

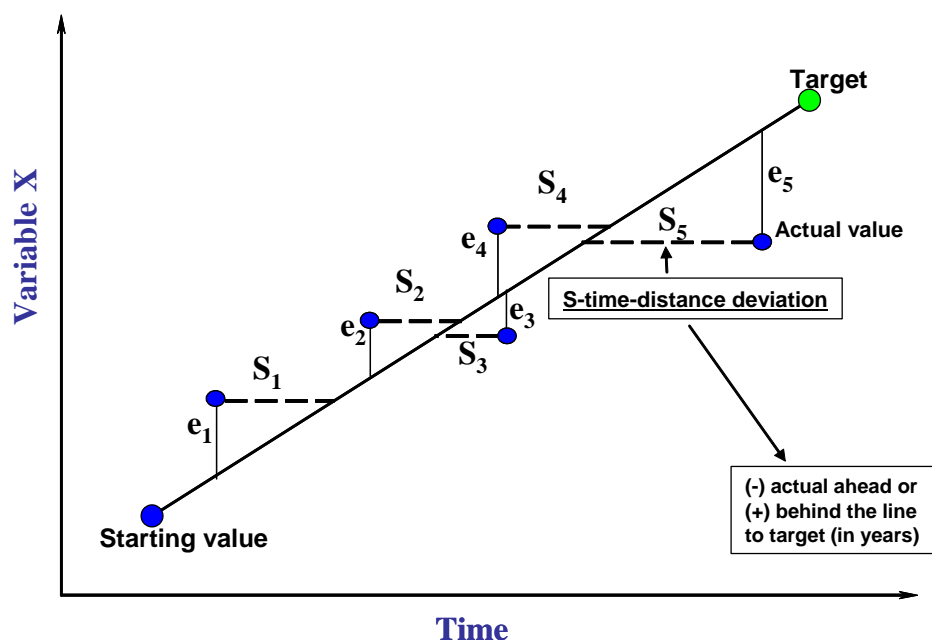
TIME DISTANCE MONITORING OF IMPLEMENTATION OF TARGETS AT THE WORLD, NATIONAL, AND LOCAL LEVELS

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Monitoring implementation of targets is an integral part of policy making at many levels and in many domains. The innovation is that implementation of targets is described in two dimensions: static deviation from the line to target at a given point in time and S-time-deviation at a given level of the indicator. **Describing the implementation of targets as leading or lagging in time against the line to well-known targets is a very useful application in the policy debate** that enhances knowledge, giving data a value beyond spreadsheets. Expressed in time units, S-time-distance is easily understood by policy makers, managers, media and general public thus being an excellent presentation tool for policy analysis and debate. It can **help us to form a new perception of the magnitude of the gap** between the implementation and proclaimed targets for a given indicator as well as across more indicators.

MONITORING: time distance deviations from the line to target

S-time-distance adds a second dimension to comparing actual values with target values, forecast, budget, plan, etc.



and actual to estimated values thus evaluating goodness-of-fit in regressions, models, forecasting and monitoring

Source: Methodology P.Sicherl, Time Distance in Economics and Statistics, Echoraum, Vienna, www.gaptimer.eu

Measuring implementation involves comparing two sets of data: actual developments over time against the implied time path from the starting point to the 2015 MDG target deadline in the first example. **We measure deviations in two dimensions. Firstly, one can measure the difference in variables at a given point in time. And secondly, discrepancies in time (either time lead or time lag) are measured.** Monitoring implementation in time is like comparing train or bus arrivals with the timetable provided for each mode of transport. In the context of the MDGs, it amounts to comparing the time of actual implementation with the time stipulated by the schedule to the 2015 target. **The**

statistical chart uses the same identifiers as Formula 1 on TV: drivers who score a minus at time distance are shown in green to signify that they are ahead in time.

