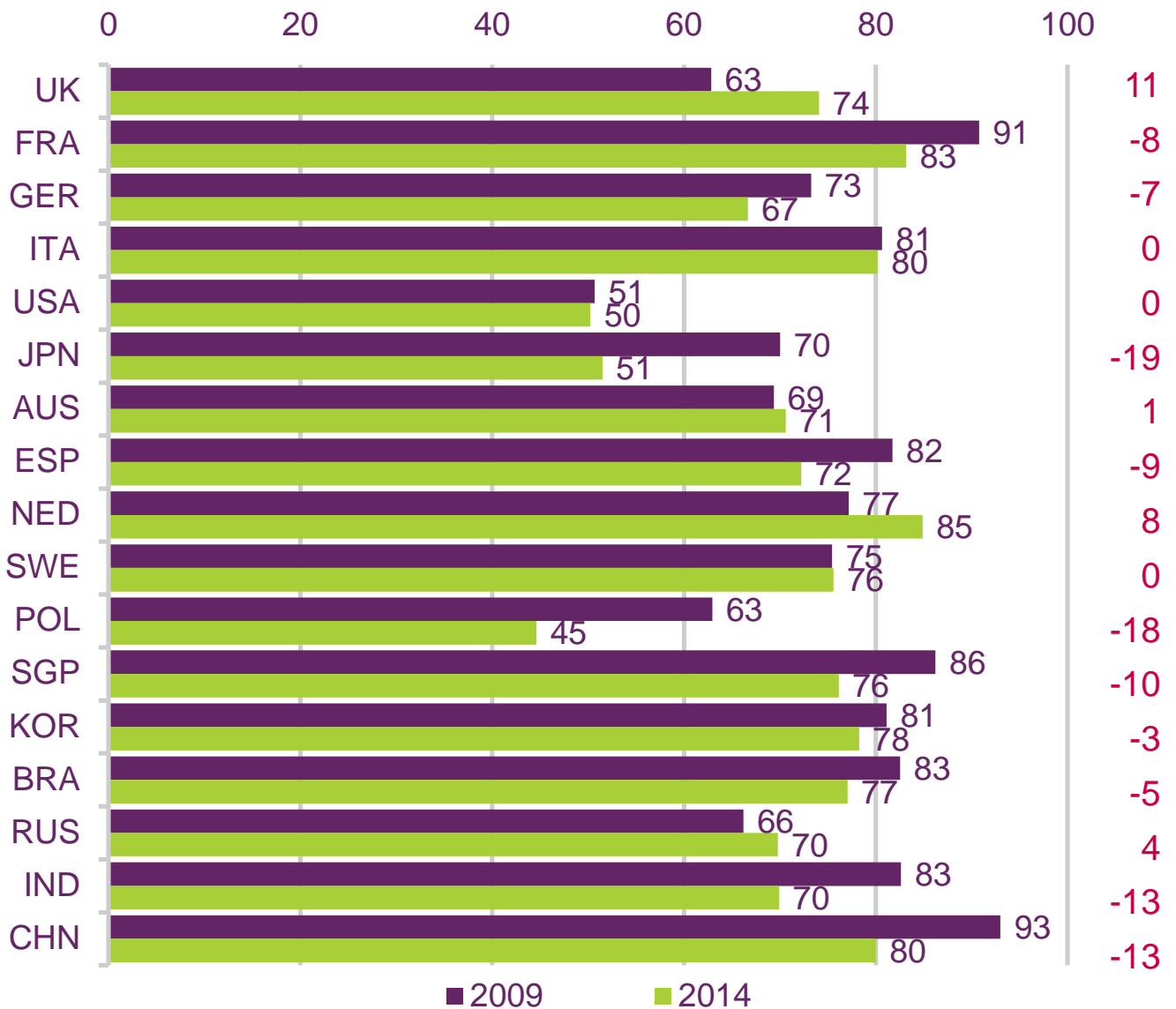
Source: IHS / industry data / Ofcom

Figure 5.28

Retail connection share of the three largest fixed broadband providers: 2009-2014

Percentage share (%)

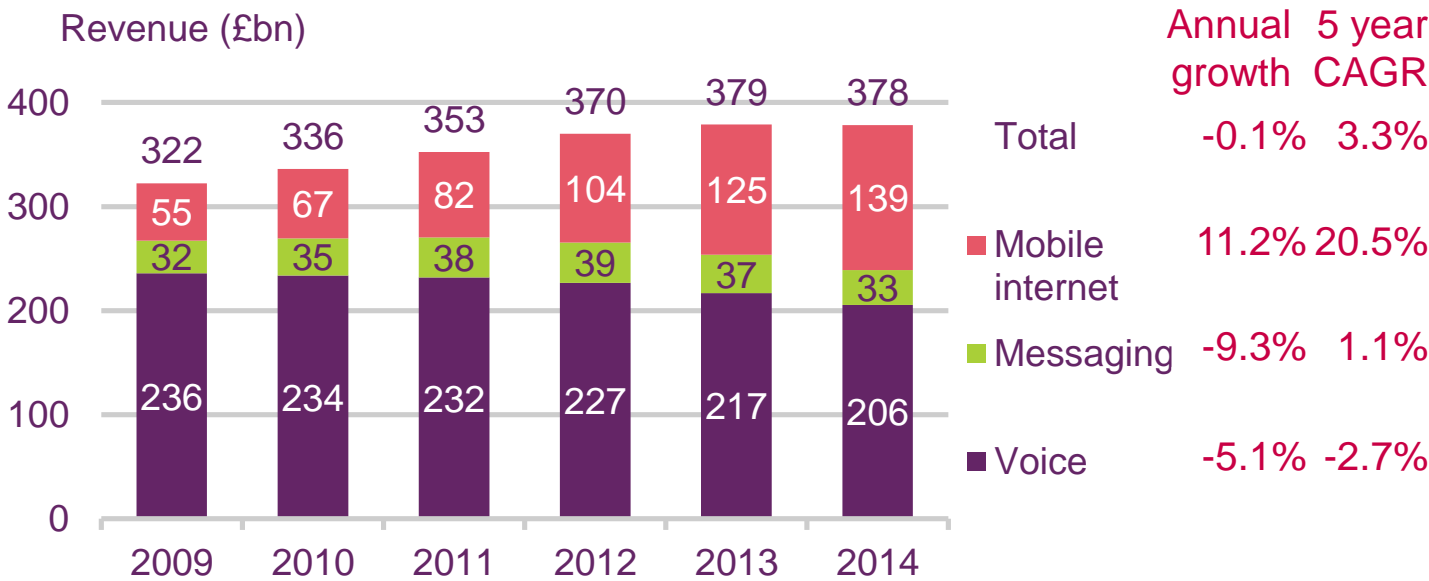
5 year percentage point change



Source: IHS / industry data / Ofcom

Figure 5.29

Total comparator country retail mobile telecoms revenue, by sector: 2009-2014

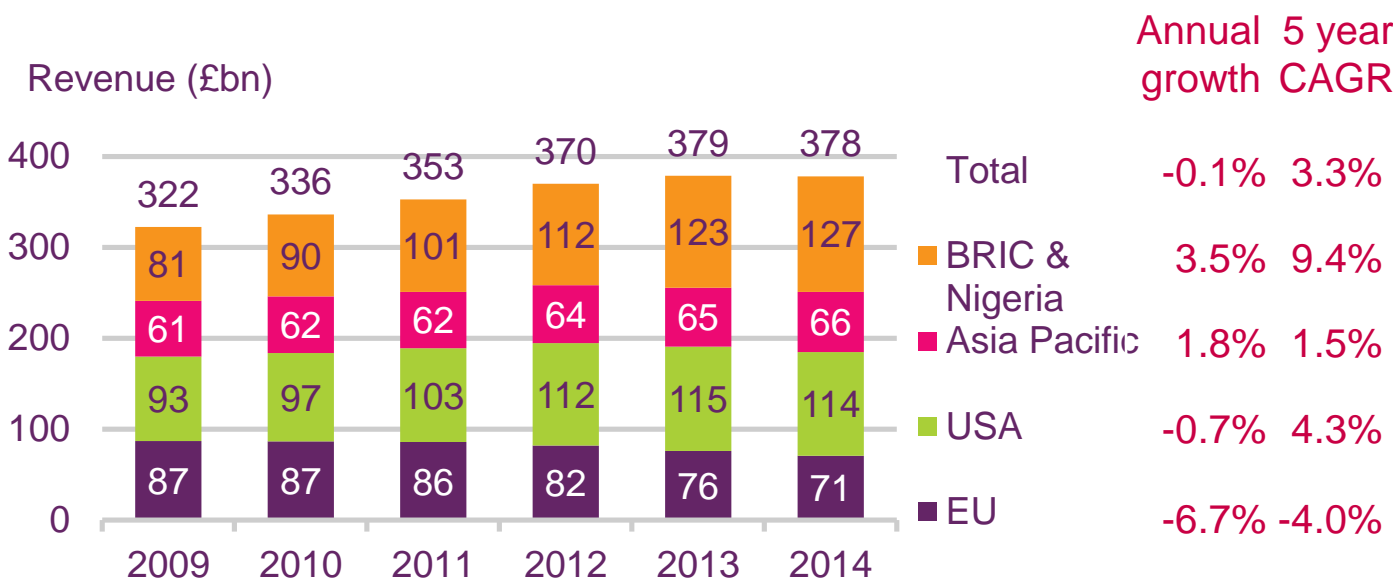


Source: IHS / industry data / Ofcom

Note: Messaging includes SMS and MMS. All figures expressed in nominal terms.

Figure 5.30

Total comparator country retail mobile telecoms revenue, by country type: 2009-2014

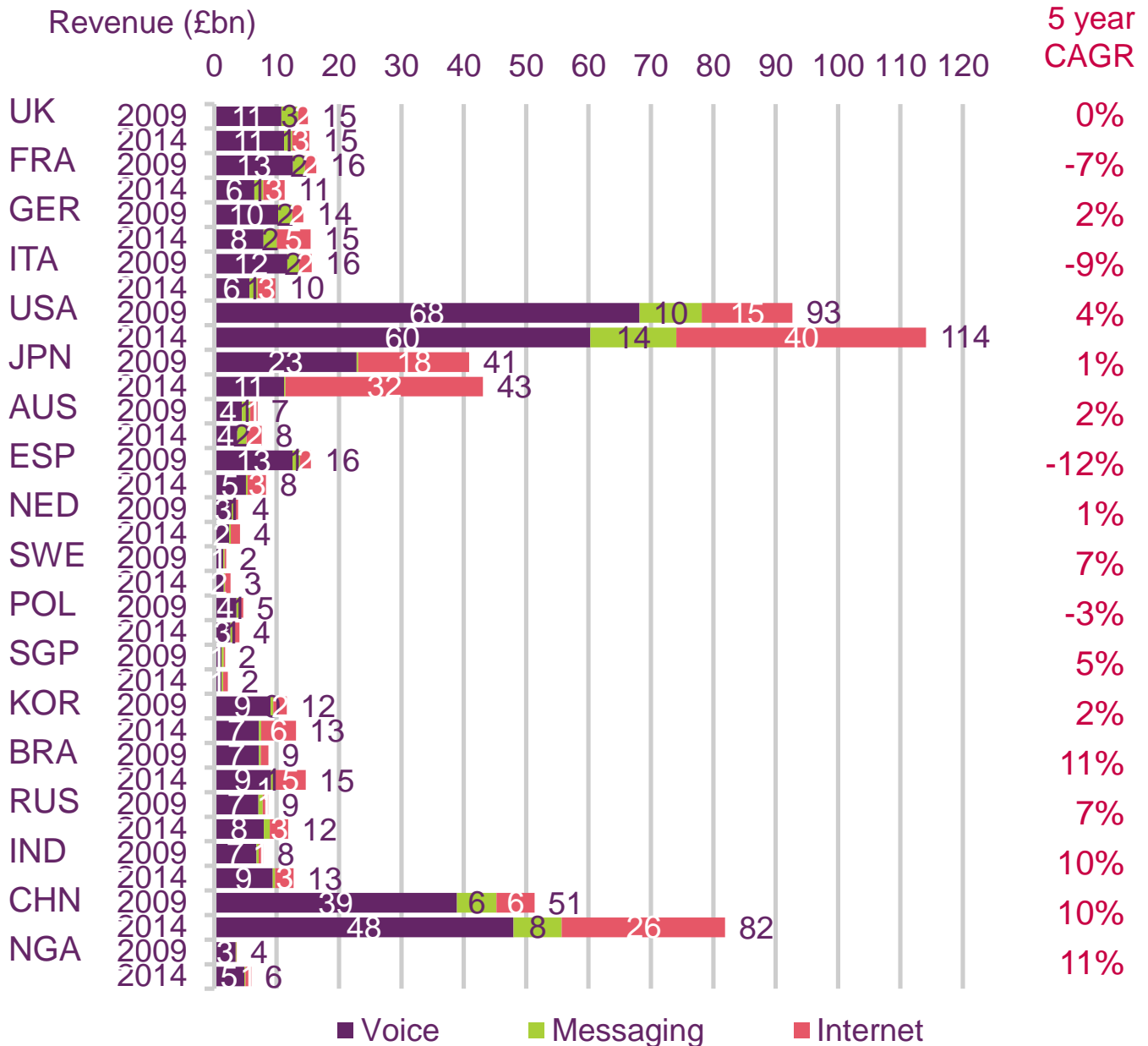


Source: IHS / industry data / Ofcom

Note: All figures expressed in nominal terms.

Figure 5.31

Retail mobile revenues, by service and country: 2009 to 2014



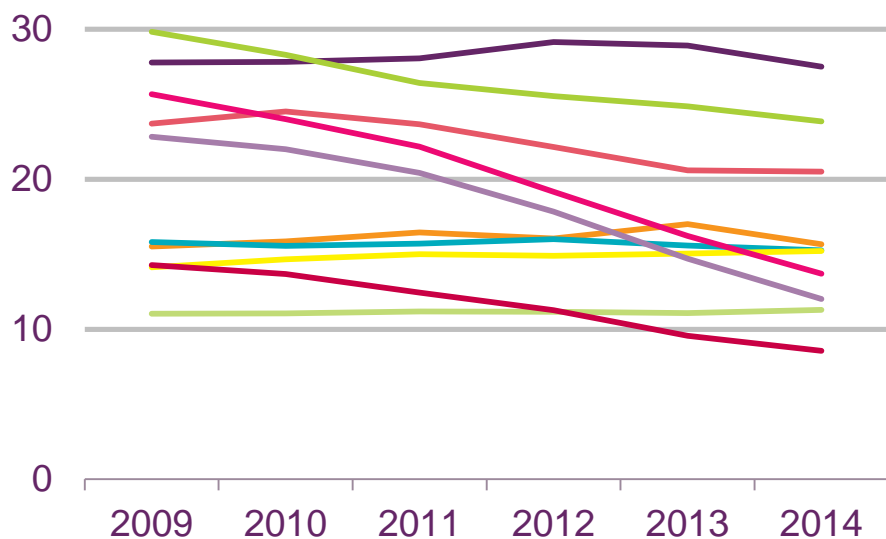
Source: IHS / industry data / Ofcom

Note: Messaging includes SMS and MMS. All figures expressed in nominal terms.

