

Research paper on africa

[Technology](#), [Development](#)



FIXED TELEPHONE SUBSCRIPTIONS

annual decline rate= $\frac{\text{current landline subscription}-\text{initial landline subscriptions}}{\text{initial landline subscriptions}} \times 100$

2007 to 2008= $\frac{11,000,000-11,000,000}{11,000,000} \times 100 = 0\%$

Indicating no growth or decline in landline subscriptions in 2008 from 2007

2008 to 2009= $\frac{12,000,000-11,000,000}{11,000,000} \times 100 = 9.09\%$

Indicating a 9.09% growth in landline subscriptions in 2009 from 2008

2009 to 2010= $\frac{12,000,000-12,000,000}{12,000,000} \times 100 = 0\%$

Indicating no growth or decline in landline subscriptions in 2010 from 2009

2010 to 2011= $\frac{11,000,000-12,000,000}{12,000,000} \times 100 = -8.33\%$

Indicating an 8.33% decline in landline subscriptions in 2011 from 2010

annual decline rate= $\frac{\text{current penetration rate}-\text{initial penetration rate}}{\text{initial penetration rate}} \times 100$

2007 to 2008= $\frac{1.5-1.5}{1.5} \times 100 = 0\%$

Indicating no decline or growth in penetration rate from 2007 to 2008

2008 to 2009= $\frac{1.6-1.5}{1.5} \times 100 = 6.67\%$

Indicating a 6. 67% growth in penetration rate from 2008 to 2009

2009 to 2010 = $1.5 - 1.61.6 \times 100 = -6.25\%$

Indicating a 6. 25% drop in penetration rates from 2009 to 2009

2010 to 2011 = $1.4 - 1.51.5 \times 100 = -6.67\%$

Indicating a 6. 67% drop in penetration rates from 2009 to 2010

FUTURE PREDICTIONS FOR 2012 TO 2016

- Based on the average annual decline and growth rates for fixed landline subscriptions, the following inferences and predictions for the fixed landline subscriptions can be made for the years 2012 to 2016.

Note: Using 2007 as the base year, the number of years is counted from 2008, making it 4 years instead of 5.

average annual rates = $\frac{\text{sum of yearly growth or decline rate}}{\text{total number of years}}$

= $0 + 9.09 + 0 - 8.334 = 0.19\%$

Based on the annual growth rate, it can be presumed that fixed landline subscriptions are expected to increase by 0.19% yearly.

- Based on the average annual decline and growth rates for fixed landline penetration, the following inferences and predictions can be made for the years 2012 to 2016

average annual rates = $\frac{\text{sum of yearly growth or decline rate}}{\text{total number of years}}$

= $0 + 6.67 - 6.25 - 6.674 = -6.25\%$

Based on the annual decline rate, it can be presumed that fixed landline penetration is expected to drop by 6.25% annually from 2012 to 2016.

MOBILE CELLULAR SUBSCRIPTIONS

annual growth rate = $\frac{\text{current mobile subscriptions} - \text{initial mobile subscriptions}}{\text{initial mobile subscriptions}} \times 100$

2007 to 2008 = $\frac{246,000,000 - 174,000,000}{174,000,000} = 41.38\%$

Indicating a 41.38% growth rate in mobile cellular subscriptions from 2007 to 2008

2008 to 2009 = $\frac{297,000,000 - 246,000,000}{246,000,000} = 20.73\%$

Indicating a 20.73% growth rate in mobile cellular subscriptions from 2008 to 2009

2009 to 2010 = $\frac{363,000,000 - 297,000,000}{297,000,000} = 22.22\%$

Indicating a 22.22% growth rate in mobile cellular subscriptions from 2009 to 2010

2010 to 2011 = $\frac{434,000,000 - 363,000,000}{363,000,000} = 19.56\%$

Indicating a 19.56% growth rate in mobile cellular subscriptions from 2010 to 2011

annual growth rate = $\frac{\text{current penetration rate} - \text{initial penetration rate}}{\text{initial penetration rate}} \times 100$

2007 to 2008 = $\frac{32.4 - 23.5235}{23.5235} \times 100 = 37.87\%$

Indicating a 37.87% growth rate in mobile cellular penetration rates from 2007 to 2008

2008 to 2009 = $\frac{38.2 - 32.4324}{32.4324} \times 100 = 17.90\%$

Indicating a 17.90% growth rate in mobile cellular penetration rates from 2008 to 2009

2009 to 2010 = $\frac{45.6 - 38.238}{38.238} \times 100 = 19.37\%$

Indicating a 19.37% growth rate in mobile cellular penetration rates from 2009 to 2010

2010 to 2011 = $\frac{53.1 - 43.643}{43.643} \times 100 = 21.79\%$

Indicating a 21.79% growth rate in mobile cellular penetration rates from 2010 to 2011

FUTURE PREDICTIONS FOR 2012 TO 2016

- Based on the average annual decline and growth rates for mobile cellular subscriptions, the following inferences and predictions for the mobile cellular subscriptions can be made for the years 2012 to 2016.