The Guardian published on their Global development web site [my article on time distance method of measuring implementation of MDGs](#), where Gaptimer progress chart summarised the situation over 7 world regions and 10 selected MDG indicators around 2010. The table below is the update (using data from the latest UN report on MDGs) available on [www.gaptimer.eu](#) and on [wikiprogress.org](#).

Gaptimer Progress Chart of MDG implementation for world regions
Are we on the track, ahead or behind in time measured by S-time-distance in years
(+ time lag, - time lead) comparing with the line to the 2015 MDG targets around 2011

Indicator	Developing Regions	Northern Africa	Sub-Saharan Africa	Latin America and the Caribbean	Eastern Asia	Southern Asia	South-Eastern Asia	Western Asia	CHINA	INDIA
Proportion of population living below \$1.25 (PPP) per day (2010)	TA (-5)	TA (-10)	12.8	TA (-5)	TA (-10)	-1.2	TA (-10)	5.3	TA (-13)	1.8
Prevalence of underweight children under-five years of age	N/A	TA (-4)	7.2	TA (-4)	TA (-4)	2.0	-1.6	TA (-4)	TA (-10)	5.9
Net enrolment ratio in primary education	6.9	-1.0	6.1	5.1	N/A	2.1	11.5	7.1	N/A	-3.8
Ratio of girls to boys in primary education	1.1	3.8	5.7	N/A	TA (-15)	-2.3	2.2	7.2	TA (-17)	TA (-6)
Under-five mortality rate (2012)	5.8	TA (-3)	6.6	-2.8	TA (-3)	3.6	-0.3	2.4	TA (-5)	3.6
Maternal mortality ratio (2010)	4.9	-2.0	6.3	5.7	-3.1	-0.9	-1.1	0.6	-3.1	-2.2
Tuberculosis patients successfully treated under short course (2010)	5.2	9.2	3.2	8.4	3.4	3.1	6.2	5.4	4.1	9.4
Proportion of population using an improved drinking water source, total	TA (-4)	1.6	6.0	TA (-4)	TA (-4)	TA (-4)	TA (-4)	4.1	TA (-12)	TA (-11)
Proportion of population using an improved sanitation facility, total	2.9	TA (-4)	17.0	-1.2	TA (-4)	6.9	-2.1	0.8	TA (-6)	7.0
Internet users per 100 inhabitants	-3.9	TA (-4)	-1.5	TA (-4)	TA (-4)	-0.7	-3.8	TA (-4)	TA (-6)	-0.8

S-time-distance measure: deviation (in years) from path to target, (+) time lag, (-) time lead
TA (-x) – 2015 target already achieved x years earlier

An overview of the situation in the 7 world regions:

2015 Target achieved	21 cases	Time lag less than 6 years	18 cases
Time lead	15 cases	Time lag 6 years or more	14 cases

Source: Own calculations based on data from UN, The Millennium Development Report 2013, New York
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Two tables below show some possible scheme and numerical values for analysing time distance deviations for implementation of five selected headline indicators towards the EU2020 EU and national targets. Such results would be available continuously for each year of actual development against the respective line to target, in these tables only the latest available year is shown. The first table does not follow the official period of EU2020 policy but shows an interesting hypothetical example if one would start from the 2005 actual situation and look towards present EU2020 targets and then evaluate how far we would be in 2012 (or 2011) on such hypothetical path.

The first table provides an excellent summary overview across countries and across selected indicators, as well as for given countries. Without going into rich details the summary numbers show very large difference between headline indicators. The last three indicators showed that about 20 countries were ahead of schedule, for early leavers and tertiary education in 2012 in about 8 countries their 2020 targets were already attained. For employment rate these results show another quantitative expression of the severe employment situation in the EU, 20 countries were behind the schedule. What is worse, 12 countries in 2012 were below their 2005 values, in the language of S-time-distance deviation, they were more than 7 years behind the line to the 2020 targets. This semantics is clear and understandable to everybody and communicates the message in the narrative for policy debate that is beyond the message of the standard statistical tables.