Figure 5.32

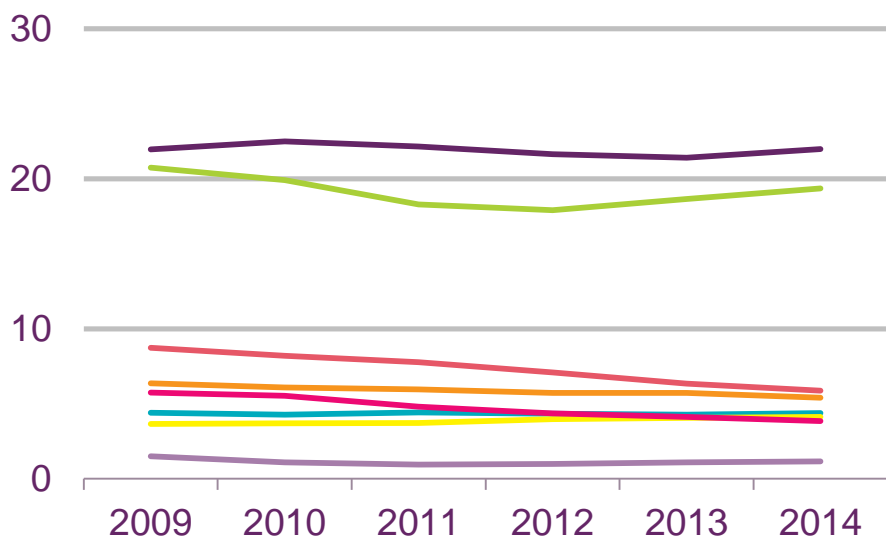
Average monthly revenue per mobile connection: 2009-2014

£ per month



	5 year CAGR
USA	-0.2%
JPN	-4.4%
AUS	-2.9%
NED	0.2%
UK	-0.7%
SWE	1.5%
ESP	-11.8%
FRA	-12.1%
GER	0.5%
ITA	-9.7%

£ per month



SGP	0.0%
KOR	-1.4%
POL	-7.6%
CHN	-3.2%
BRA	-0.1%
RUS	2.4%
NGA	-7.7%
IND	-5.2%

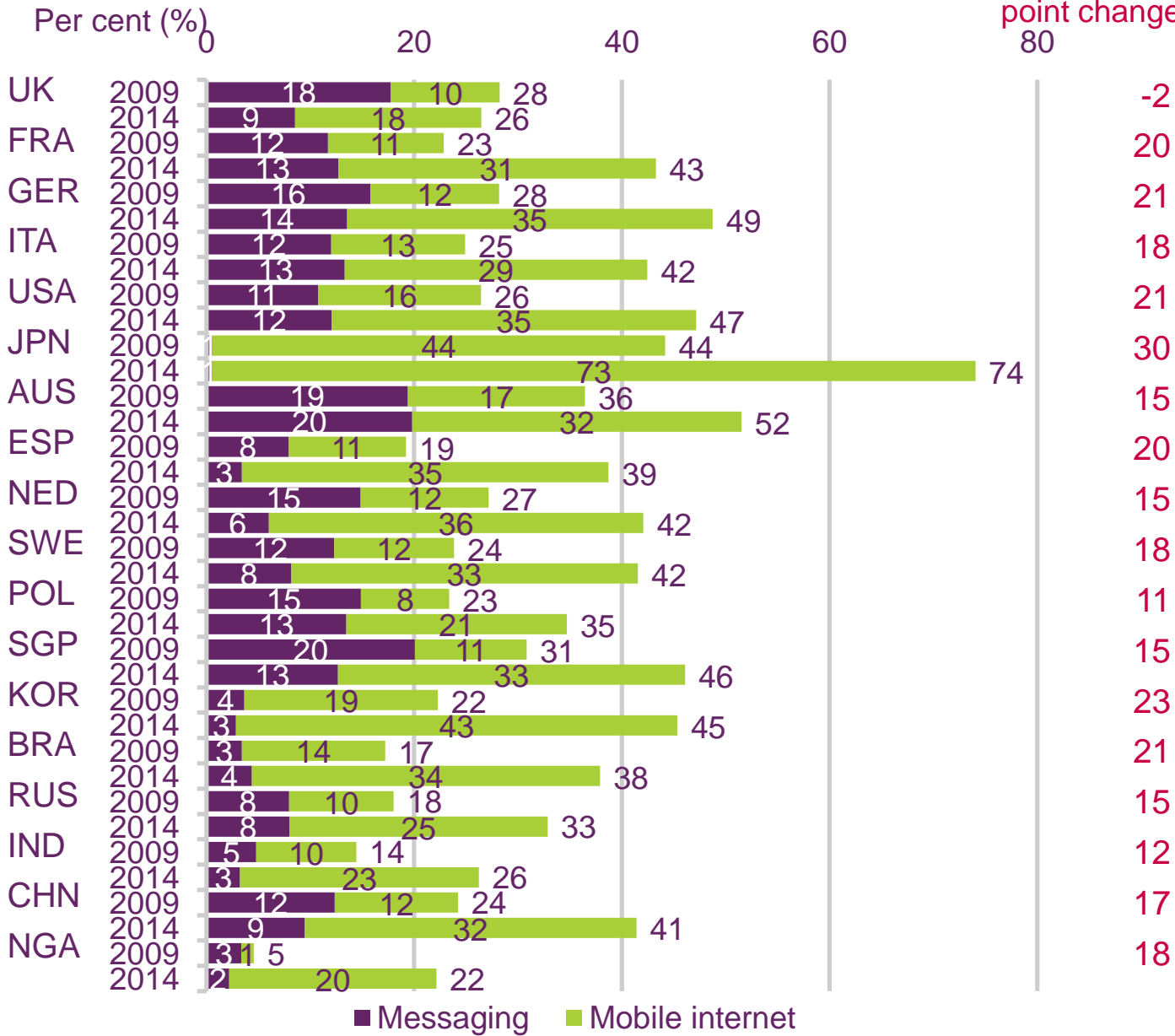
Source: IHS / industry data / Ofcom

Note: All figures expressed in nominal terms.

Figure 5.33

Data as a proportion of total mobile service revenues:
2009 and 2014

5 year percentage
point change

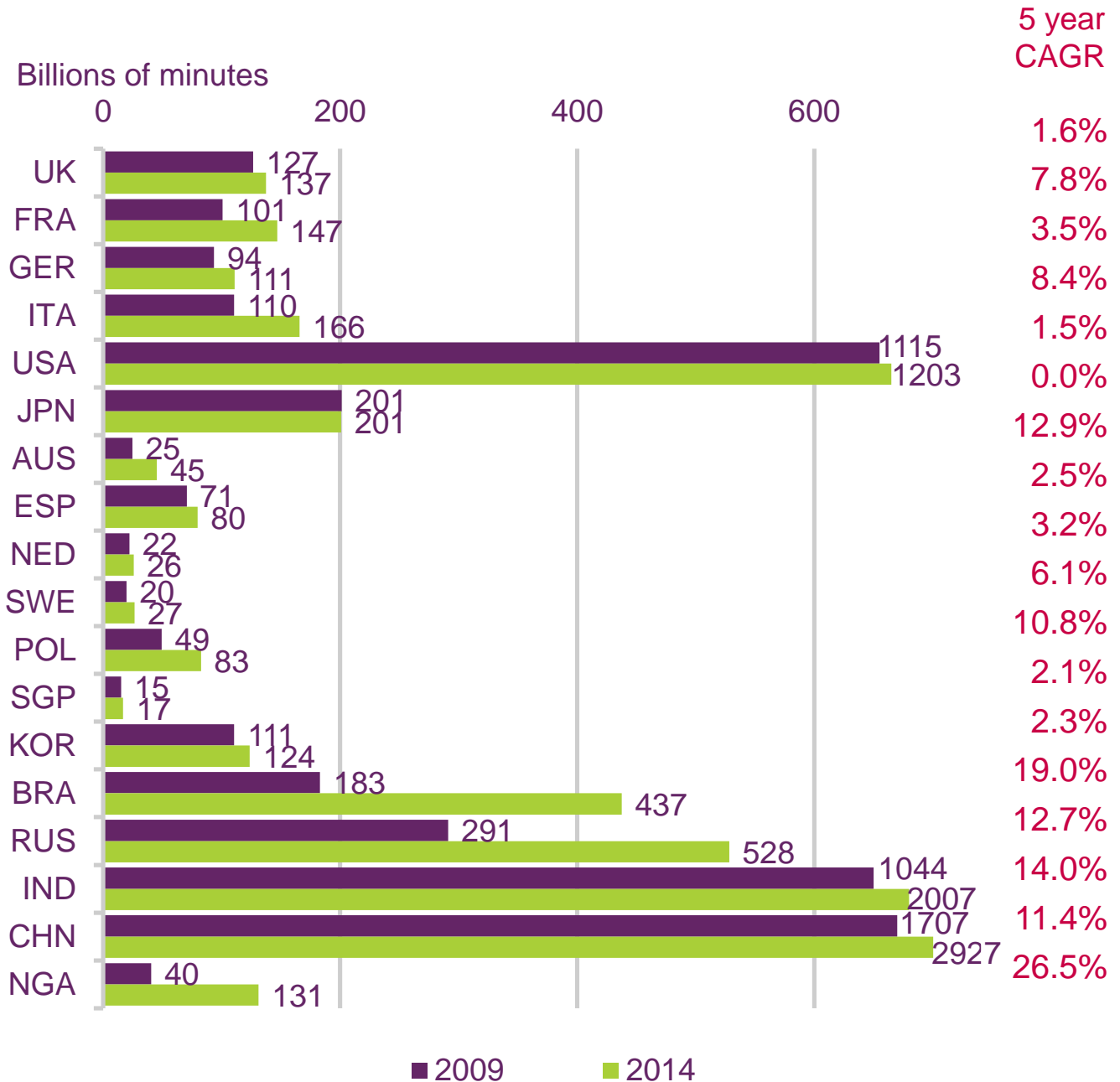


Source: IHS / industry data / Ofcom

Note: Messaging includes SMS and MMS.

Figure 5.34

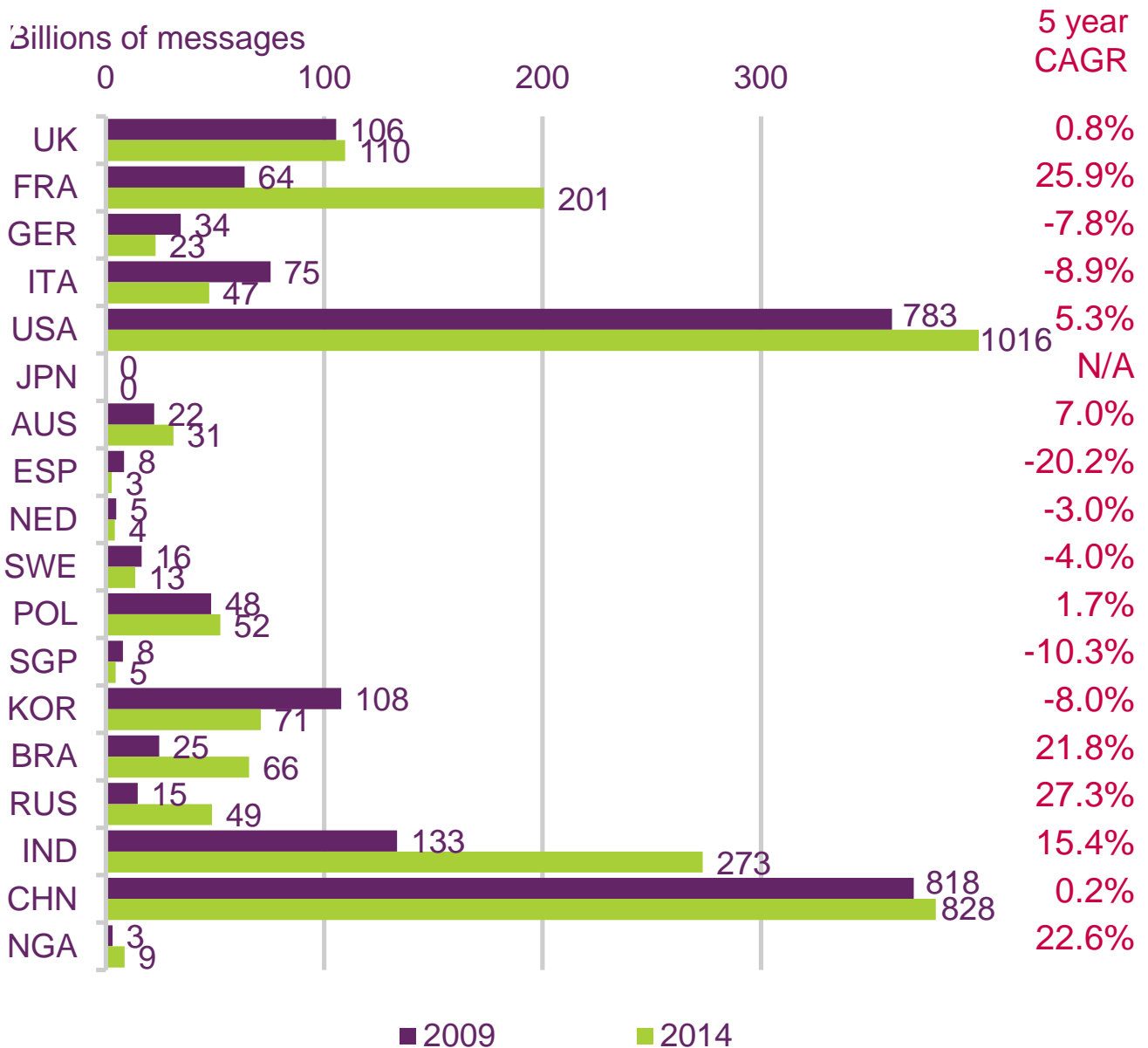
Mobile voice call volumes: 2009 and 2014



Source: IHS / industry data / Ofcom

Figure 5.35

Mobile messaging volumes: 2009 and 2014

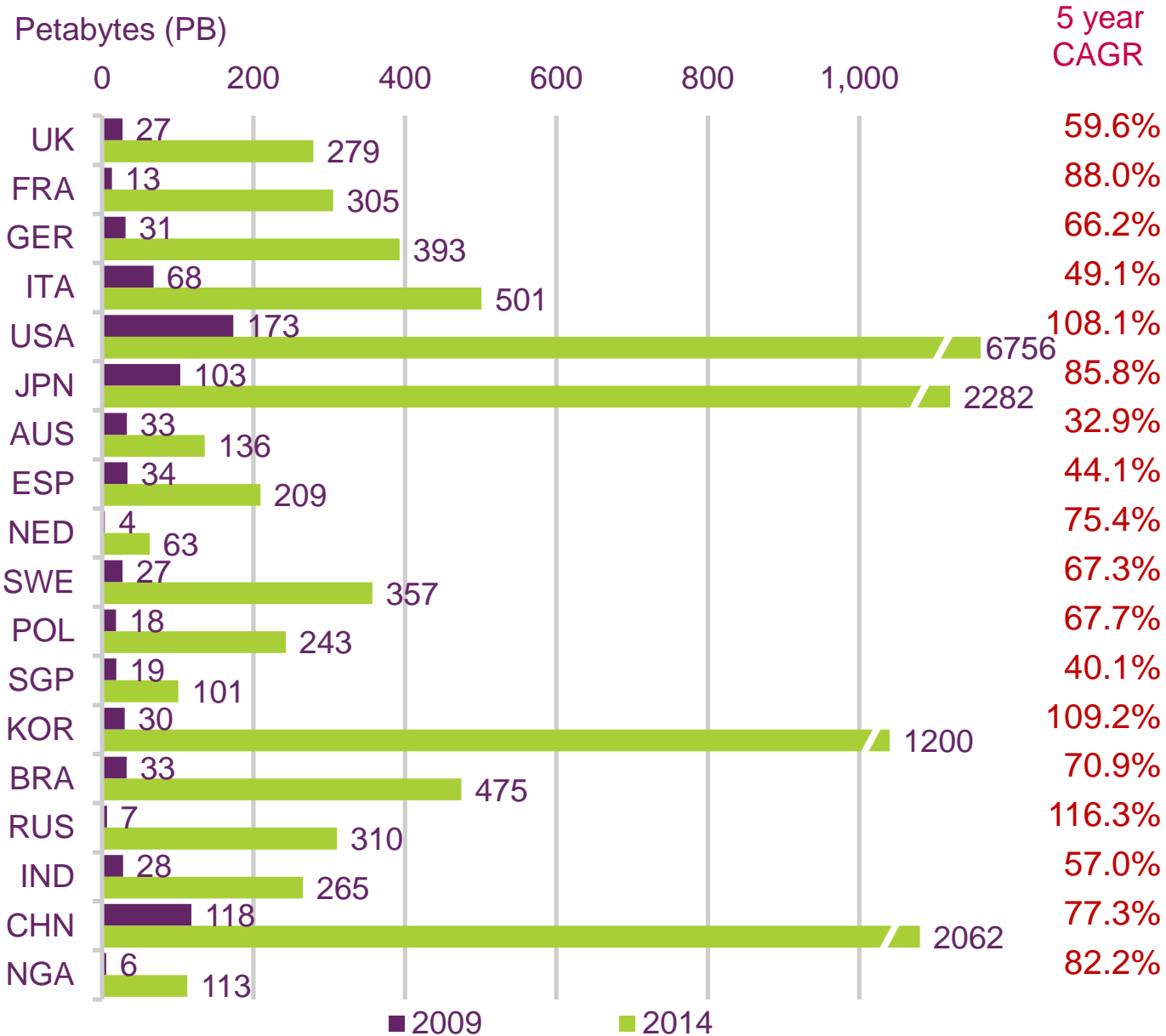


Source: IHS / industry data / Ofcom

Note: Includes SMS and MMS messages. Includes SMS and MMS messages; CAGR for Japan is negligible due very low messaging activity as consumers prefer email and instant messaging services rather than traditional services.

