SAMPLE DATA

Over the following pages we provide sample data from the **2018** edition of the report. This includes summary data for both production and markets, and sample data from several countries.

SUMMARY OF WORLD PRODUCTION 2017

Table 2.3.3

Country	$M Computing	$M Office Equip	$M Control & Instr	$M Medical & Industrial	$M Radio Comms & Radar*	$M Telecomm-unications	$M Consumer	$M Compo-nents	$M TOTAL
Australia	654	8	1000	227	1115	712	30	314	**4059**
Austria	248	1	1144	936	279	299	6	1777	**4691**
Belgium	572	-	847	445	407	143	7	832	**3254**
Brazil	7289	170	1196	310	5900	920	1830	1882	**19497**
Bulgaria	160	35	130	81	95	38	28	339	**906**
Canada	1652	9	2500	1027	3058	46	12	607	**8910**
China	239700	3735	13061	10339	178020	43672	46689	151954	**687169**
Croatia	21	4	80	50	40	36	-	115	**346**
Czech	6300	16	870	190	1000	300	907	1494	**11077**
Denmark	187	-	1136	981	209	106	25	613	**3256**
Egypt	13	-	5	8	36	12	414	21	**509**
Estonia	65	1	190	66	506	470	-	78	**1376**
Finland	31	-	754	575	433	317	-	486	**2595**
France	910	95	3589	1870	10209	1311	235	6399	**24617**
Germany	3490	109	25378	7562	3057	2078	1234	15453	**58361**
Greece	191	6	63	16	167	75	2	52	**572**
Hong Kong	116	12	48	136	130	100	304	428	**1276**
Hungary	2760	200	2775	285	920	775	2423	1430	**11568**
India	3287	69	2857	768	13978	1644	2872	1744	**27220**
Indonesia	1800	59	240	230	1500	350	2553	3485	**10217**
Ireland	1597	20	922	1548	235	123	21	4756	**9221**
Israel	1550	10	1500	1545	1360	1440	24	3289	**10718**
Italy	644	35	3466	1751	2511	968	31	4473	**13879**
Japan	15955	554	10518	6821	11500	2554	3652	68054	**119607**
Lithuania	20	5	125	91	95	48	33	85	**502**
Malaysia	9895	200	3419	683	1465	1558	3345	31593	**52158**
Mexico	23440	38	2600	1289	2600	2650	15279	5288	**53184**
Netherlands	943	0	2662	2643	408	256	34	1294	**8240**
N Zealand	186	3	191	66	172	89	3	144	**853**
Norway	101	0	623	140	333	87	-	109	**1392**
Philippines	5750	95	360	120	795	75	224	8269	**15688**
Poland	2470	33	700	615	1025	880	4113	625	**10461**
Portugal	162	-	110	105	394	91	749	520	**2132**
Puerto Rico	534	2	172	245	95	74	9	298	**1429**
Romania	370	6	550	195	370	455	27	183	**2156**
Russia	700	50	500	335	350	215	1266	505	**3921**
Saudi Arabia	170	2	172	136	91	91	4	80	**746**
Singapore	8844	130	4348	1051	3043	428	281	53985	**72110**
Slovakia	580	8	130	139	180	137	3417	873	**5464**
Slovenia	130	2	205	77	160	60	22	216	**872**
South Africa	361	3	150	80	241	226	203	164	**1427**
South Korea	13075	180	1800	2405	17750	1277	2686	100994	**140167**
Spain	287	7	341	496	875	526	15	991	**3537**
Sweden	78	-	1665	193	1726	1290	24	700	**5677**
Switzerland	353	5	3941	2311	435	315	4437	1911	**13708**
Taiwan	2961	12	414	3743	4523	796	664	62729	**75843**
Thailand	11770	83	793	312	729	1446	2540	9070	**26743**
Turkey	2200	8	130	340	600	180	1550	259	**5267**
UK	1094	56	5341	2816	5926	344	82	3540	**19199**
Ukraine	110	4	110	65	200	100	13	97	**699**
USA	20262	1315	42530	29215	77200	5875	687	60299	**237383**
Venezuela	107	7	26	34	139	36	14	40	**403**
Vietnam	5801	42	224	398	25536	1026	2673	6653	**42353**
TOTAL	**401945**	**7443**	**148602**	**88105**	**384122**	**79116**	**107692**	**621589**	**1838614**

*Notes: 2017 is a forecast at current exchange rates. West Europe figures are taken from Volume 1 of the 2018 edition of the Yearbook. US, Japan & Asia Pacific figures are taken from Volume 2 of the 2018 edition of the Yearbook. * includes mobile phones*