EU27 time distance monitoring to the line to target EU2020

(S-time-distance: (-) actual ahead or (+) behind the line to target (in years))

Employment rate - total				R&D in GDP				Renewable energy				Early leavers from education - total				Tertiary educational attainment - total			
Country	S-time-distance (years)	2012 value	2020 target value	Country	S-time-distance (years)	2011 value	2020 target value	Country	S-time-distance (years)	2011 value	2020 target value	Country	S-time-distance (years)	2012 value	2020 target value	Country	S-time-distance (years)	2012 value	2020 target value
EU (27 countries)	5.9	68.5	75.0	EU27	2.7	2.0	3.0	EU27	-1.8	12.5	20.0	EU27	-0.5	12.9	10.0	EU27	-3.0	35.5	40.0
Sweden	-3.3	79.4	80.0	Finland	-2.9	3.8	4.0	Sweden	-5.6	46.8	49.0	Slovenia	TA	4.4	5.0	Ireland	-2.3	51.1	60.0
Netherlands	0.5	77.2	80.0	Sweden	> 6	3.4	4.0	Latvia	4.1	33.1	40.0	Slovakia	TA	5.3	6.0	Cyprus	TA	49.9	46.0
Germany	-7.4	76.7	77.0	Denmark	TA	3.1	3.0	Finland	0.4	31.8	38.0	Czech Republic	TA	5.5	5.5	Luxembourg	TA	49.6	40.0
Austria	-4.1	75.6	77.0	Germany	-4.4	2.8	3.0	Austria	-5.0	30.9	34.0	Poland	> 7	5.7	4.5	Lithuania	TA	48.7	40.0
Denmark	> 7	75.4	80.0	Austria	2.1	2.8	3.8	Estonia	TA	25.9	25.0	Lithuania	TA	6.5	8.9	Sweden	TA	47.9	40.0
UK	N/A	74.2	N/A	Slovenia	-5.0	2.5	3.0	Portugal	-1.7	24.9	31.0	Sweden	TA	7.5	9.9	UK	N/A	47.1	N/A
Finland	3.9	74.0	78.0	Estonia	-6.0	2.4	3.0	Denmark	-2.8	23.1	30.0	Austria	TA	7.6	9.5	Finland	TA	45.8	42.0
Estonia	6.6	72.1	76.0	France	3.3	2.3	3.0	Romania	-3.5	21.4	24.0	Luxembourg	TA	8.1	9.9	Belgium	-2.4	43.9	47.0
Czech Republic	4.1	71.5	75.0	Belgium	2.7	2.0	3.0	Lithuania	-2.9	20.3	23.0	Netherlands	-5.6	8.8	7.9	France	-0.7	43.6	50.0
Luxembourg	-2.1	71.4	73.0	Netherlands	2.1	2.0	2.5	Slovenia	0.6	18.8	25.0	Finland	-2.1	8.9	8.0	Denmark	TA	43.0	40.0
Cyprus	> 7	70.2	75.0	Czech Republic	N/A	1.8	N/A	Spain	-4.3	15.1	20.0	Denmark	> 7	9.1	9.9	Netherlands	TA	42.3	40.0
France	> 7	69.3	75.0	UK	N/A	1.8	N/A	Bulgaria	-5.0	13.8	16.0	Ireland	-2.3	9.7	8.0	Spain	2.6	40.1	44.0
Lithuania	> 7	68.7	72.8	Ireland	-4.2	1.7	2.0	Germany	-4.4	12.3	18.0	Germany	-5.5	10.5	9.9	Slovenia	-7.4	39.2	40.0