Figure 5.36

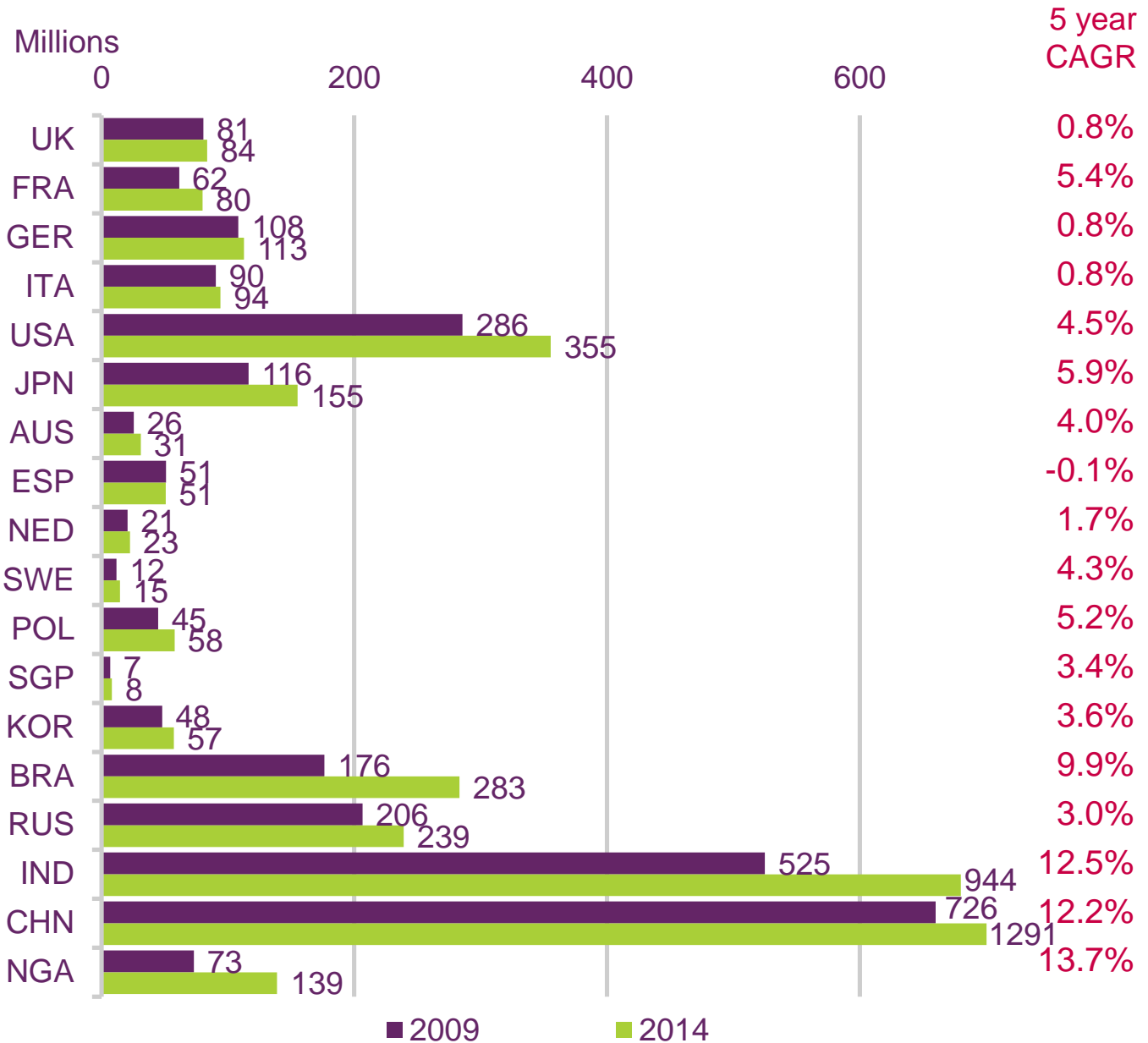
Mobile data volumes: 2009 and 2014



Source: IHS

Figure 5.37

Mobile connections: 2009 and 2014



Source: IHS / industry data / Ofcom

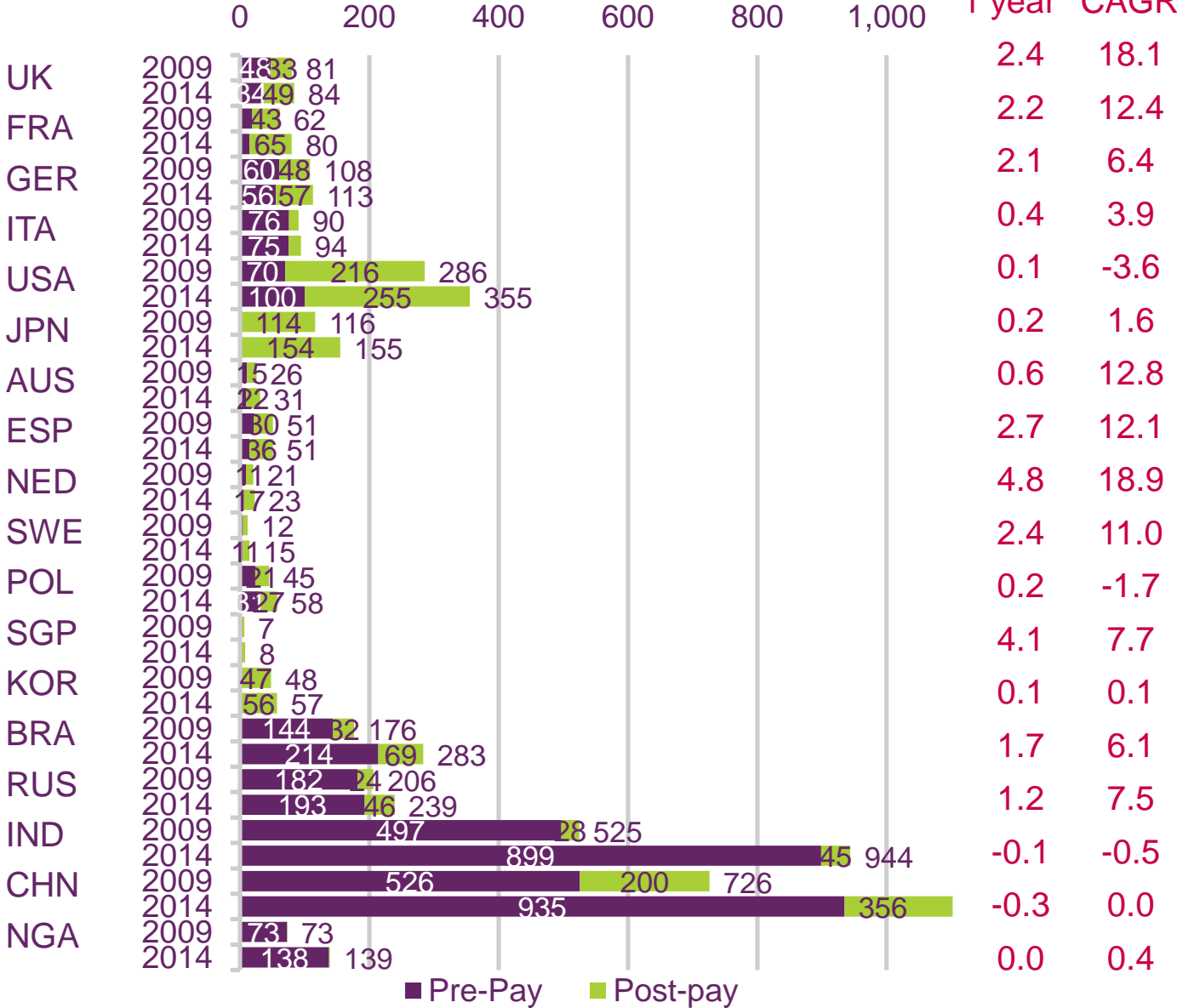
Figure 5.38

Mobile connections, by type: 2009 and 2014



Change in proportion of post-pay connections (percentage point)

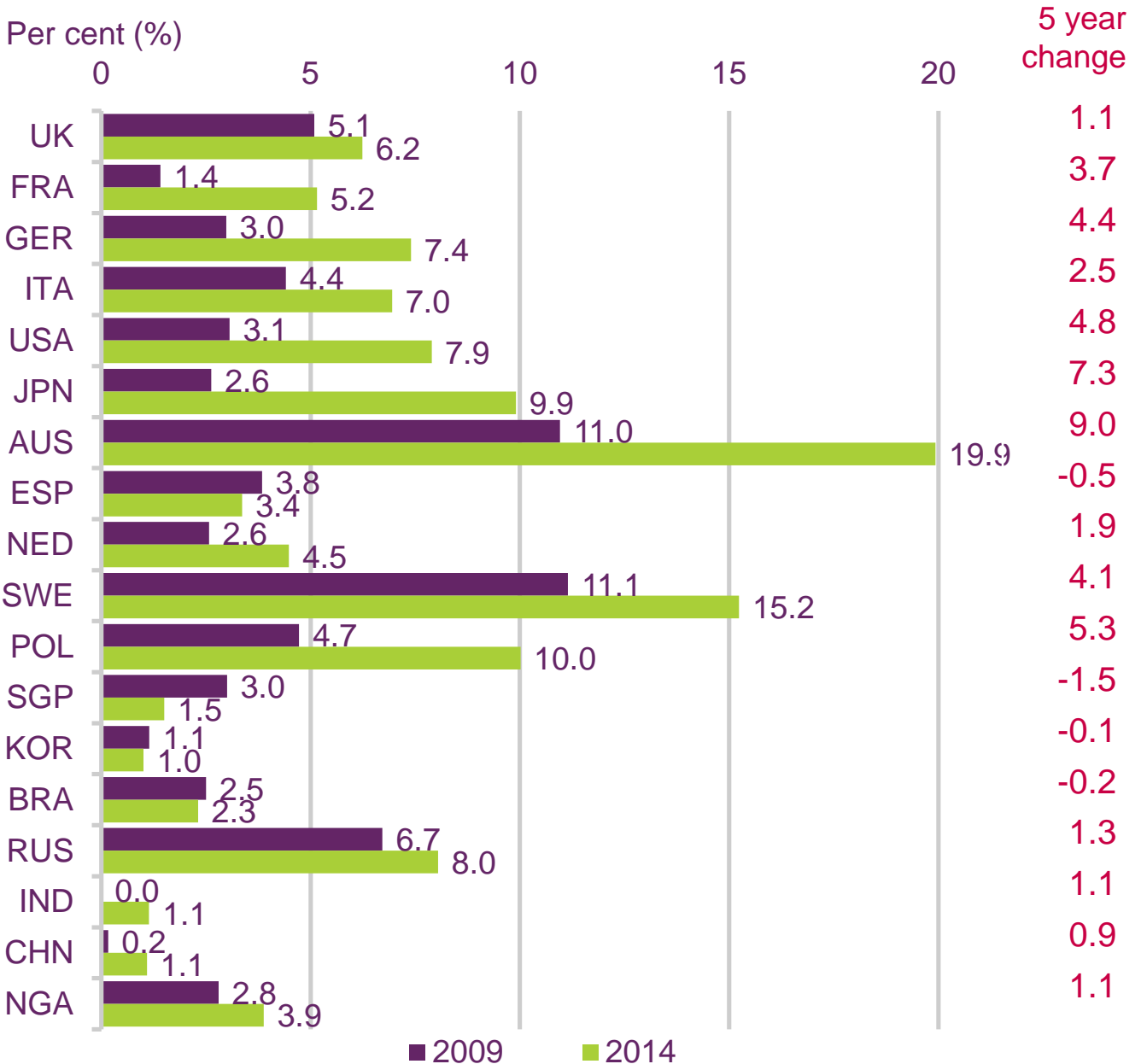
Millions



Source: IHS / industry data / Ofcom

Figure 5.39

Dedicated mobile broadband as a proportion of total mobile connections: 2009 and 2014

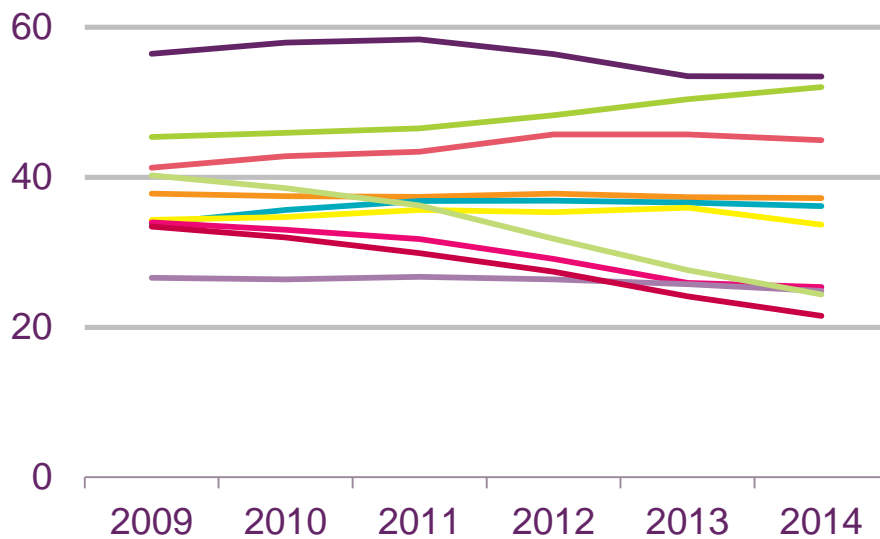


Source: IHS / industry data / Ofcom

Figure 5.40

Per-capita monthly telecoms service revenue: 2009-2014

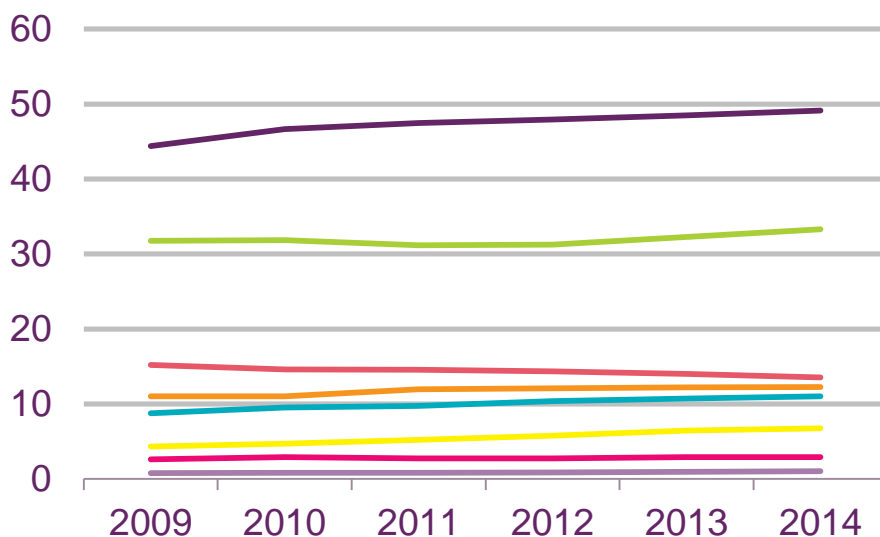
£ per month



1 year change 5 year CAGR

AUS	0.0%	-1.1%
JPN	3.3%	2.8%
USA	-1.6%	1.7%
UK	-0.3%	-0.3%
SWE	-1.3%	1.3%
NED	-6.2%	-0.4%
FRA	-2.1%	-5.7%
GER	-3.6%	-1.4%
ESP	-11.7%	-9.5%
ITA	-10.8%	-8.5%

£ per month



SGP	1.3%	2.0%
KOR	3.1%	0.9%
POL	-3.4%	-2.3%
BRA	0.2%	2.1%
RUS	2.8%	4.7%
CHN	4.5%	9.3%
NGA	0.4%	2.2%
IND	8.6%	5.3%

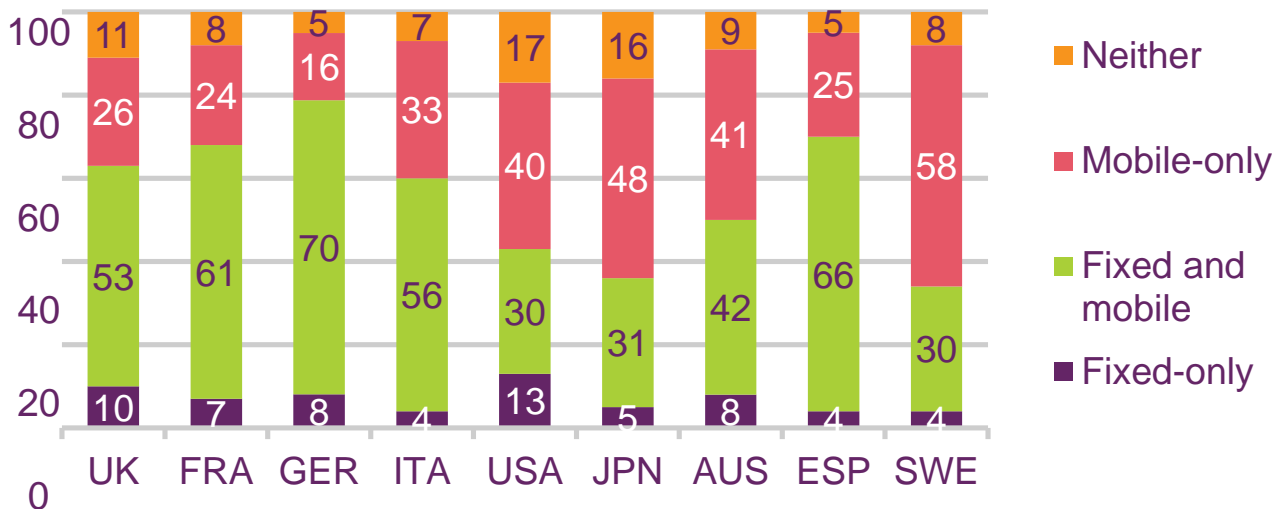
Source: IHS / industry data / Ofcom

Note: Includes spend by businesses, and is therefore not representative of average consumer spend. All figures expressed in nominal terms.