Note: Using 2007 as the base year, the number of years is counted from 2008, making it 4 years instead of 5.

average annual rates = $\frac{\text{sum of yearly growth or decline rate}}{\text{total number of years}}$

= $\frac{41.38 + 20.73 + 22.22 + 19.56}{4} = 25.97\%$

Based on the annual growth rate, it can be presumed that mobile cellular subscriptions are expected to increase by 25.97% yearly from 2011 to 2016.

- Based on the average annual decline and growth rates for mobile cellular penetration, the following inferences and predictions can be made for the years 2012 to 2016

average annual rates = $\frac{\text{sum of yearly growth or decline rate}}{\text{total number of years}}$

$37.87 + 17.90 + 19.37 + 21.794 = 24.23\%$

Based on the annual decline rate, it can be presumed that mobile cellular penetration is expected to grow by 24.23% annually from 2012 to 2016.

ARAB STATES

annual decline rate = $\frac{\text{current landline subscription} - \text{initial landline subscriptions}}{\text{initial landline subscriptions}} \times 100$

2007 to 2008 = $\frac{35,000,000 - 33,000,000}{33,000,000} \times 100 = 6.06\%$

Indicating a 6.06% growth rate in fixed landline subscriptions from 2007 to 2008

2008 to 2009 = $\frac{34,000,000 - 35,000,000}{35,000,000} \times 100 = -2.86\%$

Indicating a 2.86% drop in fixed landline subscriptions from 2008 to 2009

2009 to 2010 = $\frac{35,000,000 - 34,000,000}{34,000,000} \times 100 = 2.94\%$

Indicating a 2.94% growth rate in fixed landline subscriptions from 2009 to 2010

2010 to 2011 = $\frac{35,000,000 - 35,000,000}{35,000,000} \times 100 = 0\%$

Indicating no change in fixed landline subscriptions from 2010 to 2011

annual decline rate = $\frac{\text{current penetration rate} - \text{initial penetration rate}}{\text{initial penetration rate}} \times 100$

2007 to 2008 = $\frac{10.3 - 10.110.1}{10.1} \times 100 = 1.98\%$

Indicating a 1.98% growth rate in fixed landline subscriptions from 2007 to 2008

2008 to 2009 = $\frac{9.9 - 10.310}{10.310} \times 100 = -3.88\%$

Indicating a 3.88% decline rate in fixed landline subscriptions from 2008 to 2009

2009 to 2010 = $\frac{9.8 - 9.99}{9.99} \times 100 = -1.01\%$

Indicating a 1.01% decline rate in fixed landline subscriptions from 2009 to 2010

2010 to 2011 = $\frac{9.6 - 9.89}{9.89} \times 100 = -2.04\%$

Indicating a 2.04% decline rate in fixed landline subscriptions from 2010 to 2011

FUTURE PREDICTIONS FOR 2012 TO 2016

- Based on the average annual decline and growth rates for fixed landline subscriptions, the following inferences and predictions for the fixed landline subscriptions can be made for the years 2012 to 2016.

Note: Using 2007 as the base year, the number of years is counted from 2008, making it 4 years instead of 5.

average annual rates = $\frac{\text{sum of yearly growth or decline rate}}{\text{total number of years}}$

= $\frac{6.06 - 2.86 + 2.94 + 0.4}{4} = 1.535\%$

Based on the annual growth rate, it can be presumed that fixed landline subscriptions are expected to increase by 1.535% yearly.

- Based on the average annual decline and growth rates for fixed landline penetration, the following inferences and predictions can be made for the

years 2012 to 2016

average annual rates= $\frac{\text{sum of yearly growth or decline rate}}{\text{total number of years}}$

$$= \frac{1.98 - 3.88 - 1.01 - 2.04}{4} = -4.95\%$$

Based on the annual decline rate, it can be presumed that fixed landline penetration is expected to drop by 64.95% annually from 2012 to 2016.