Slovenia	> 7	68.3	75.0	Portugal	-1.9	1.5	2.7	Greece	-1.8	11.6	18.0	Estonia	-4.2	10.5	9.5	Estonia	-6.7	39.1	40.0
Latvia	> 7	68.2	73.0	Luxembourg	> 6	1.4	2.3	France	2.4	11.5	23.0	Latvia	TA	10.5	13.4	Poland	-4.9	39.1	45.0
Belgium	5.4	67.2	73.2	Spain	3.4	1.3	3.0	Italy	-4.2	11.5	17.0	Greece	-1.5	11.4	9.7	Latvia	TA	37.0	34.0
Portugal	> 7	66.5	75.0	Italy	-0.1	1.3	1.5	Poland	-1.9	10.4	15.0	Cyprus	-5.4	11.4	10.0	Germany	0.7	31.9	42.0
Slovakia	5.7	65.1	72.0	Hungary	0.2	1.2	1.8	Slovakia	-1.8	9.7	14.0	Hungary	1.0	11.5	10.0	Greece	-5.8	30.9	32.0
Poland	-0.9	64.7	71.0	Lithuania	2.7	0.9	1.9	Czech Republic	-2.6	9.4	13.0	France	3.7	11.6	9.5	Hungary	-7.6	29.9	30.3
Romania	6.5	63.8	70.0	Poland	1.9	0.8	1.7	Hungary	-2.3	8.1	13.0	Belgium	3.0	12.0	9.5	Portugal	-0.9	27.2	40.0
Ireland	> 7	63.7	69.0	Malta	TA	0.7	0.7	Ireland	-1.5	6.7	16.0	Bulgaria	-5.6	12.5	11.0	Bulgaria	3.9	26.9	36.0
Malta	TA	63.1	62.9	Latvia	2.6	0.7	1.5	Cyprus	-0.8	5.4	13.0	UK	N/A	13.5	N/A	Austria	1.0	26.3	38.0
Bulgaria	5.7	63.0	76.0	Slovakia	-0.4	0.7	1.0	Netherlands	0.4	4.3	14.0	Romania	3.0	17.4	11.3	Czech Republic	-4.3	25.6	32.0
Hungary	> 7	62.1	75.0	Greece	N/A	0.6	N/A	Belgium	1.0	4.1	13.0	Italy	-2.7	17.6	15.0	Slovakia	-0.4	23.7	40.0
Italy	> 7	61.0	67.0	Bulgaria	3.3	0.6	1.5	UK	-0.6	3.8	15.0	Portugal	-2.4	20.8	10.0	Malta	2.0	22.4	33.0
Spain	> 7	59.3	74.0	Cyprus	-5.9	0.5	0.5	Luxembourg	0.7	2.9	11.0	Malta	TA	22.6	29.0	Romania	-4.0	21.8	26.7
Greece	> 7	55.3	70.0	Romania	4.5	0.5	2.0	Malta	N/A	0.4	10.0	Spain	1.4	24.9	15.0	Italy	-1.6	21.7	26.0
Target achieved	1			Target achieved	2			Target achieved	1			Target achieved	9			Target achieved	8		
Time lead	5			Time lead	9			Time lead	18			Time lead	10			Time lead	13		
Time lag	8			Time lag	11			Time lag	7			Time lag	5			Time lag	5		
Lower than 2005	12			Lower than 2005	2			Lower than 2005	0			More than 2005	2			Lower than 2005	0		
Ahead of schedule	6			Ahead of schedule	11			Ahead of schedule	19			Ahead of schedule	19			Ahead of schedule	21		
Behind schedule	20			Behind schedule	13			Behind schedule	7			Behind schedule	7			Behind schedule	5		