Figure 5.41

Regular use of fixed and mobile telephony services

Proportion (%) of all respondents



Source: Ofcom consumer research September – October 2015

Base: All respondents, UK=1006, FRA=1003, GER=1007, ITA=1003, USA=1009, JPN=1006, AUS=1000, ESP=1002, SWE=1004

Q.6 Which of the following do you regularly do (at least once a week?)

Figure 5.42

Household take-up of fixed and mobile broadband connections

Proportion (%) of respondents with broadband



Source: Ofcom consumer research September – October 2015

Base: All respondents with broadband, UK=915, FRA=930, GER=842, ITA=861, USA=723, JPN=740, AUS=894, ESP=879, SWE=915

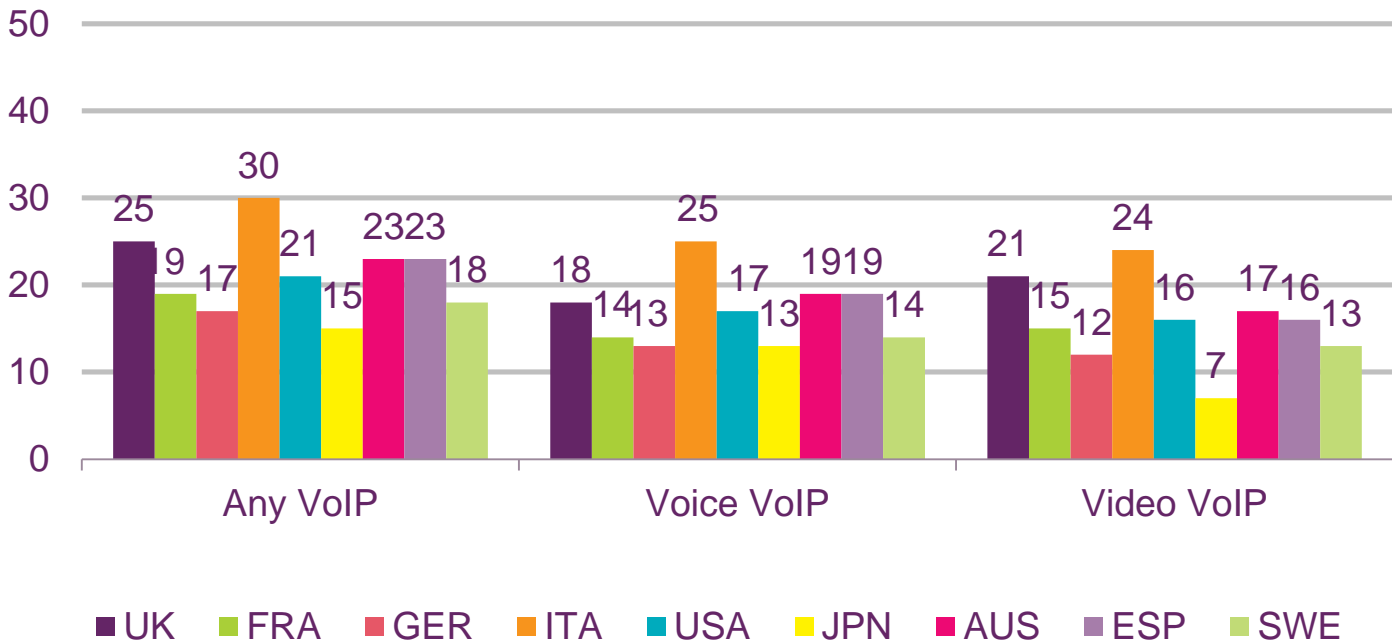
Q.3b Which of the following services do you have in your home?

Figure 5.43



Use of VoIP services at least once a week

Proportion (%) of all respondents



Source: Ofcom consumer research September – October 2015

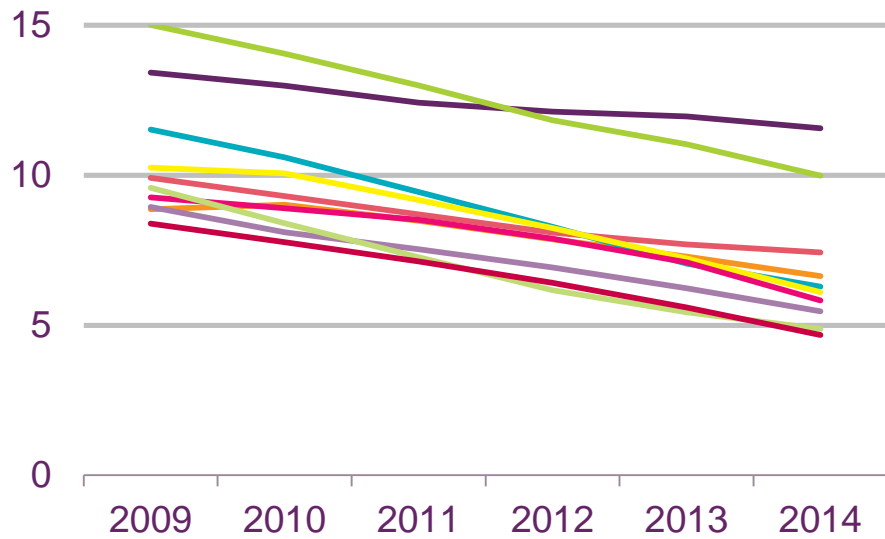
Base: All respondents, UK=1006, FRA=1003, GER=1007, ITA=1003, USA=1009, JPN=1006, AUS=1000, ESP=1002, SWE=1004

Q.8 How often do you use an internet connection on any of your devices for each of the following activities? Making Voice/VoIP calls (e.g. Skype, Making video calls (e.g. Skype, Face Time): At least once a week.

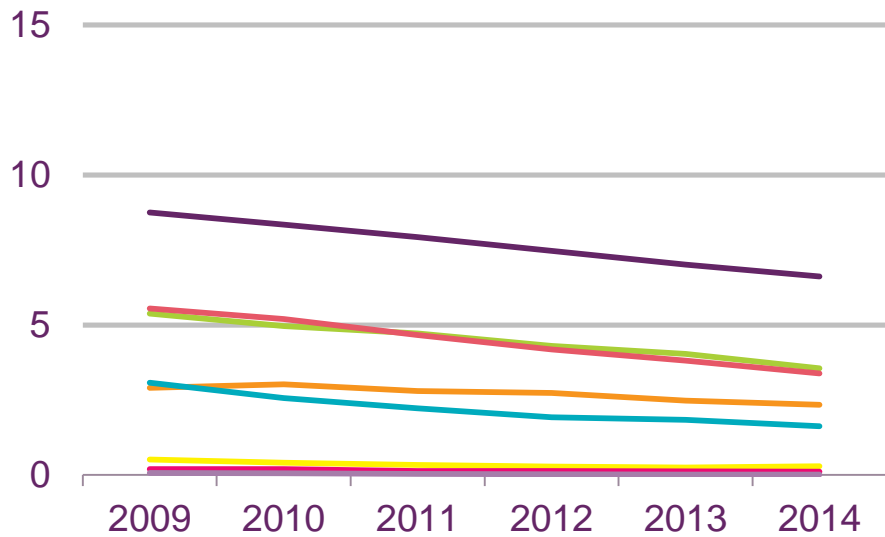
Figure 5.44

Average monthly per-capita fixed voice revenue: 2009-2014

£ per month



£ per month



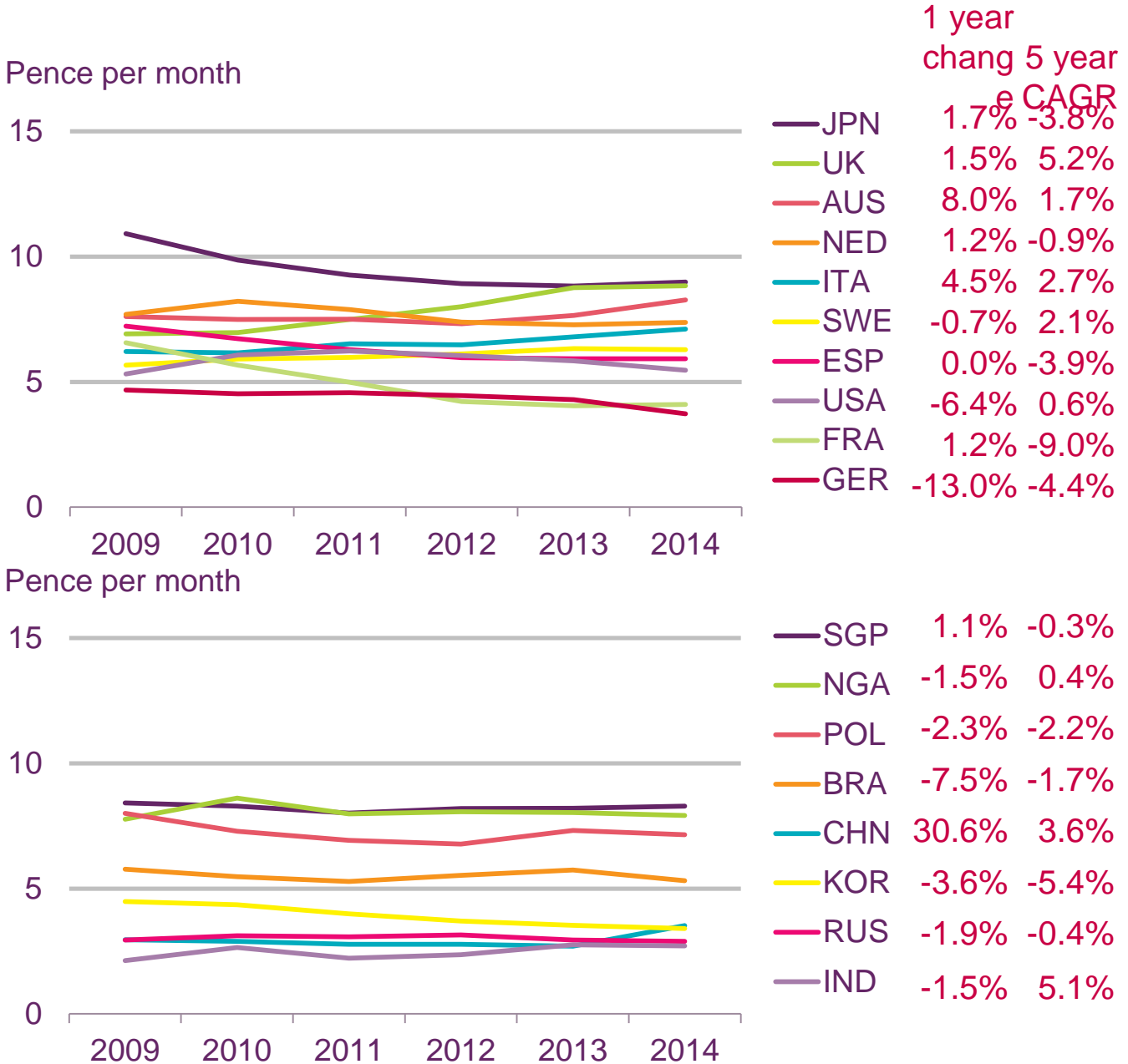
	1 year change	5 year CAGR
UK	-3.3%	-2.9%
AUS	-9.5%	-7.8%
JPN	-3.5%	-5.6%
NED	-9.0%	-5.6%
SWE	-	-
USA	10.8%	-11.4%
GER	-	-
ITA	15.6%	-9.9%
FRA	-	-
ESP	18.0%	-8.9%
	12.4%	-9.4%
	-	-
SGP	15.2%	-12.7%
BRA	-11.9%	-7.9%
KOR	16.5%	-11.0%
RUS	-11.3%	-9.5%
POL	-	-
CHN	-11.6%	12.0%
IND	-	-
IND	17.6%	10.9%
NGA	-	-
	-9.0%	10.4%
	-	-
	-32.1%	30.3%

Source: IHS / industry data / Ofcom

Note: Includes managed VoIP revenues. All figures expressed in nominal terms.

Figure 5.45

Average price of a fixed voice call minute: 2009-2014



Source: IHS / industry data / Ofcom

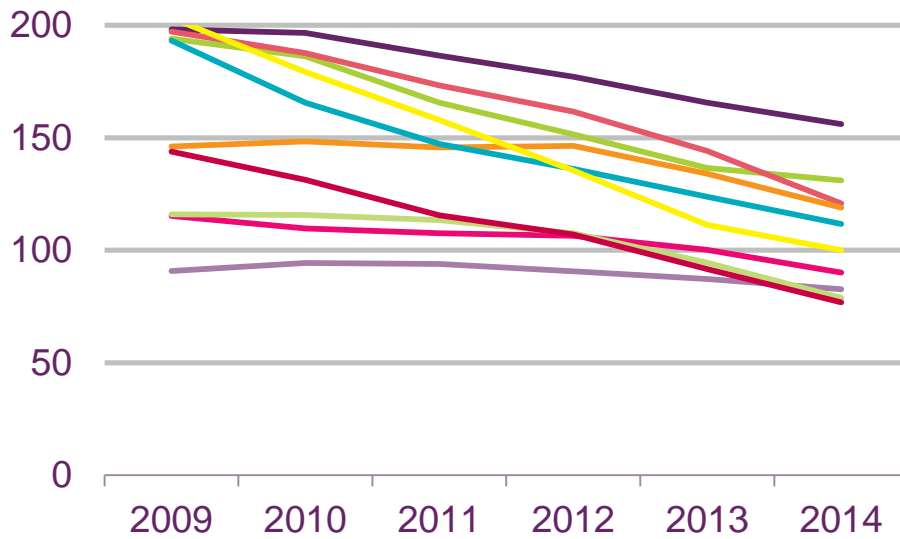
Note: Includes managed VoIP calls. All figures expressed in nominal terms.

