

# TELCOS & HI-TECH

Helgi's Pocket Guide

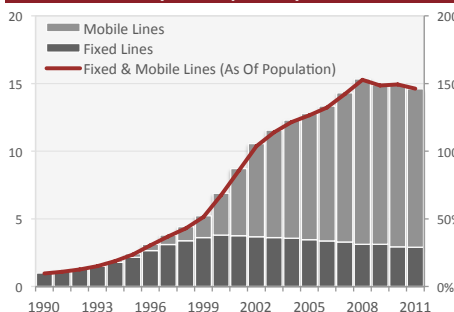
January 2013

Hungary

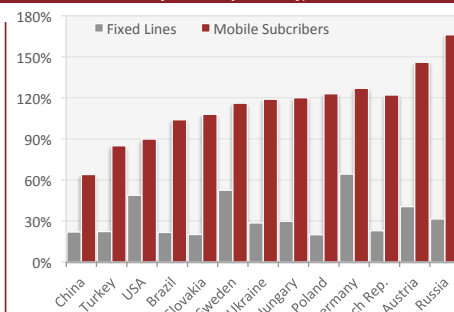
HUNGARIAN TELCOS AT A GLANCE	1990	1995	2000	2005	2010
Number Of Fixed Lines (mil)	1.00	2.16	3.80	3.45	2.93
Fixed Line Penetration (As Of Population)	10%	21%	37%	34%	30%
Fixed Lines Per Household	26%	56%	98%	88%	72%
Market Share Of Incumbent Fixed Line Operator				92%	
Mobile Cellular Subscriptions (mil)		0.27	3.08	9.3	12.0
Mobile Phone Penetration (As Of Population)		3%	30%	92%	120%
Market Share Of The Largest Mobile Operator				45%	45%
Number Of Fixed Broadband Internet Connections (mil)			0.00	0.65	1.96
Fixed Broadband Internet Lines Per Household			0.1%	17%	48%
Number Of Personal Computers (mil)	0.10	0.40	0.87	1.46	
Personal Computers Per Household	2.6%	10%	23%	37%	
R&D Expenditures (As Of GDP)		0.7%	0.8%	0.9%	1.2%
High-Tech Exports (As Of GDP)		2.9%	18.6%	18.8%	16.9%



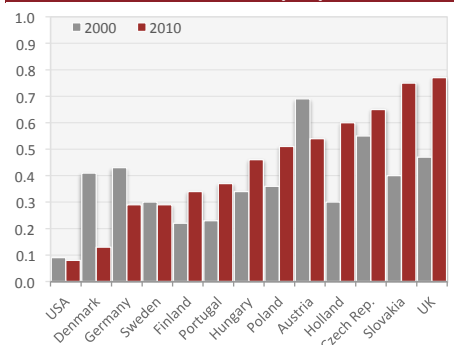
TELEPHONE LINES (As Of Population)



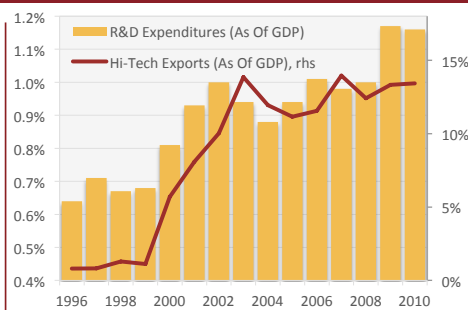
TELEPHONE LINES (As Of Population), 2010



PRICE OF 10-MINUTE LOCAL CALL (EUR)

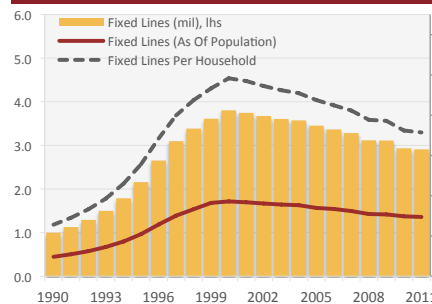


HI-TECH EXPORTS & RESEARCH & DEVELOPMENT

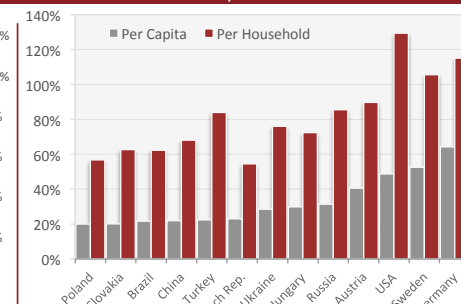


Source: World Bank, National Statistical Office, United Nations, OECD, Helgi Analytics calculation