EU28 time distance monitoring to the line to target EU2020

(S-time-distance: (-) actual ahead or (+) behind the line to target (in years))

Employment rate - total				R&D in GDP				Renewable energy				Early leavers from education - total				Tertiary educational attainment - total			
Country	S-time-distance (years)	2013 value	2020 target value	Country	S-time-distance (years)	2012 value	2020 target value	Country	S-time-distance (years)	2012 value	2020 target value	Country	S-time-distance (years)	2013 value	2020 target value	Country	S-time-distance (years)	2013 value	2020 target value
EU28	> 3	68.3	75.0	EU28	1.2	2.1	3.0	EU28	-0.6	14.1	20.0	EU28	-2.1	11.9	10.0	EU28	-2.4	36.8	40.0
EU27	3.0	68.5	75.0	EU27	1.2	2.1	3.0	EU27	N/A	N/A	20.0	EU27	-2.0	12.0	10.0	EU27	-2.3	36.8	40.0
Sweden	-6.0	79.8	80.0	Finland	> 2	3.6	4.0	Sweden	TA	51.0	49.0	Croatia	TA	3.7	4.0	Ireland	0.3	52.6	60.0
Germany	TA	77.1	77.0	Sweden	1.7	3.4	4.0	Latvia	-2.7	35.8	40.0	Slovenia	TA	3.9	5.0	Luxembourg	-0.6	52.5	66.0
Netherlands	> 3	76.5	80.0	Denmark	> 2	3.0	3.0	Finland	-1.6	34.3	38.0	Czech Republic	> 3	5.4	5.5	Lithuania	TA	51.3	40.0
Denmark	> 3	75.6	80.0	Germany	-7.0	3.0	3.0	Austria	-2.2	32.1	34.0	Poland	> 3	5.6	4.5	Sweden	TA	48.3	40.0
Austria	0.1	75.5	77.0	Austria	1.5	2.8	3.8	Denmark	-3.0	26.0	30.0	Luxembourg	TA	6.1	10.0	Cyprus	TA	47.8	46.0
United Kingdom	N/A	74.9	N/A	Slovenia	-6.1	2.8	3.0	Estonia	TA	25.8	25.0	Lithuania	TA	6.3	9.0	United Kingdom	N/A	47.6	N/A
Estonia	-4.2	73.3	76.0	France	1.3	2.3	3.0	Portugal	1.3	24.6	31.0	Slovakia	> 3	6.4	6.0	Finland	TA	45.1	42.0
Finland	2.4	73.3	78.0	Belgium	0.2	2.2	3.0	Romania	> 2	22.9	24.0	Sweden	> 3	7.1	10.0	France	2.2	44.0	50.0
Czech Republic	-1.6	72.5	75.0	Estonia	-2.8	2.2	3.0	Lithuania	-4.1	21.7	23.0	Austria	TA	7.3	9.5	Estonia	TA	43.7	40.0
Luxembourg	1.2	71.1	73.0	Netherlands	-3.1	2.2	2.5	Slovenia	0.1	20.2	25.0	Denmark	TA	8.0	10.0	Denmark	TA	43.4	40.0
Lithuania	-3.7	69.9	72.8	Czech Republic	N/A	1.9	N/A	Croatia	-2.8	16.8	20.0	Ireland	-5.9	8.4	8.0	Netherlands	TA	43.1	40.0
Latvia	-3.0	69.7	73.0	Ireland	N/A	1.7	N/A	Bulgaria	TA	16.3	16.0	Cyprus	TA	9.1	10.0	Belgium	> 3	42.7	47.0
France	2.5	69.5	75.0	United Kingdom	N/A	1.7	N/A	Spain	1.0	14.3	20.0	Netherlands	-1.0	9.2	8.0	Spain	2.7	40.7	44.0