Figure 5.46



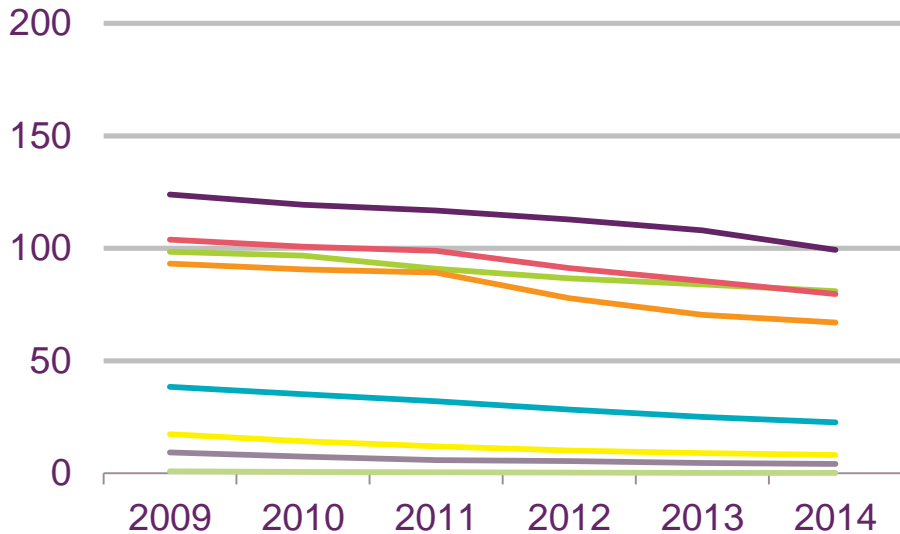
Per capita monthly fixed voice call minutes: 2009 - 2014

Minutes



	1 year change	5 year change
GER	-5.8%	-4.9%
UK	-4.7%	-7.7%
AUS	-16.2%	-9.3%
FRA	-11.3%	-4.0%
USA	-9.8%	-10.4%
SWE	-10.2%	-13.2%
NED	-10.1%	-4.8%
JPN	-5.1%	-1.8%
ESP	-16.5%	-7.4%
ITA	-16.2%	-11.8%

Minutes



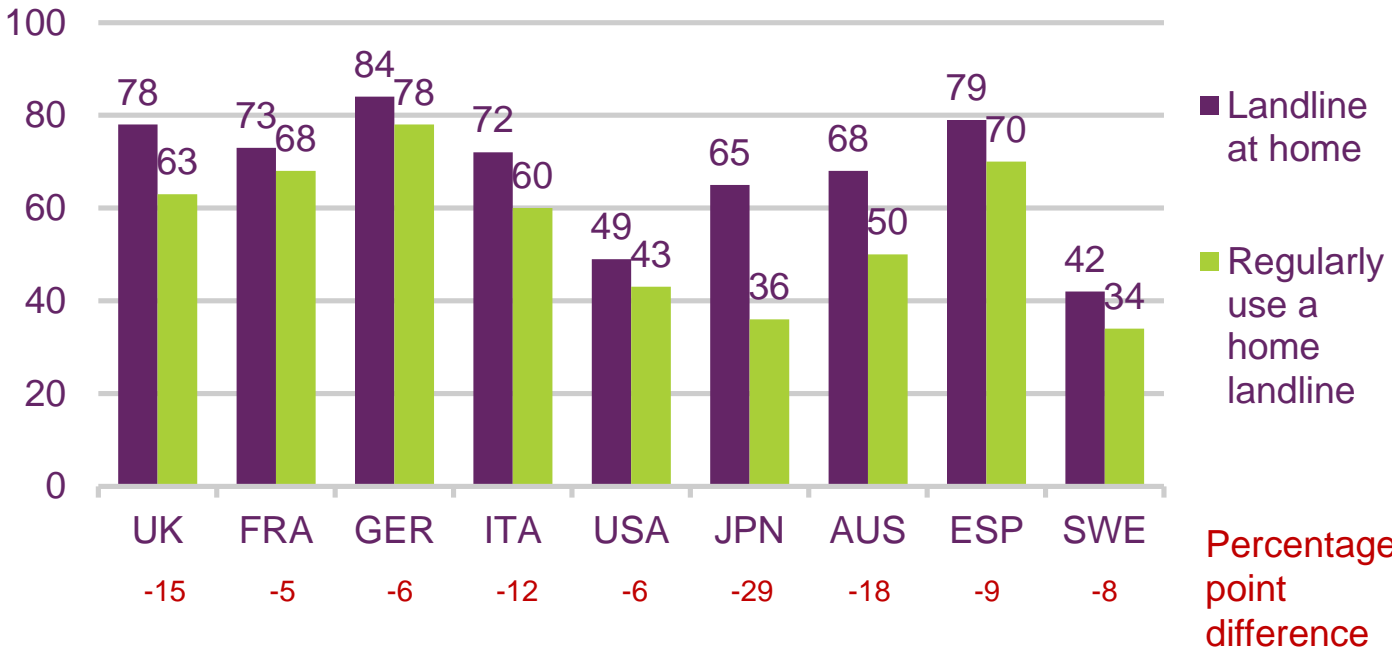
	1 year change	5 year change
KOR	-8.0%	-4.3%
RUS	-3.4%	-3.8%
SGP	-6.7%	-5.2%
BRA	-4.8%	-6.4%
POL	-9.6%	-10.0%
CHN	-10.0%	-14.0%
IND	-7.6%	-14.7%
NGA	-31.1%	-30.6%

Source: IHS / industry data / Ofcom
 Note: Includes managed VoIP calls

Figure 5.47

Household take-up and personal use of fixed telephony services

Proportion (%) of respondents



Source: Ofcom consumer research September - October 2015

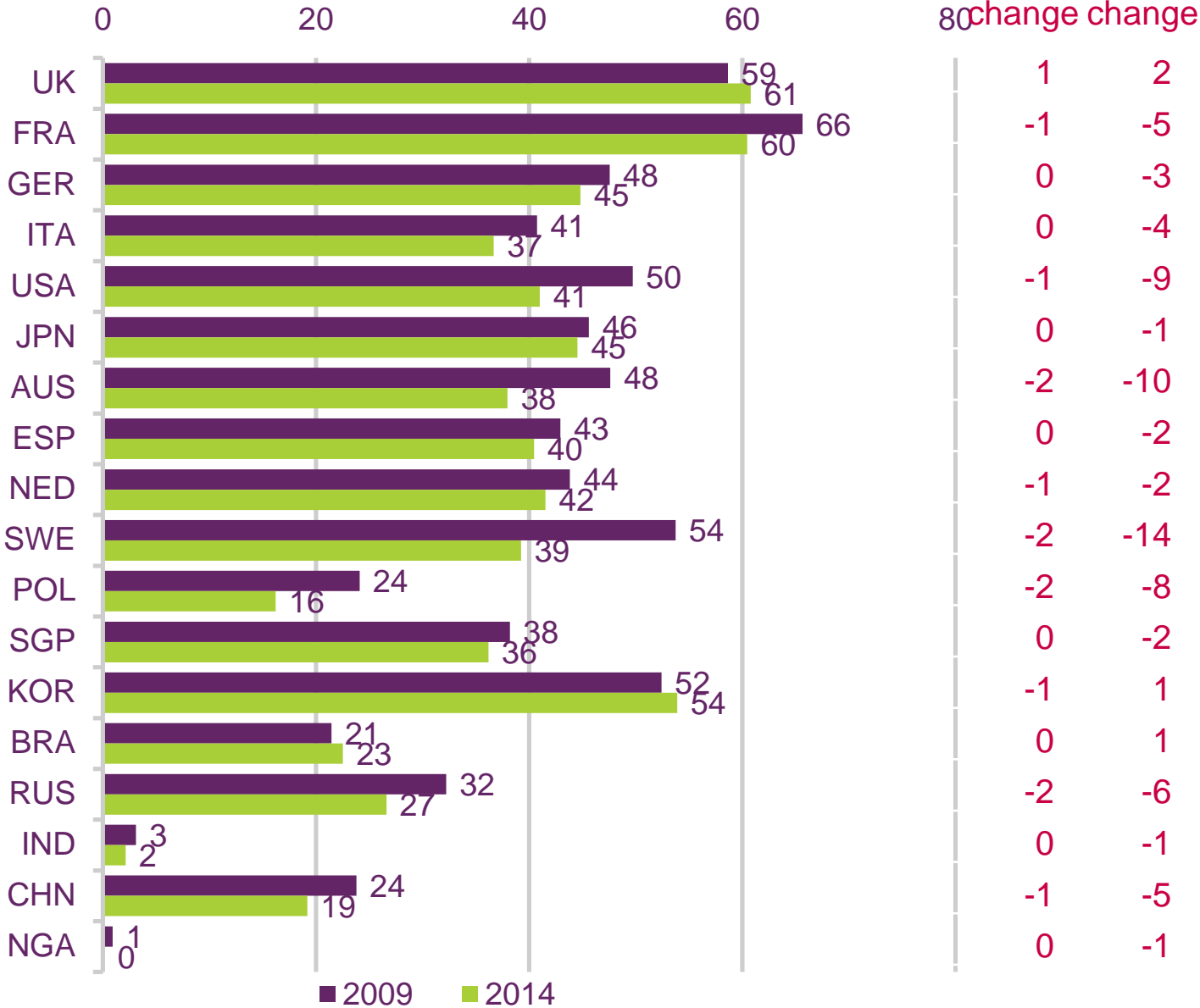
Base: All respondents, UK=1006, FRA=1003, GER=1007, ITA=1003, USA=1009, JPN=1006, AUS=1000, ESP=1002, SWE=1004

Q.3b Which of the following services do you have in your home? Q.6: Which of the following do you regularly do (at least once a week)?

Figure 5.48

Fixed voice connections per 100 population: 2009 and 2014

Connections per 100 population



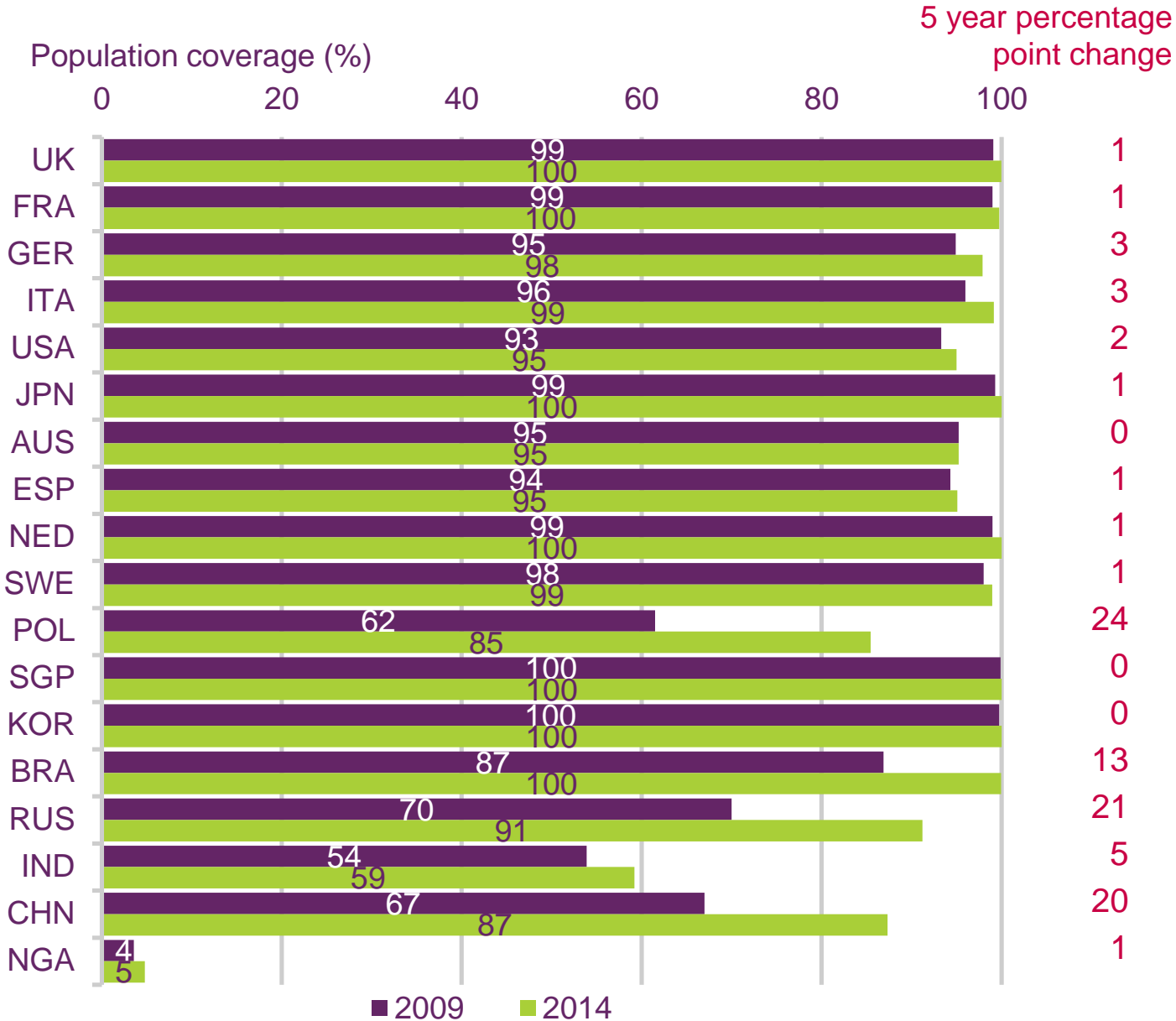
Source: IHS / industry data / Ofcom

Note: Includes managed VoIP connections

Figure 5.49



Fixed broadband availability: 2009 and 2014

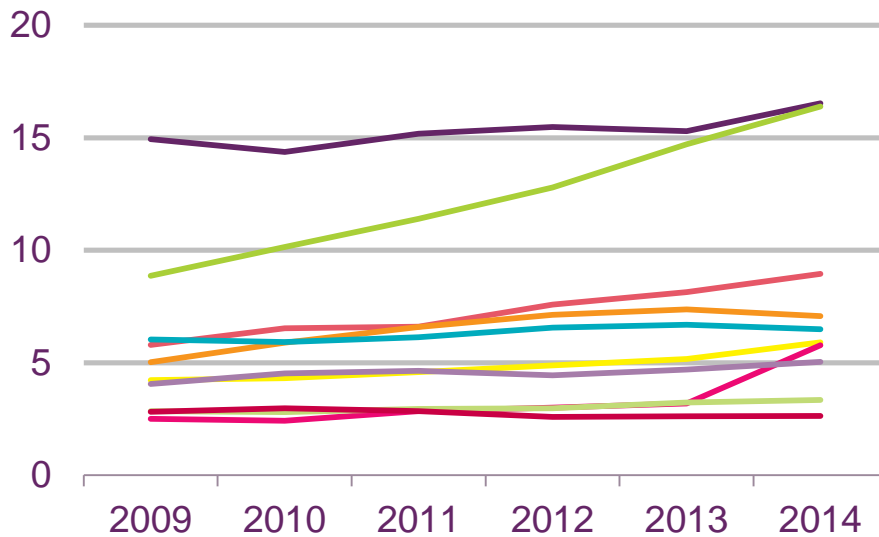


Source: IHS / industry data / Ofcom

Figure 5.50

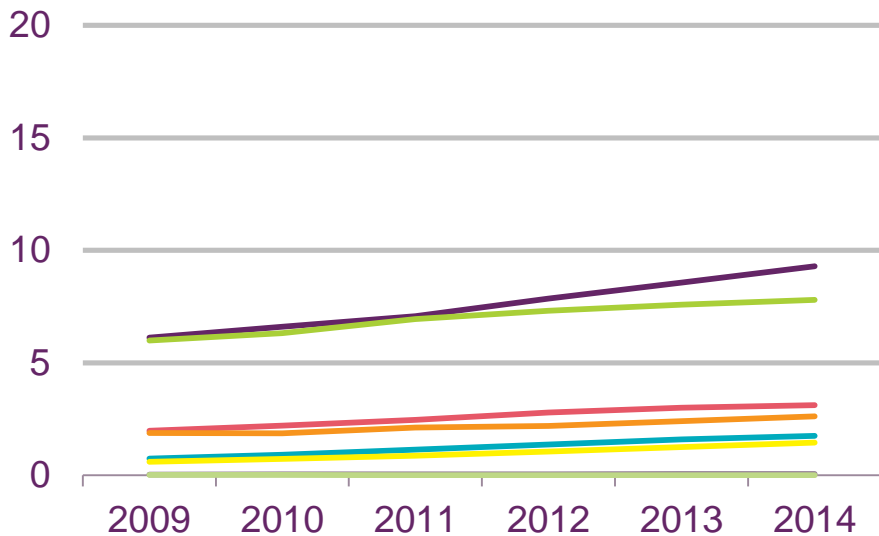
Average per-capita fixed broadband revenue: 2009-2014