FIXED LINE TELEPHONY

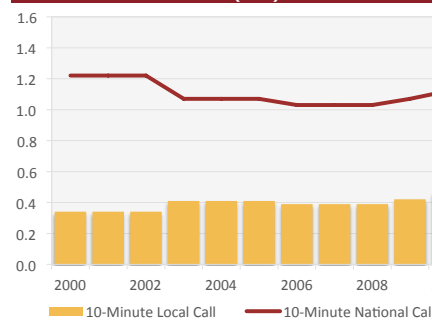


FIXED LINE PENETRATION, 2010

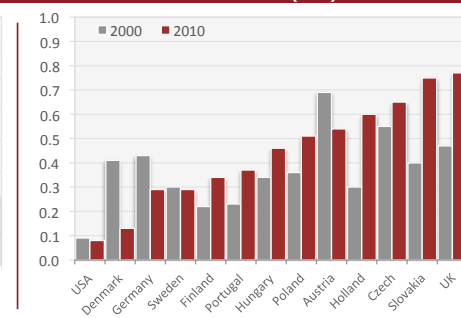


The fixed line business peaked at the turn of the century, when the penetration of fixed lines reached 37% of the population. Since then, it has been replaced by mobile telephony. Having said that, the overall penetration of telephone lines (both fixed and mobile) has been rising, to around 1.5 lines per person in 2010.

PRICE OF DOMESTIC CALLS (EUR)

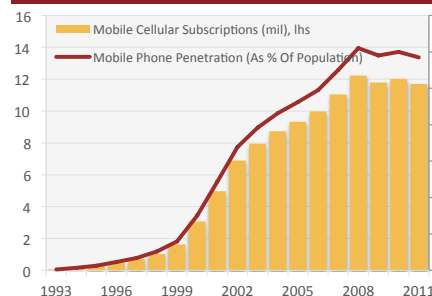


PRICE OF 10-MINUTE LOCAL CALL (EUR)

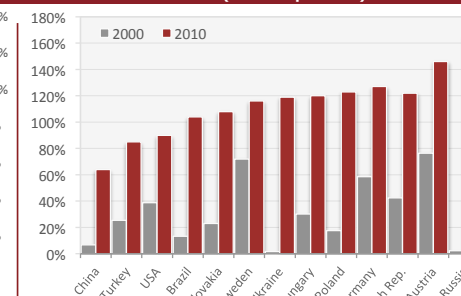


Slow deregulation, weak regulators and low competition are among the reasons why Central Europeans pay so much for their phone bills. According to Eurostat, Hungarians pay relatively high prices for fixed and mobile calling.

MOBILE TELEPHONY



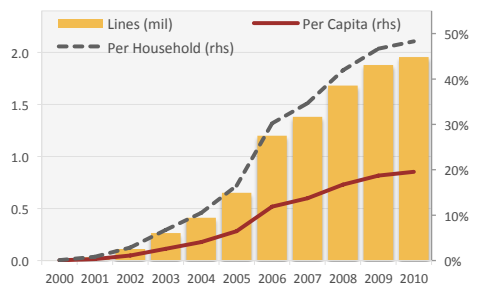
MOBILE SUBSCRIPTIONS (As Of Population)



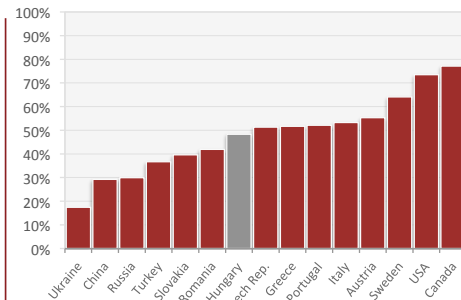
Similarly to other Central Europeans, Hungarians like mobile phones. In 2010, there were 1.2 mobile phones (or subscriptions) per person on average; this figure is among the higher ones worldwide.

Source: World Bank, National Statistical Office, United Nations, OECD, Helgi Analytics calculation

## FIXED BROADBAND INTERNET

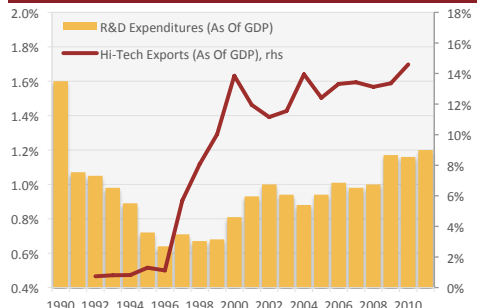


## FIXED BROADBAND INTERNET (As Of Households), 2010

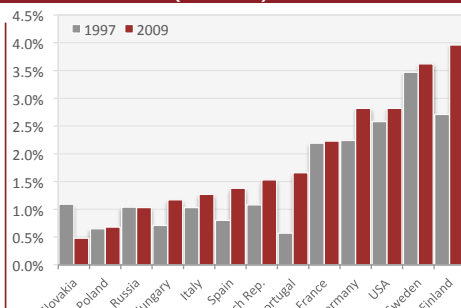


Similarly to the rest of the developed world, internet penetration, quality and speed have improved dramatically over the last decade. From nothing 10 years ago, virtually every second Hungarian household has a fixed broadband connection now, while 65% of the population is estimated to be using the internet, according to the World Bank's figures.