Belgium	> 3	67.2	73.2	Portugal	> 2	1.5	2.7	Greece	-3.6	13.8	18.0	Finland	-1.4	9.3	8.0	Latvia	TA	40.7	34.0
Slovenia	> 3	67.2	75.0	Luxembourg	> 2	1.5	2.3	Italy	-3.1	13.5	17.0	Estonia	-6.1	9.7	9.5	Poland	-2.9	40.5	45.0
Cyprus	> 3	67.1	75.0	Spain	> 2	1.3	3.0	France	1.1	13.4	23.0	France	-6.4	9.7	9.5	Slovenia	TA	40.1	40.0
Portugal	> 3	65.6	75.0	Hungary	-0.4	1.3	1.8	Germany	-0.8	12.4	18.0	Latvia	TA	9.8	13.4	Greece	TA	34.6	32.0
Ireland	0.9	65.5	69.0	Italy	1.6	1.3	1.5	Czech Republic	-3.6	11.2	13.0	Germany	TA	9.9	10.0	Germany	-0.1	33.1	42.0
Slovakia	2.4	65.0	72.0	Lithuania	0.5	0.9	1.9	Poland	-1.3	11.0	15.5	Greece	-6.0	10.1	9.7	Hungary	TA	31.9	30.3
Malta	TA	64.9	62.9	Poland	-0.3	0.9	1.7	Slovakia	-1.3	10.4	14.0	Belgium	-0.8	11.0	9.5	Bulgaria	0.7	29.4	36.0
Poland	2.1	64.9	71.0	Malta	TA	0.8	0.7	Hungary	-0.1	9.6	14.7	Hungary	> 3	11.8	10.0	Portugal	-1.1	29.2	40.0
Romania	2.1	63.9	70.0	Slovakia	-2.1	0.8	1.2	Ireland	-0.4	7.2	16.0	United Kingdom	N/A	12.4	N/A	Austria	-0.1	27.3	38.0
Bulgaria	> 3	63.5	76.0	Croatia	2.0	0.8	1.4	Belgium	-1.2	6.8	13.0	Bulgaria	-1.8	12.5	11.0	Slovakia	-0.3	26.9	40.0
Hungary	0.9	63.2	75.0	Greece	TA	0.7	0.7	Cyprus	0.4	6.8	13.0	Italy	-3.4	17.0	16.0	Czech Republic	-3.0	26.7	32.0
Italy	> 3	59.8	67.0	Latvia	1.0	0.7	1.5	Netherlands	0.7	4.5	16.0	Romania	1.5	17.3	11.3	Malta	-1.4	26.0	33.0
Spain	> 3	58.2	74.0	Bulgaria	1.3	0.6	1.5	United Kingdom	0	4.2	15.0	Portugal	-2.1	19.2	10.0	Croatia	1.3	25.9	30.0
Croatia	> 3	53.9	59.0	Romania	1.6	0.5	2.0	Luxembourg	1.5	3.1	11.0	Malta	-0.1	20.9	10.0	Romania	-2.9	22.8	26.7
Greece	> 3	53.2	70.0	Cyprus	> 2	0.5	0.5	Malta	-1.9	1.4	10.0	Spain	-0.7	23.5	15.0	Italy	-1.5	22.4	26.0
Target achieved	2			Target achieved	2			Target achieved	3			Target achieved	9			Target achieved	11		
Time lead	5			Time lead	7			Time lead	16			Time lead	12			Time lead	10		
Time lag	9			Time lag	10			Time lag	8			Time lag	1			Time lag	5		
Lower than 2010	11			Lower than 2010	6			Lower than 2010	1			More than 2010	5			Lower than 2010	1		
Ahead of schedule	7			Ahead of schedule	9			Ahead of schedule	19			Ahead of schedule	21			Ahead of schedule	21		
Behind schedule	20			Behind schedule	16			Behind schedule	9			Behind schedule	6			Behind schedule	6		