£ per year



	1 year	5 year
AUS	8.1%	2.0%
JPN	11.4%	13.1%
USA	9.9%	9.1%
SWE	-4.1%	7.0%
NED	-2.9%	1.5%
UK	14.7%	7.0%
FRA	81.6%	18.1%
ESP	7.3%	4.4%
GER	3.3%	3.3%
ITA	0.5%	-1.4%

£ per year



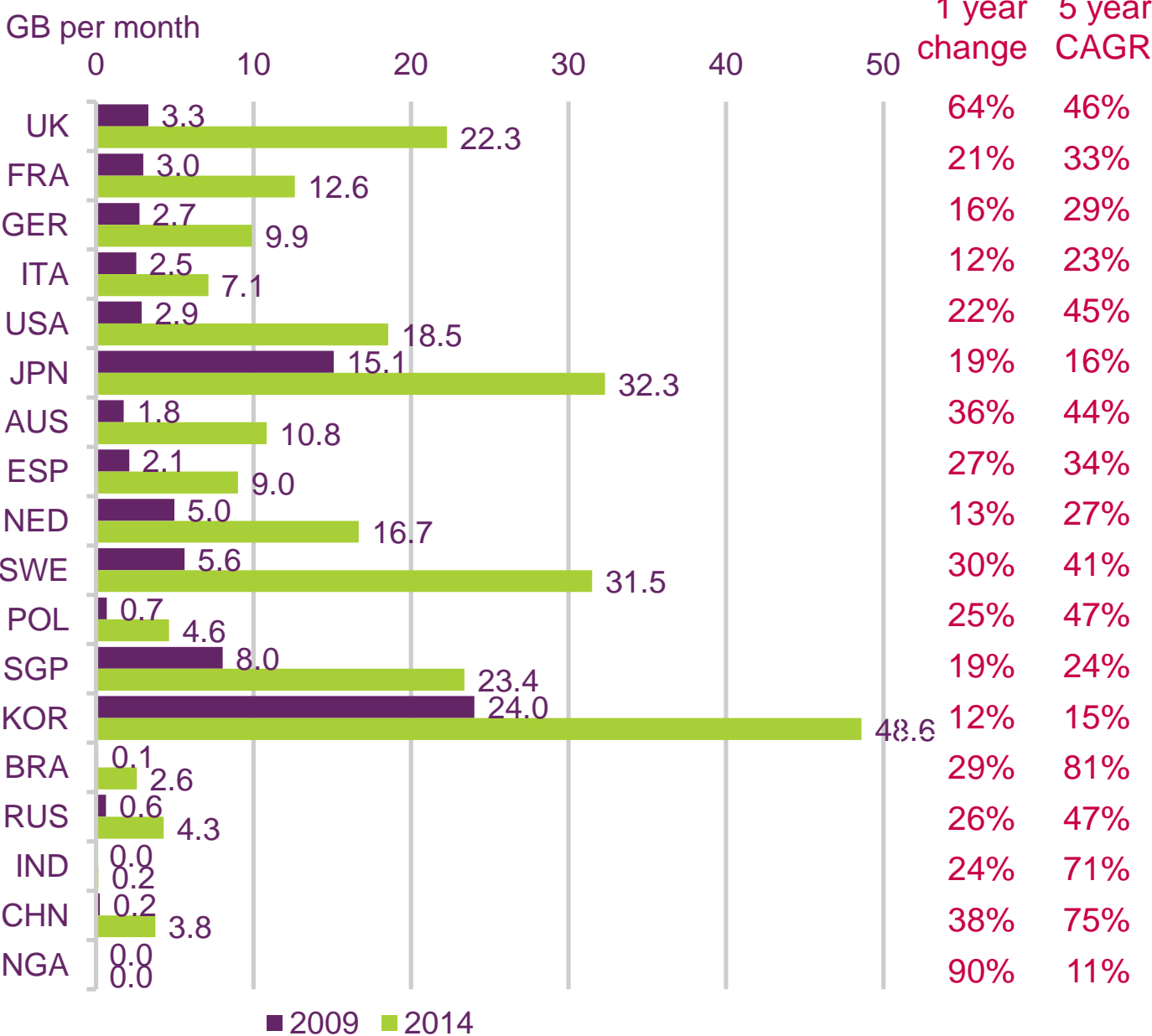
	1 year	5 year
SGP	8.4%	8.7%
KOR	2.8%	5.4%
POL	3.6%	9.5%
BRA	8.6%	6.8%
RUS	10.0%	18.6%
CHN	15.2%	19.4%
IND	14.7%	14.6%
NGA	81.0%	-21.5%

Source: IHS / industry data / Ofcom

Note: All figures expressed in nominal terms

Figure 5.51

Average monthly fixed broadband data volume per person: 2009-2014

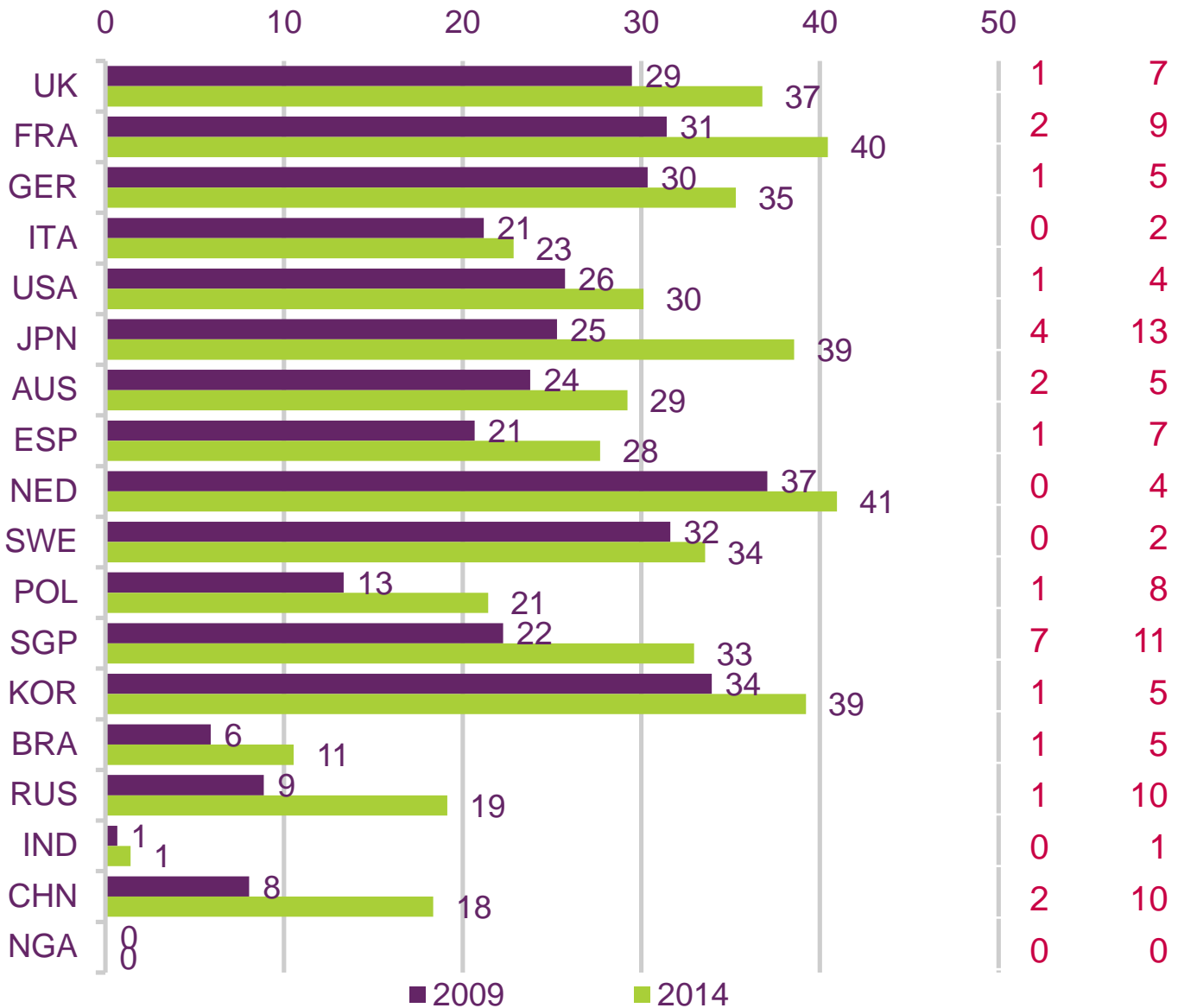


Source: IHS / industry data / Ofcom

Figure 5.52

Fixed broadband connections per 100 population: 2009-2014

Connections per 100 population

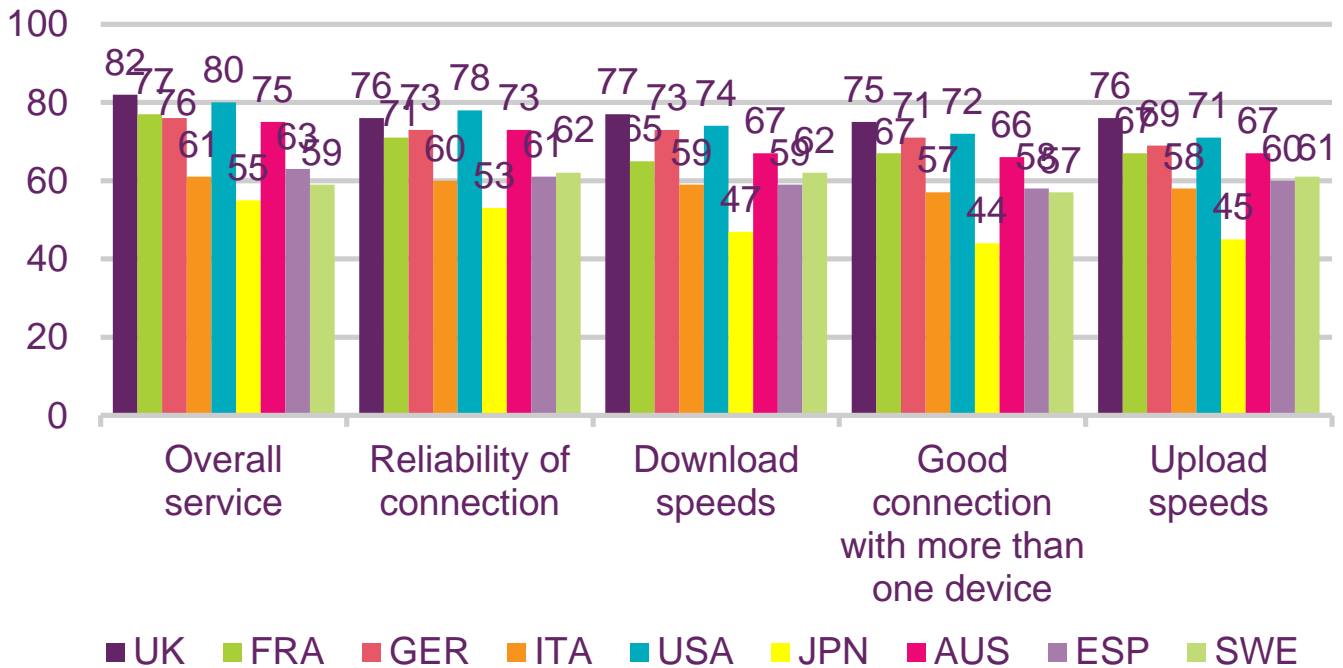


Source: IHS / industry data / Ofcom

Figure 5.53

Satisfaction with fixed broadband service

Proportion (%) of fixed broadband users



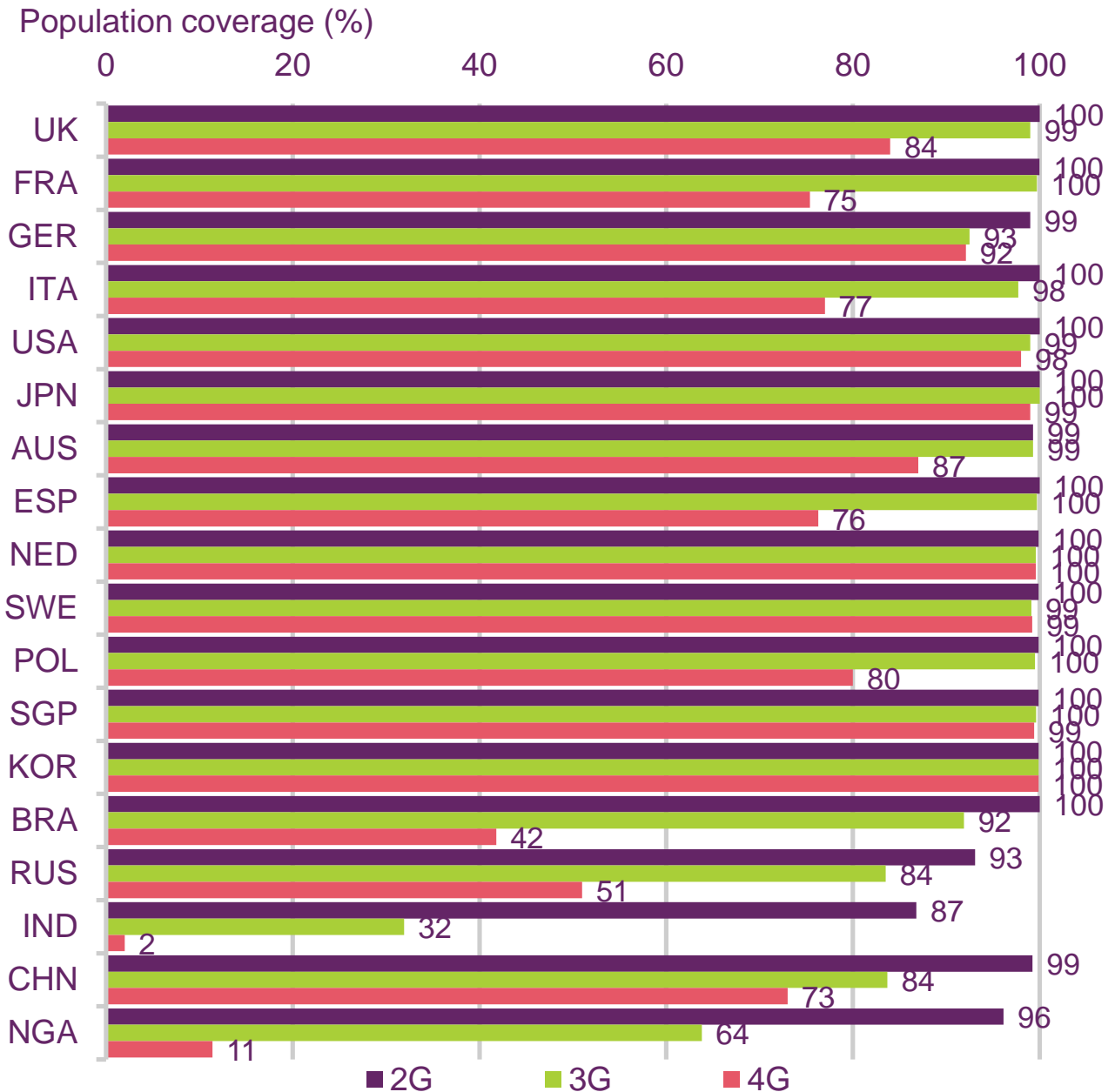
Source: Ofcom consumer research September – October 2015

Base: All respondents with fixed broadband, UK=862, FRA=874, GER=704, ITA=661, USA=588, JPN=663, AUS=727, ESP=735, SWE=741

Q.30 To what extent are you satisfied or dissatisfied with the following aspects of your current home broadband service?