## R&D EXPENDITURES AND HI-TECH EXPORTS

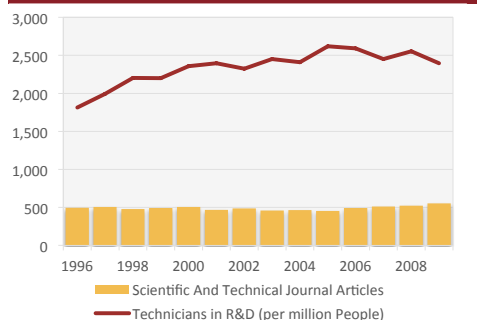


## R&D EXPENDITURES (As Of GDP)

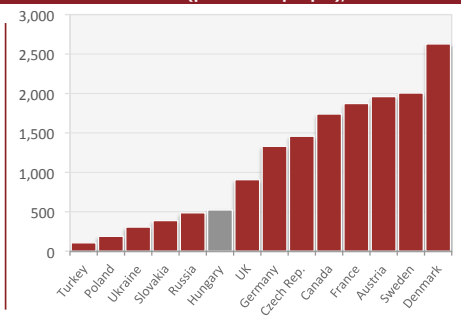


The Hungarian economy is one of the most open in the world, with the sum of exports and imports accounting for 160% of GDP. Widespread privatisation and the arrival of foreign companies have helped introduce and expand value-added products. The share of hi-tech products has increased by 40% of GDP over the last 10 years. R&D expenditures are, however, among the lowest within the EU27 and account for only 1% of GDP.

## R&D TECHNICIANS AND SCIENTIFIC ARTICLES



## TECHNICIANS IN R&D (per million people), 2008



Hungary has one of the lowest numbers of technicians in research and development within the EU27, according to the World Bank's figures. On the other hand, the quality of Hungarian researchers is fairly high. Hungary ranks 4th out of 13 countries in the CEE countries' Talent Index and 23rd out of 133 countries (1st is Switzerland, 2nd the USA) for the quality of its scientific research institutions.

Source: World Bank, National Statistical Office, United Nations, OECD, Helgi Analytics calculation

POPULATION		2003	2004	2005	2006	2007	2008	2009	2010	2011
Population	<i>mil</i>	10.14	10.12	10.10	10.08	10.07	10.05	10.03	10.01	9.99
Population (As % Of World Population)	%	0.16%	0.16%	0.16%	0.15%	0.15%	0.15%	0.15%	0.15%	0.14%
Persons Per Household	<i>persons</i>	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.5
Share Of Population (0-14 Years Of Age)	%	16%	16%	16%	15%	15%	15%	15%	15%	15%
Share Of Population (15-64 Years Of Age)	%	69%	69%	69%	69%	69%	69%	69%	69%	69%
Share Of Population (65+ Years Of Age)	%	16%	16%	16%	16%	16%	16%	16%	17%	17%
Median Age	<i>years</i>	38.9	39.0	39.1	39.2	39.4	39.5	39.7	39.8	40.0
Old Age Dependency Ratio	%	23%	23%	23%	23%	23%	24%	24%	24%	24%
Youth Dependency Ratio	%	23%	23%	23%	22%	22%	22%	22%	21%	21%
Life Expectancy, both sexes	<i>years</i>	72.3	72.6	72.6	73.1	73.2	73.7	73.9	74.2	
Life Expectancy At 65, both sexes	<i>years</i>	15.3	15.6	15.5	16.0	16.1	16.4	16.4	16.5	
Total Fertility Rate	<i>children</i>	1.28	1.28	1.32	1.35	1.32	1.35	1.33	1.26	1.24
Urban Population As Of Total	%	66%	66%	66%	67%	67%	68%	68%	69%	69%