Source: Own calculations based on data from Eurostat.

http://epp.eurostat.ec.europa.eu/portal/page/portal/europe_2020_indicators/headline_indicators

The second table for EU 28 countries for 2013 (or 2012) is more politically correct as it shows the results from 2010 on. Yet the summary results confirm the earlier conclusions. For the headline indicator employment rate 20 countries are behind the schedule, 11 of them had in 2013 values below those in 2010 starting year. For 11 countries there was no progress in the 2010-2013 period for employment rate. The earlier graph that contained also the worse years of the financial crisis showed

even a more serious situation. The time distance method, either for monitoring or for benchmarking in the time perspective, brings the second dimension of deviations or disparities that the present state-of-the-art is neglecting.

For early leavers nine countries were in 2013 already better than their 2020 targets, this holds true for tertiary attainment for 10 countries; with only six countries being behind the schedule for both indicators. The headline indicator renewable energy also more countries are ahead of schedule than behind it, but with fewer cases that already reached the 2020 targets. R&D in GDP indicates a different picture, with 9 countries ahead and 16 countries behind the schedule; overall it is closer with the employment rate situation than with the other three indicators.

The average for EU28 S-time-distance deviations express the situation with being ahead or behind the track to 2020 targets in simple terms: employment rate is more than 3 years behind, R&D 1.2 years behind, renewably energy 0.6 years, early leavers 2.1 years and tertiary attainment 2.4 years, ahead of the line to the 2020 target.

Software for time distance monitoring of targets from your own data:

Free web monitoring tool

For time distance monitoring of implementation of targets, as it was shown here for examples of indicators for EU2020 and UN Millennium Development Goals, SICENTER developed on www.gaptimer.eu a software tool to facilitate interested users to use the method for their own data. The tool can be accessed on http://www.gaptimer.eu/s-t-d_monitoring_tool.html

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S-T-D Monitoring Tool

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S-T-D MONITORING TOOL

Tuesday, 27 November 2007

FREE WEB MONITORING TOOL FOR LISBON, NRP, MILLENNIUM DEVELOPMENT GOALS AND OTHER TARGETS WITH S-TIME-DISTANCE MEASURE

CLICK TO USE THE TOOL OR SEE THE DEMO

FUNCTION

- To calculate the lead or lag in time for tracking implementation of targets at the world, regional, national, sub-national or business levels, e.g.
- Lisbon, NRP and Sustainable Development targets in the case of EU
- UN Millennium Development Goals
- or other planned, budgeted, or aid disbursement targets

PURPOSE

To empower a broad range of stakeholders in Europe and in the world with an excellent presentation and communication tool that is easily understood by policy makers, experts, managers, media and general public, it can support decision-making as well as influence public opinion.

POTENTIAL USERS

All stakeholders who would like to take advantage of this complementary statistical measure for analysis and policy debate at various levels, e.g.: international and national organizations, NGOs, experts, businesses, managers, educators, students, interest groups, media and the general public

Free web time distance monitoring tool is available at
www.gaptimer.eu

You can use the tool to track the implementation of targets by using your data and assumptions

For time distance monitoring of implementation of targets, as it was shown here for examples of indicators for EU2020 and UN Millennium Development Goals, SICENTER developed on www.gaptimer.eu a software tool to facilitate interested users to use the method for their own data. The tool can be accessed on http://www.gaptimer.eu/s-t-d_monitoring_tool.html.

Instructions for preparation of input file and for running the tool

[1] Input format

The input structure is shown below. It can be prepared in Excel file with the specified elements. Different formats of Excel might sometimes cause some problems in uploading, in such case it is advised to save the input file as TAB delimited file and upload such file. The tool is at present prepared for input files with decimal point separator.

The user is given the flexibility to prepare his/her assumptions about the line to target before he/she enters the time series of the line to target into the input file. This means that he/she can calculate it e.g. as linear or exponential or any other assumption about the line to target with the limitation that it has to be either continuously increasing or continuously decreasing. If the value and year of the target for a given indicator is in the NRP different for different countries enter this information in the proper places of the input structure. It is important that two names in the input file are never the same; in the example above we used 'LT' to separate the line to target from the actual values for a given case.

For most of the structural indicators the desired tendency for Lisbon targets is increasing. Only for indicators for which the desired tendency might be decreasing (e.g. infant mortality) in the first column of the row indicating line to target '0' should be put before the name of the country or indicator (e.g. '0 Ireland LT').

