Time distance view of 200 countries for mobile phones penetration rate

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S-time-distance (how many years are their penetration rates behind benchmark Sweden) and S-time-step (time needed to reach the next specified penetration level)Â

The mobile phones penetration rates for 200 countries are analysed with two novel time distance statistical measures to deal with two characteristics for a given country: 1) what is the time lag or lead against the Sweden as benchmark, and 2) the dynamics of change. Methodology is available on http://www.gaptimer.eu/overview_of_the_methodology.html Â¸

Firstly, the statistical measure S-time-distance measures the distance (proximity) in time between the points in time when the two series compared reach the same specified level of the indicator X. The graph below shows the S-time-distance for the corresponding 2008 values against the time trend for Sweden. The median value of S-time-distance is 7.5 years, which means that about 100 of the countries are closer and one 100 more distant in time from Sweden. Due to space limitations only one name out of each four countries can be printed in the graph, the values for each country are available in the Excel file below. Â

Secondly, time matrix is presented showing the time when a given level of the penetration rate was achieved in a country. In this case a series of levels were chosen so that the next level is approximatelly 50% higher than the previous one. From such time matrix it is possible to calculate the second time distance measure: S-time-step (i.e. time needed to pass from one to the next specified penetration level). It measures dynamics between specified levels that is expressed in time units. The speed of mobile penetration is remarkable, on the average at low levels until 15 per 100 inhabitants steps of 50% growth were achieved in less than 1 year. At penetration levels higher than 50 per 100 inhabitants the average S-time-step becomes closer to 2 years and continues to rise. The four top countries have passed even 11 steps of 50% growth per step. Â Â Â Â Graph: Time distance view of 200 countries for mobile phones behind benchmark Sweden.xls Â Calculations by levels of penetration rate: Time matrix and S-time-steps for 200 countries.xlsÂ