MOBILE CELLULAR SUBSCRIPTIONS

annual growth rate= $\frac{\text{current mobile subscriptions} - \text{initial mobile subscriptions}}{\text{initial mobile subscriptions}} \times 100$

$$2007 \text{ to } 2008 = \frac{214,000,000 - 175,000,000}{175,000,000} \times 100 = 22.29\%$$

Indicating a 22.29% growth rate in mobile cellular subscriptions from 2007 to 2008

$$2008 \text{ to } 2009 = \frac{265,000,000 - 214,000,000}{214,000,000} \times 100 = 23.83\%$$

Indicating a 23.83% growth rate in mobile cellular subscriptions from 2008 to 2009

$$2009 \text{ to } 2010 = \frac{310,000,000 - 265,000,000}{265,000,000} \times 100 = 16.98\%$$

Indicating a 16.98% growth rate in mobile cellular subscriptions from 2009 to 2010

$$2010 \text{ to } 2011 = \frac{350,000,000 - 310,000,000}{310,000,000} \times 100 = 12.90\%$$

Indicating a 12.90% growth rate in mobile cellular subscriptions from 2010 to 2011

annual growth rate= $\frac{\text{current penetration rate} - \text{initial penetration rate}}{\text{initial penetration rate}} \times 100$

$$2007 \text{ to } 2008 = \frac{63.4 - 53.53}{53.53} \times 100 = 19.62\%$$

Indicating a 19.62% growth rate in mobile cellular penetration rate from 2007 to 2008

2008 to 2009 = $\frac{76.6 - 63.463}{63.4} \times 100 = 20.82\%$

Indicating a 20.82% growth rate in mobile cellular penetration rate from 2008 to 2009

2009 to 2010 = $\frac{87.8 - 76.676}{76.6} \times 100 = 14.62\%$

Indicating a 14.62% growth rate in mobile cellular penetration rate from 2009 to 2010

2010 to 2011 = $\frac{96.9 - 87.887}{87.8} \times 100 = 10.36\%$

Indicating a 10.36% growth rate in mobile cellular penetration rate from 2010 to 2011

FUTURE PREDICTIONS FOR 2012 TO 2016

- Based on the average annual decline and growth rates for mobile cellular subscriptions, the following inferences and predictions for the mobile cellular subscriptions can be made for the years 2012 to 2016.

Note: Using 2007 as the base year, the number of years is counted from 2008, making it 4 years instead of 5.

average annual rates = $\frac{\text{sum of yearly growth or decline rate}}{\text{total number of years}}$

= $\frac{22.29 + 28.83 + 16.98 + 12.90}{4} = 20.25\%$

Based on the annual growth rate, it can be presumed that mobile cellular subscriptions are expected to increase by 20.25% yearly from 2011 to 2016.

- Based on the average annual decline and growth rates for mobile cellular

penetration, the following inferences and predictions can be made for the years 2012 to 2016

average annual rates= $\frac{\text{sum of yearly growth or decline rate}}{\text{total number of years}}$

$$19.62 + 20.82 + 14.62 + 10.364 = 16.36\%$$

Based on the annual decline rate, it can be presumed that mobile cellular penetration is expected to grow by 16.36% annually from 2012 to 2016.

ASIA & PACIFIC

annual decline rate= $\frac{\text{current landline subscription} - \text{initial landline subscriptions}}{\text{initial landline subscriptions}} \times 100$

$$2007 \text{ to } 2008 = \frac{567,000,000 - 579,000,000}{579,000,000} \times 100 = -2.73\%$$

Indicating a 2.73% decline in fixed landline subscriptions from 2007 to 2008

$$2008 \text{ to } 2009 = \frac{574,000,000 - 567,000,000}{567,000,000} \times 100 = 1.23\%$$

Indicating a 1.23% growth in fixed landline subscriptions from 2008 to 2009

$$2009 \text{ to } 2010 = \frac{557,000,000 - 574,000,000}{574,000,000} \times 100 = -2.96\%$$

Indicating a 2.96% decline in fixed landline subscriptions from 2009 to 2010

$$2010 \text{ to } 2011 = \frac{540,000,000 - 557,000,000}{557,000,000} \times 100 = -3.05\%$$

Indicating a 3.05% decline in fixed landline subscriptions from 2010 to 2011

annual decline rate = $\frac{\text{current penetration rate} - \text{initial penetration rate}}{\text{initial penetration rate}} \times 100$

2007 to 2008 = $\frac{14.9 - 15.4}{15.4} \times 100 = -3.23\%$

Indicating a 3.23% decline in fixed landline subscription penetration rate

2008 to 2009 = $\frac{14.9 - 14.9}{14.9} \times 100 = 0\%$

Indicating no change in fixed landline subscription penetration rate from 2008 to 2009

2009 to 2010 = $\frac{14.3 - 14.9}{14.9} \times 100 = -4.03\%$

Indicating a 4.03% decline in fixed landline subscription penetration rate from 2009 to 2010

2010 to 2011 = $\frac{13.8 - 14.3}{14.3} \times 100 = -3.50\%$

Indicating a 3.50% decline in fixed landline subscription penetration rate from 2010 to 2011