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010					
2	EU27 LT	62.2	62.98	63.76	64.54	65.32	66.1	66.88	67.66	68.44	69.22	70					
3	EU27	62.2	62.5	62.3	62.5	62.9	63.4	64.4									
4	EU25 LT	62.4	63.16	63.92	64.68	65.44	66.2	66.96	67.72	68.48	69.24	70					
5	EU25	62.4	62.8	62.8	62.9	63.3	63.9	64.7									
6	EU15 LT	63.4	64.06	64.72	65.38	66.04	66.7	67.36	68.02	68.68	69.34	70					
7	EU15	63.4	64	64.2	64.3	64.7	65.3	66									
8	Belgium LT	60.5	61.45	62.4	63.35	64.3	65.25	66.2	67.15	68.1	69.05	70					
9	Belgium	60.5	59.9	59.9	59.6	60.3	61.1	61									
10	Bulgaria LT	50.4	52.36	54.32	56.28	58.24	60.2	62.16	64.12	66.08	68.04	70					
11	Bulgaria	50.4	49.7	50.6	52.5	54.2	55.8	58.6									
12	Czech Republic LT	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70					
13	Czech Republic	65	65	65.4	64.7	64.2	64.8	65.3									
14	Denmark LT	76.3	75.67	75.04	74.41	73.78	73.15	72.52	71.89	71.26	70.63	70					
15	Denmark	76.3	76.2	75.9	75.1	75.7	75.9	77.4									
16	Germany LT	65.6	66.04	66.48	66.92	67.36	67.8	68.24	68.68	69.12	69.56	70					
17	Germany	65.6	65.8	65.4	65	65	66	67.5									
18	Estonia LT	60.4	61.36	62.32	63.28	64.24	65.2	66.16	67.12	68.08	69.04	70					
19	Estonia	60.4	61	62	62.9	63	64.4	66.1									
20	Ireland LT	65.2	65.68	66.16	66.64	67.12	67.6	68.08	68.56	69.04	69.52	70					
21	Ireland	65.2	65.8	65.5	65.5	66.3	67.6	68.6									
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The first basic row required is TIME (years)

The input information for each case should always be in pairs; in the first row the user specifies the line to target, the second row represents actual values

In the first column are names of countries or indicators

Input

If input file is prepared as Excel file, sheet name has to be 'Input'

Demo file: For the convenience of the user demo file 'Total employment rate' for Lisbon 1 target is pre-installed to provide the first impression of a practical application of the tool.

[2] Instructions for running the monitoring tool

- click on 'Browse' button
- choose the file from your computer that you wish to use (see Input format for

preparation)

- click 'Open'
- type indicator name if you wish that this name will be displayed in the tables
- double click 'OK'

The first screen of the output consists of the following parts:

1. input file
2. S-time-distance deviation in time for actual values from the line to target for all units
3. The calculated time on the line to target for any given actual value
4. Percentage deviations from the line to target for all units

Further results can be obtained in the following options:

5. Choose 'Select for graph:' and from drop-down menu select any country or unit to get
 - 5.1 (i.e. a small concentrated table of results for that country or unit)
 - 5.2 (i.e. the visualization of two graphs for that case: the first graph shows the line to target and actual values, the second one values of the S-time-distance for the selected unit)
6. Choose 'Select for download:' the user can download any of the tables of the output in the Excel format for printing, graphing and further advanced handling of the results

There are two further options incorporated:

1. Change the decimal separator (dot or comma)
2. Transpose table(s) if desired

[3] Comment on output

Colours (red and green) are used to indicate those specific years where the normal calculation of S-time-distance deviation from the line to target is replaced by a qualitative statement. The green field for a given year indicates that in that year the country specific final target was already achieved, with symbol TA (Target Achieved). In cases where the final target was attained throughout the analysed period no graphs for S-time-distance will be displayed (disregard LT information in the input file for such cases).

The red field for a given year indicates that the actual value in that year is worse than in the starting year of the analysed period (indicated by WTS - Worse Than Starting value). For S-time-distance the number in a red field shows that the S-time-distance is more than x years (current year minus starting year).

[4] Current limitations

Currently the time axis is expressed in years. We plan further development of S-time-distance web tool for monitoring implementation of targets in line with the interaction with interested users.

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