TELECOMMUNICATION & INTERNET		2003	2004	2005	2006	2007	2008	2009	2010	2011
Telecommunication Revenues	<i>USD mil</i>	4,686	4,810	5,099	5,009	5,779	5,820	4,656		
Telecommunication Employees	<i>persons</i>	19,508	19,086	17,220	16,339	16,163	15,838	16,161		
Number Of Fixed Lines	<i>mil</i>	3.61	3.57	3.45	3.37	3.28	3.12	3.11	2.93	2.91
Fixed Line Penetration (As Of Population)	%	36%	35%	34%	33%	32%	31%	31%	30%	29%
Fixed Lines Per Household	%	0.92	0.91	0.88	0.85	0.82	0.78	0.77	0.72	0.71
Market Share Of Incumbent Fixed Line Operator	%	100%	99%	92%						
Mobile Cellular Subscriptions	<i>mil</i>	7.9	8.7	9.3	10.0	11.0	12.2	11.8	12.0	11.7
Mobile Phone Penetration (As Of Population)	%	78%	86%	92%	99%	110%	122%	118%	120%	117%
Market Share Of The Largest Mobile Operator	%	48%	45%	45%	44%	44%	44%	45%	45%	
Price Of 10-Minute Local Call	<i>EUR</i>	0.41	0.41	0.41	0.39	0.39	0.39	0.16	0.46	
Price Of 10-Minute Inland Long-Distance Call	<i>EUR</i>	1.07	1.07	1.07	1.03	1.03	1.03	1.07	1.12	
Price Of 10-Minute International Call To USA	<i>EUR</i>	2.93	2.40	2.93	2.81	2.30	2.30	2.40	2.40	
Number Of Fixed Broadband Internet Connections	<i>mil</i>	0.26	0.41	0.65	1.20	1.38	1.68	1.88	1.96	
Fixed Broadband Internet Lines (As Of Population)	%	2.6%	4.1%	6.5%	12%	14%	17%	19%	20%	
Fixed Broadband Internet Lines Per Household	%	6.8%	10.5%	17%	30%	35%	42%	47%	48%	
Share Of Population Using Internet	%			7.0%	15%	17%	22%	28%	39%	47%
Number Of Personal Computers	<i>mil</i>	1.3	1.5	1.5	1.8	2.6				
Personal Computers Penetration (As Of Population)	%	13%	15%	14%	18%	26%				
Personal Computers Per Household	%	33%	38%	37%	47%	64%				

HIGH TECHNOLOGY AND RESEARCH		2003	2004	2005	2006	2007	2008	2009	2010	2011
R&D Expenditures (As % Of GDP)	%	0.9%	0.9%	0.9%	1.0%	1.0%	1.0%	1.2%	1.2%	1.2%
Researchers In R&D Per mil People	<i>persons</i>	1,498	1,474	1,574	1,743	1,732	1,846	2,006		
Hi-Tech Exports (Current USD)	<i>USD mil</i>	9,654	14,225	13,695	14,995	18,271	20,254	16,919	18,771	
Hi-Tech Exports (As % Of Total Exports)	%	19%	22%	19%	17%	17%	16%	17%	17%	
Hi-Tech Exports (As % Of GDP)	%	12%	14%	12%	13%	13%	13%	13%	15%	
Patent Applications (Non-Residents)	<i>patents</i>	4,054	1,909	497	206	102	89	30	47	
Patent Applications (Residents)	<i>patents</i>	756	748	705	718	689	683	757	649	
Scientific And Technical Journal Articles	<i>articles</i>	2,451	2,409	2,619	2,592	2,452	2,554	2,397		
Secure Internet Servers	<i>servers</i>	139	210	303	361	593	838	1,137	1,662	2,193
Secure Internet Servers (Per 1 mil People)	<i>servers</i>	14	21	30	36	59	84	113	166	220
Technicians In R&D (per million People)	<i>persons</i>	458	466	455	491	512	523	553		
Trademark Applications (Direct Non-resident)	<i>apps.</i>	1,291	826	659	747	631	552	501	446	
Trademark Applications (Direct Resident)	<i>apps.</i>	4,386	4,293	3,515	3,490	3,615	3,291	3,240	3,477	
Trademark Applications (Total)	<i>apps.</i>	13,701	11,637	10,102	9,285	8,785	7,903	6,671	6,298	
Trademark Applications (Madrid)	<i>apps.</i>	8,024	6,518	5,928	5,048	4,539	4,060	2,930	2,375	

Source: World Bank, National Statistical Office, United Nations, OECD, Helgi Analytics calculation. For more details, description and explanation of particular indicators, please, visit [www.helgilibrary.com](http://www.helgilibrary.com)