Figure 5.54

2G, 3G and 4G mobile network availability: 2014

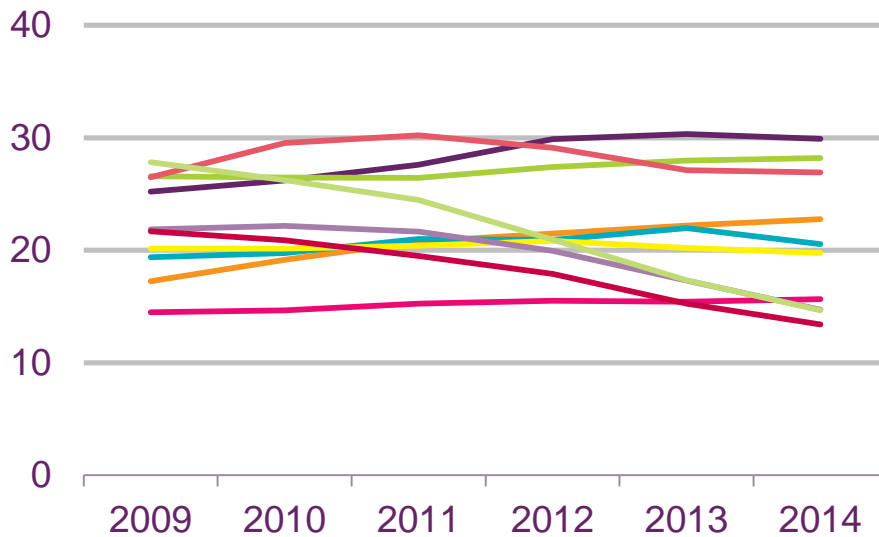


Source: IHS / industry data / Ofcom

Figure 5.55

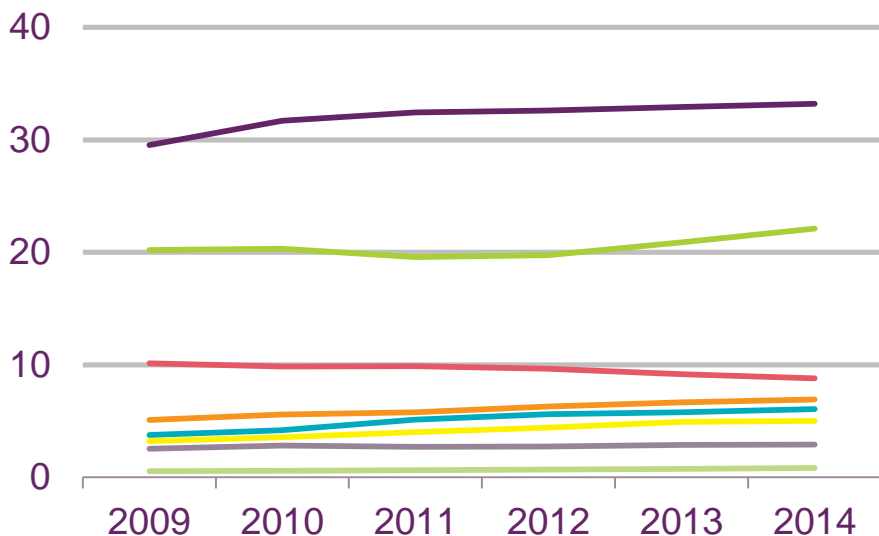
Average per-capita monthly retail mobile revenue: 2009 - 2014

£ per month



	1 year change	5 year CAGR
USA	-1.4%	3.5%
JPN	0.8%	1.2%
AUS	-0.8%	0.3%
SWE	2.6%	5.7%
NED	-6.4%	1.2%
UK	-2.3%	-0.4%
GER	1.6%	1.6%
FRA	-15.0%	-7.6%
ESP	-15.4%	-12.0%
ITA	-12.1%	-9.2%

£ per month



	1 year change	5 year CAGR
SGP	0.9%	2.4%
KOR	5.8%	1.8%
POL	-4.0%	-2.8%
RUS	4.1%	6.3%
BRA	5.2%	10.1%
CHN	1.2%	9.2%
NGA	0.5%	2.7%
IND	11.0%	8.6%

Source: IHS / industry data / Ofcom

Note: All figures expressed in nominal terms

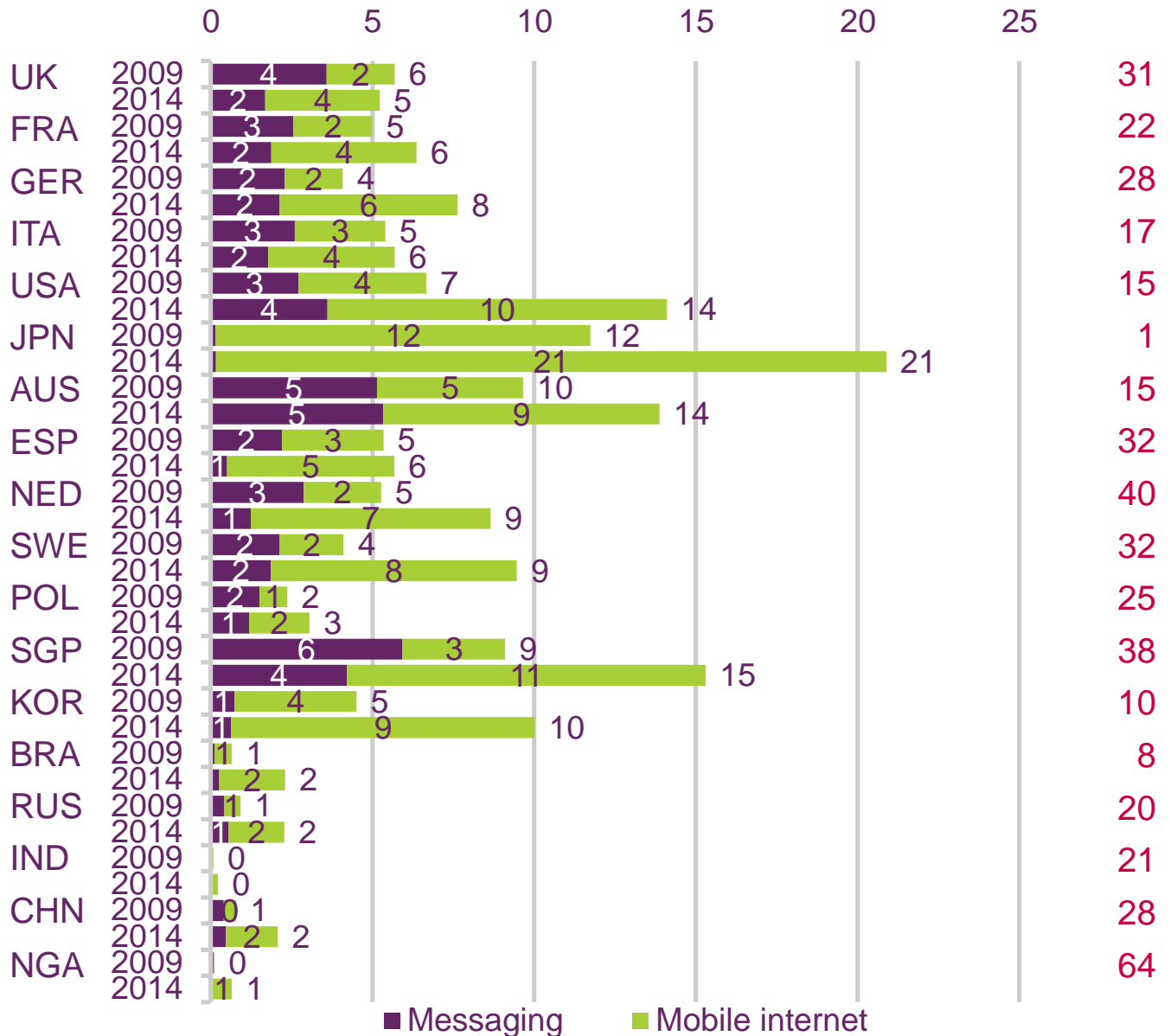
Figure 5.56



Per-capita mobile data average revenue: 2009 and 2014

£ per year

Percentage point change in % of total data from internet

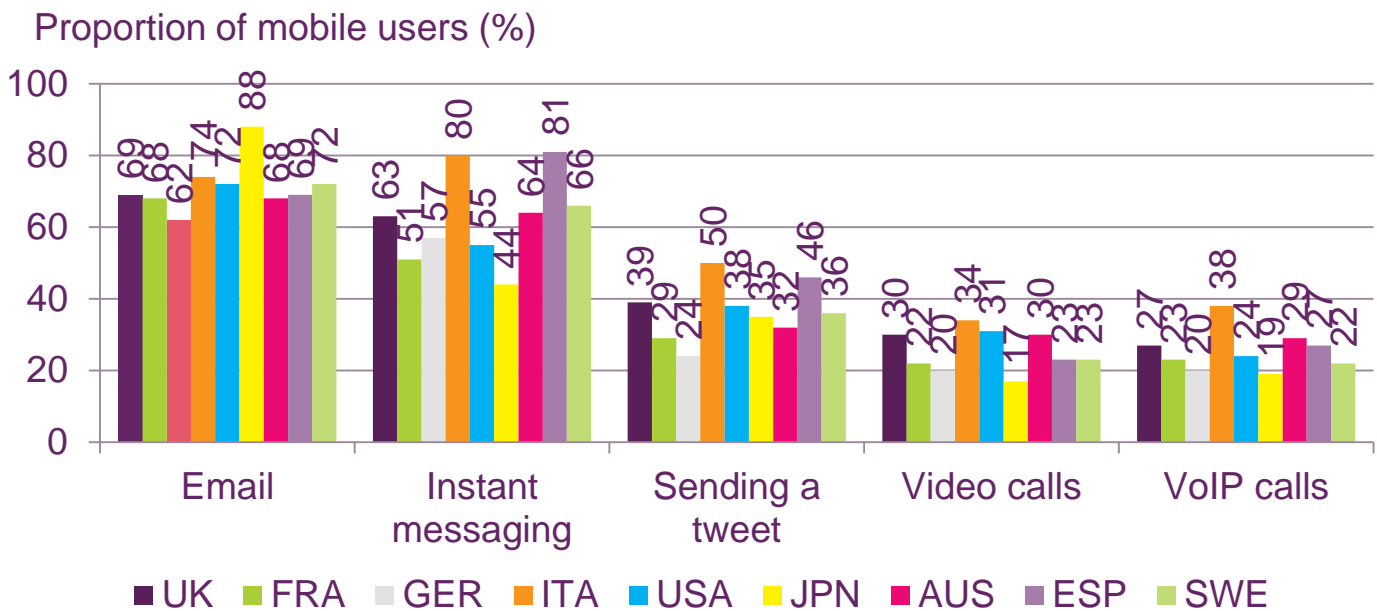


Source: IHS / industry data / Ofcom

Note: Messaging includes SMS and MMS.

Figure 5.57

Activities undertaken on a mobile phone



Source: Ofcom consumer research September – October 2015

Base: All respondents who use a mobile or smartphone/ All respondents who access the internet with each device, UK=SMS 839/ Other services 594, FRA=SMS 853/ Other services 568, GER=SMS 882/ Other services 623, ITA=SMS 865/ Other services 779, USA=SMS 751/ Other services 523, JPN=SMS 815/ Other services 573, AUS=SMS 843/ Other services 610, ESP=SMS 886/ Other services 803, SWE=SMS 882/ Other services 678.

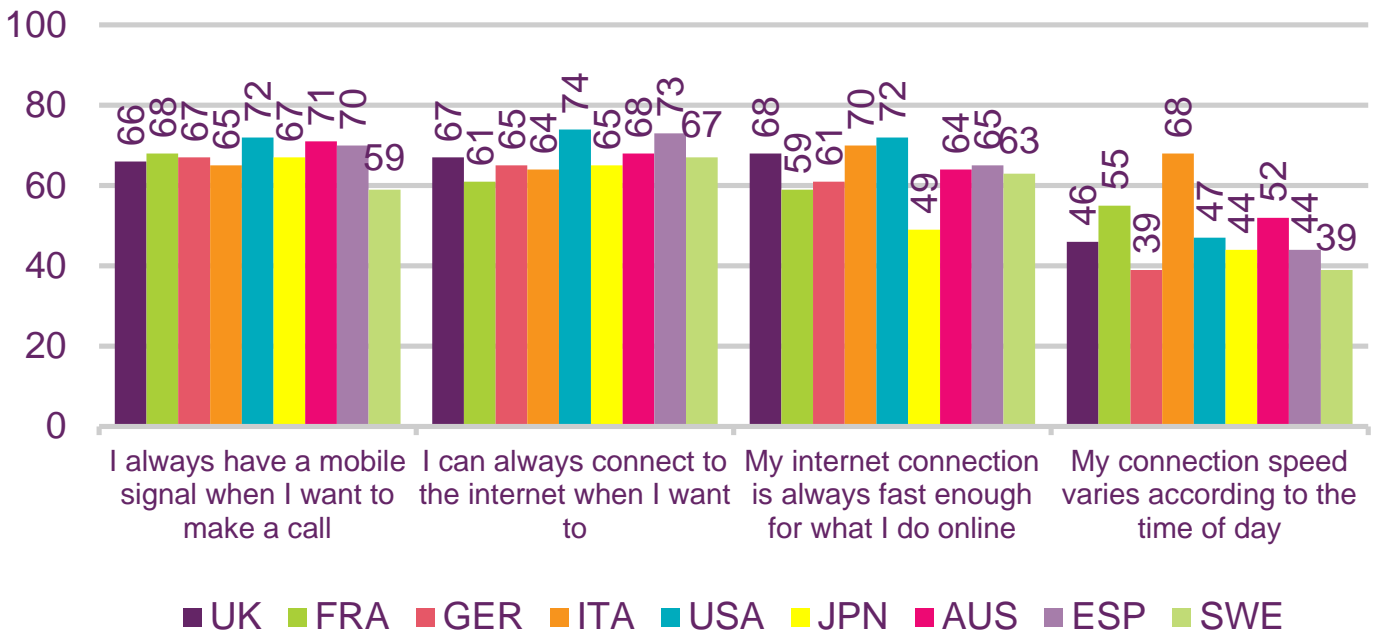
Q. 9b Which, if any of the following ways of communicating over the internet do you use each of your devices for?

Q. 9e Which, if any, of the following do you use your mobile phone or smartphone for?

Figure 5.58

Mobile phone connectivity

Proportion of mobile users (%)



Source: Ofcom consumer research September - October 2015

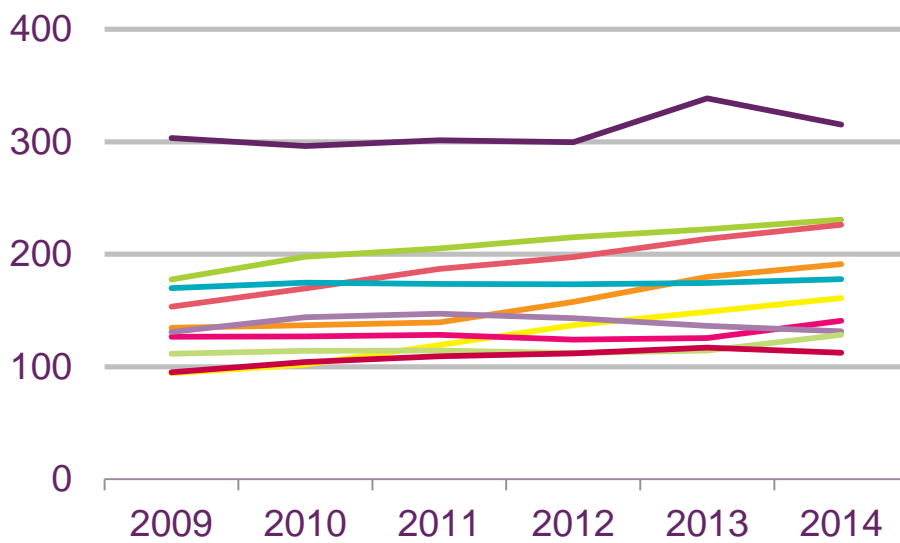
Base: All respondents who use a smartphone or mobile phone (Statement 1) / use a smartphone (Statements 2,3 and 4), UK=839/677, FRA=853/666, GER=882/713, ITA=865/791, USA=751/580, JPN=815/779, AUS=843/690, ESP=886/829, SWE=882/748

Q.10 Thinking about when you use your mobile phone, please select an answer to each of the following...