MACROECONOMIC ROUND-UP		2003	2004	2005	2006	2007	2008	2009	2010	2011
GDP	USD bil	83.5	101.9	110.3	112.5	136.1	154.2	126.6	128.6	140.0
GDP Growth	%	3.9%	4.8%	4.0%	3.9%	0.1%	0.9%	-6.8%	1.3%	1.7%
GDP Per Capita	USD	8,247	10,085	10,937	11,174	13,535	15,365	12,635	12,863	14,044
Industrial Production Growth	%	6.9%	7.8%	6.8%	9.9%	7.9%	-0.1%	-17.6%	10.6%	5.4%
Retail Sales Growth	%									
Government Budget Balance (As % Of GDP)	%	-7.2%	-6.4%	-7.9%	-9.4%	-5.1%	-3.7%	-4.5%	-4.3%	4.2%
Public Debt (As % Of GDP)	%	58%	59%	62%	66%	67%	73%	80%	81%	81%
Unemployment Rate	%	5.9%	6.1%	7.2%	7.5%	7.4%	7.8%	10.0%	11.2%	10.9%
Gross Average Monthly Wage	USD	698	864	936	935	1,143	1,313	1,133	1,111	1,174
Foreign Debt (As % Of GDP)	%	70%	80%	77%	118%	130%	145%	188%	161%	
Imports (As % Of GDP)	%	65%	67%	68%	79%	80%	81%	73%	80%	85%
Exports (As % Of GDP)	%	61%	63%	66%	78%	81%	82%	78%	87%	92%
Current Account Balance (As % Of GDP)	%	-8.0%	-8.6%	-7.6%	-7.6%	-7.3%	-7.4%	-0.2%	1.2%	1.4%
Foreign Exchange Reserves (Including Gold)	USD bil	12.8	16.0	18.6	21.6	24.1	33.9	44.2	45.0	48.8
Foreign Exchange Reserves (As % Of Imports)	%	23%	23%	25%	24%	22%	27%	48%	44%	41%
Foreign Direct Investments	USD bil	2.2	4.3	8.5	18.7	70.6	75.0	-3.0	-20.7	9.6
Foreign Direct Investments (As % Of GDP)	%	2.6%	4.2%	7.7%	16.6%	51.9%	48.6%	-2.3%	-16.1%	6.9%
Foreign Direct Investments (As % Of CA Deficit)	%	33%	49%	102%	217%	713%	657%	-1531%	1313%	-490%
Workers' Remittances, Received (As % Of GDP)	%	0.4%	1.7%	1.7%	1.8%	1.7%	1.6%	1.7%	1.7%	1.7%
Portfolio Investments (As % Of GDP)	%	3.5%	6.7%	4.1%	5.6%	-1.7%	-2.0%	-4.1%	-0.3%	6.2%
Development Assistance (As % Of GDP)	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

INFLATION, FOREX & INTEREST RATES		2003	2004	2005	2006	2007	2008	2009	2010	2011
Inflation, CPI (Average)	%	4.4%	6.8%	3.6%	3.9%	7.9%	6.1%	4.2%	4.9%	3.9%
Long-Term Interest Rate (10-Year Gov. Bond Yield)	%	6.8%	8.3%	6.6%	7.1%	6.7%	8.2%	9.1%	7.3%	7.6%
Short-Term Interbank Interest Rate (3-Month)	%	8.2%	11.3%	7.0%	6.9%	7.6%	8.9%	8.5%	5.4%	6.0%
Interest Spread To USD, 10-Year Gov. Bond	%	2.8%	4.0%	2.3%	2.3%	2.1%	4.6%	5.9%	4.1%	4.8%
Interest Spread To USD, 3M IBOR	%	7.0%	9.7%	3.5%	1.7%	2.3%	5.7%	7.5%	4.8%	5.6%
FX Rate To USD (Average)	per USD	224	203	200	210	184	172	202	208	201
FX Rate To EUR (Average)	per EUR	253	252	248	264	251	252	280	275	279

Source: World Bank, National Statistical Office, United Nations, OECD, Helgi Analytics calculation. For more details, description and explanation of particular indicators, please, visit [www.helgilibrary.com](http://www.helgilibrary.com)

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Helgi Analytics is a consulting company based in the Czech Republic. The company mainly provides consultancy in the area of financial services and real estate and focuses primarily on the region of Central and Eastern Europe.

Helgi Analytics also runs a web application called Helgi Library, which is a database/library offering data and analyses on more than 95% of the world's economy and population. The Library aims to bring interesting statistical data and analyses to a wide audience under affordable conditions. If you wish to get more details, please visit [www.helgilibrary.com](http://www.helgilibrary.com) or contact us at [info@helgianalytics.com](mailto:info@helgianalytics.com).

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