Figure 5.59

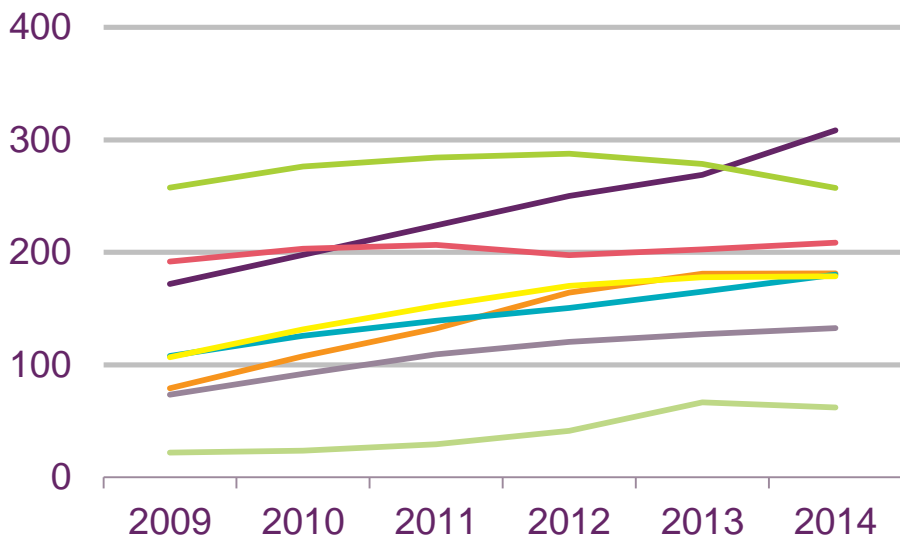
Average per-capita monthly mobile voice call minutes: 2009-2014

Minutes per month



	1 year change	5 year CAGR
USA	-6.9%	0.8%
SWE	3.8%	5.4%
ITA	5.8%	8.1%
FRA	6.3%	7.3%
UK	2.1%	0.9%
AUS	8.1%	11.3%
ESP	12.3%	2.2%
JPN	-3.4%	0.1%
NED	12.2%	2.9%
GER	-3.9%	3.4%

Minutes per month



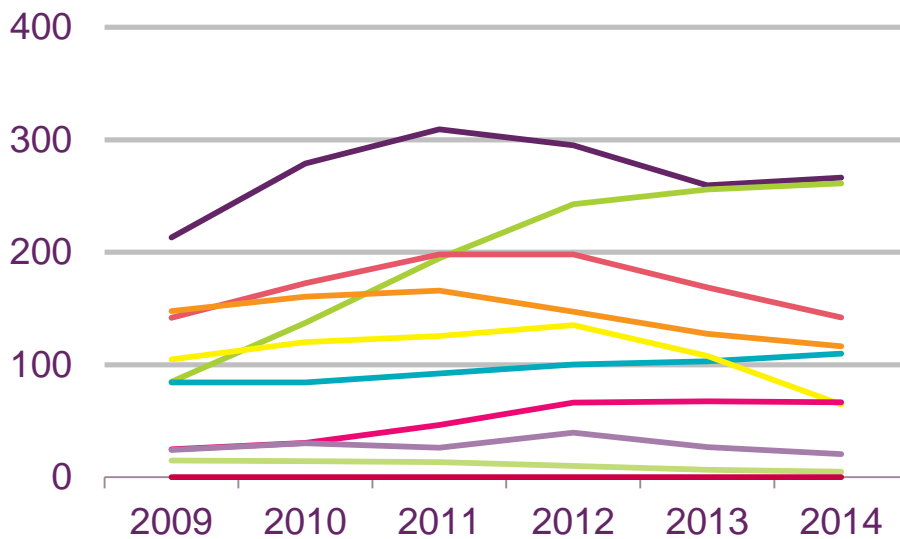
RUS	14.7%	12.4%
SGP	-7.7%	0.0%
KOR	3.0%	1.7%
BRA	0.1%	18.0%
POL	9.1%	10.8%
CHN	0.5%	10.8%
IND	4.4%	12.5%
NGA	-7.1%	23.1%

Source: IHS / industry data / Ofcom

Figure 5.60

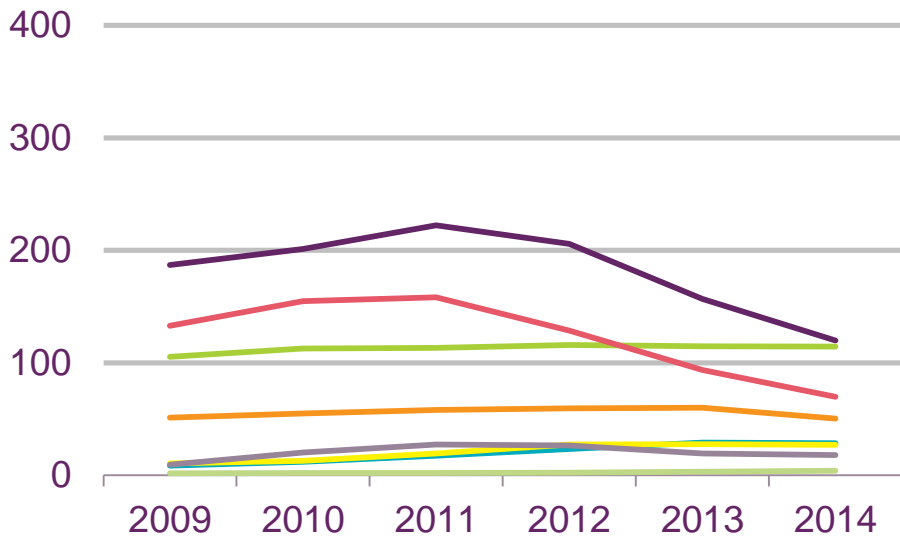
Average number of monthly mobile messages per head: 2009-2014

Messages per month



	1 year change	5 year CAGR
USA	2.6%	4.6%
FRA	2.0%	25.2%
UK	-15.9%	0.0%
SWE	-8.9%	-4.7%
AUS	6.8%	5.4%
ITA	-40.1%	-9.2%
GER	-1.6%	21.7%
NED	-23.3%	-3.3%
ESP	-27.9%	-20.4%
JPN	N/A	N/A

Messages per month



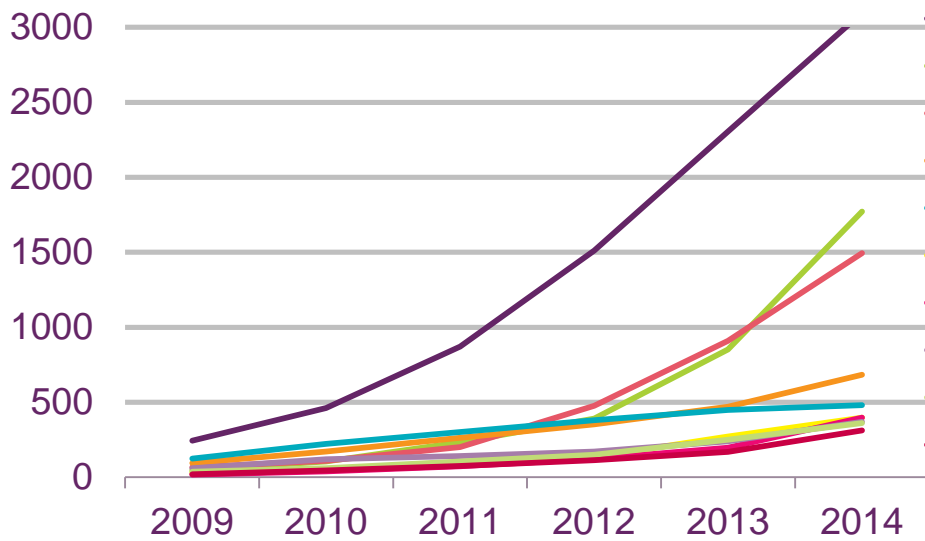
KOR	-23.6%	-8.5%
POL	-0.4%	1.7%
SGP	-25.6%	-12.1%
CHN	-15.7%	-0.3%
RUS	-2.2%	27.0%
BRA	-2.2%	20.7%
IND	-7.0%	14.0%
NGA	30.6%	19.3%

Source: IHS / industry data / Ofcom

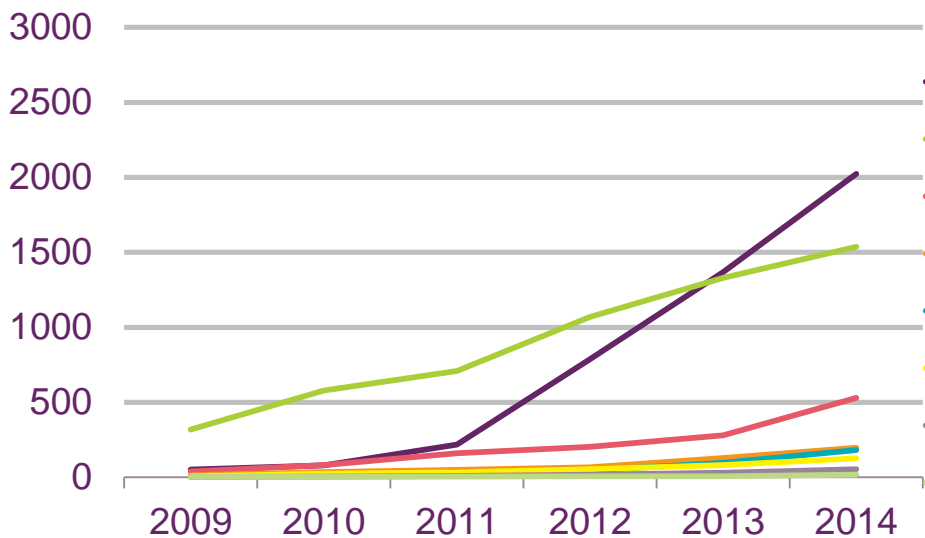
Figure 5.61

Average per-capita monthly mobile data use: 2009-2014

MB per month



MB per month



Source: IHS / industry data / Ofcom

Figure 5.62



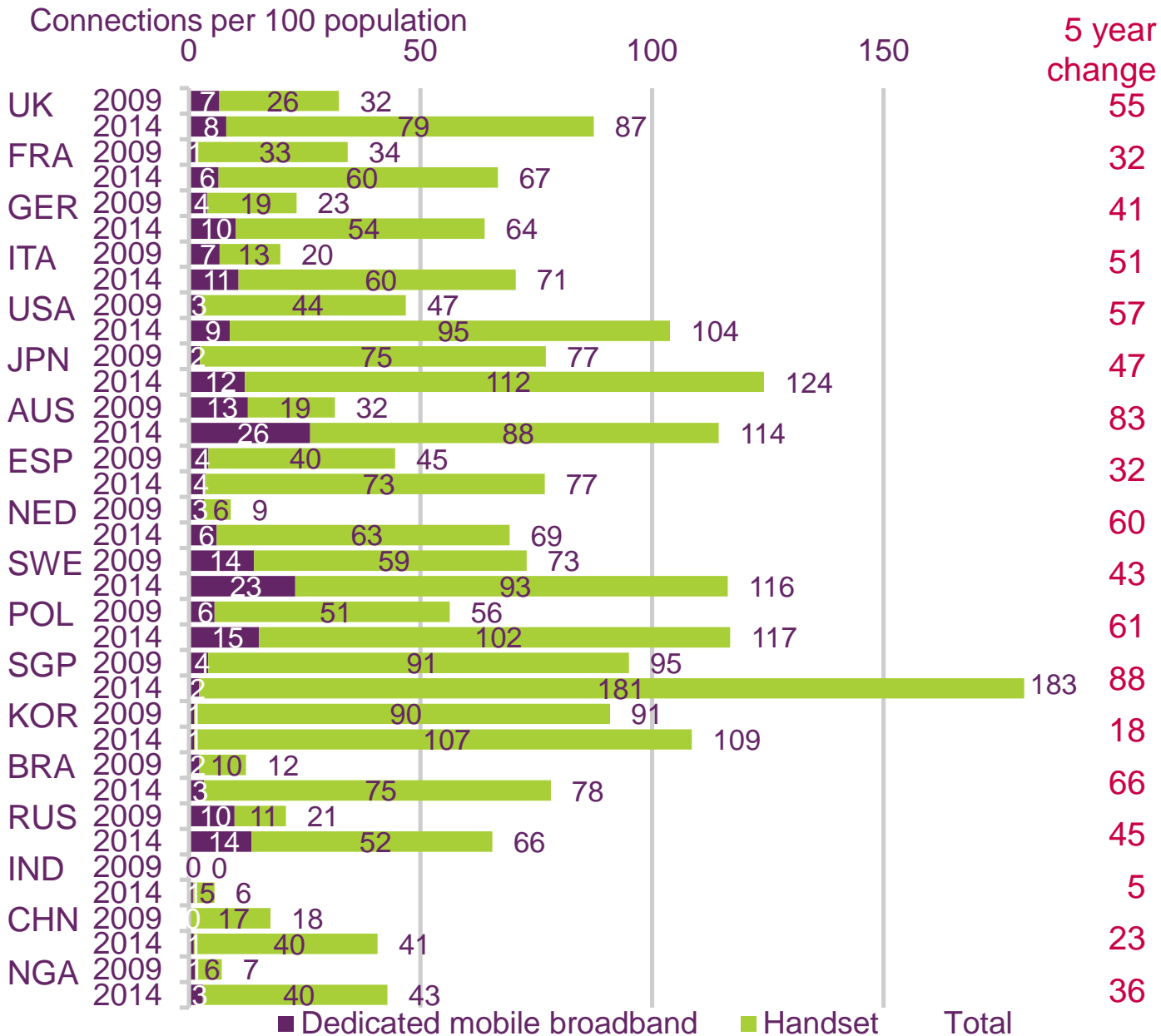
Mobile connections per 100 people: 2009-2014



Source: IHS / industry data / Ofcom

Figure 5.63

Mobile data connections per 100 people: 2009 and 2014

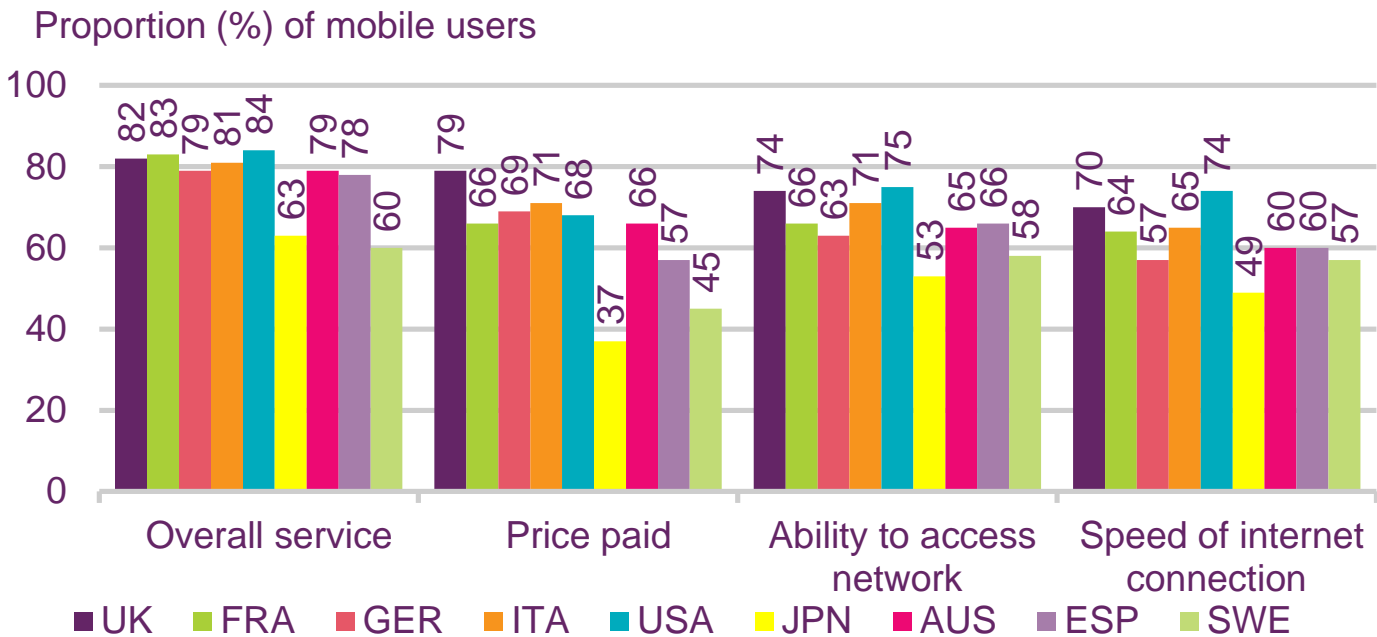


Source: IHS / industry data / Ofcom

Note: Mobile internet excludes messaging services such as SMS and MMS

Figure 5.64

Satisfaction with mobile service



Source: Ofcom consumer research September - October 2015

Base: All respondents who access the internet access via a mobile handset, UK=277, FRA=356, GER=323, ITA=546, USA=246, JPN=190, AUS=371, ESP=501, SWE=374

Q.25 To what extent are you satisfied or dissatisfied with the following aspects of your mobile phone service?