SUMMARY OF EAST EUROPE PRODUCTION 2017

Table 3.4.3

Country	$M EDP	$M Office Equip	$M Control & Instr	$M Medical & Industrial	$M Radio Comms & Radar*	$M Telecomm-unications	$M Consumer	$M Compo-nents	$M TOTAL
Bulgaria	160	35	130	81	95	38	28	339	**906**
Croatia	21	4	80	50	40	36	-	115	**346**
Czech	6300	16	870	190	1000	300	907	1494	**11077**
Estonia	65	1	190	66	506	470	-	78	**1376**
Hungary	2760	200	2775	285	920	775	2423	1430	**11568**
Lithuania	20	5	125	91	95	48	33	85	**502**
Poland	2470	33	700	615	1025	880	4113	625	**10461**
Romania	370	6	550	195	370	455	27	183	**2156**
Russia	700	50	500	335	350	215	1266	505	**3921**
Slovakia	580	8	130	139	180	137	3417	873	**5464**
Slovenia	130	2	205	77	160	60	22	216	**872**
Turkey	2200	8	130	340	600	180	1550	259	**5267**
Ukraine	110	4	110	65	200	100	13	97	**699**
TOTAL	**15886**	**372**	**6495**	**2529**	**5541**	**3694**	**13799**	**6299**	**54615**

SUMMARY OF EAST EUROPE MARKETS 2017

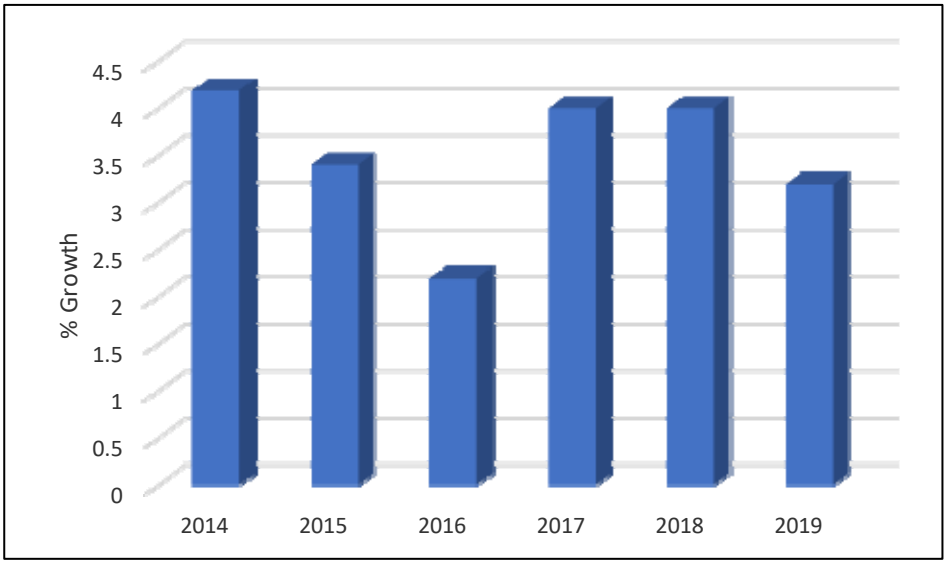
Table 3.5.3

Country	$M EDP	$M Office Equip	$M Control & Instr	$M Medical & Industrial	$M Radio Comms & Radar*	$M Telecomm-unications	$M Consumer	$M Compo-nents	$M TOTAL
Bulgaria	383	14	131	91	392	159	244	391	**1805**
Croatia	317	9	109	87	305	115	160	160	**1262**
Czech	1753	53	1170	292	983	234	576	4320	**9381**
Estonia	186	4	115	75	104	44	63	682	**1273**
Hungary	2093	43	411	338	789	309	506	4485	**8974**
Lithuania	160	9	122	63	234	79	125	213	**1005**
Poland	3432	96	1292	432	2236	1210	1211	3483	**13392**
Romania	1001	25	560	280	1341	571	367	1859	**6004**
Russia	3954	91	1601	1037	4568	1410	1677	1703	**16041**
Slovakia	750	8	563	233	597	221	284	2129	**4785**
Slovenia	270	10	165	71	313	130	117	262	**1338**
Turkey	3231	117	1899	1710	2743	661	727	3756	**14844**
Ukraine	542	17	260	190	780	217	107	514	**2627**
TOTAL	**18072**	**496**	**8398**	**4899**	**15385**	**5360**	**6164**	**23957**	**82731**

4.5 Hungary

4.5.1 Economic Overview

- GDP increased by 4.0% in 2017 driven by strong domestic demand. Private consumption was supported by significant administrative wage increases and rising employment. Final demand was increasingly met by imports; the falling trade balance contributed to the narrowing of the current account surplus by 3.1 percentage points to 2.9% of GDP.
- With the economy remaining buoyant in the first half of 2018 GDP is expected to remain close to 4.0% for the year as a whole but is forecast to slowdown in 2019 as the level of investment reaches a plateau and the tailwinds supporting consumption moderate. Corporate investment is forecast to grow vigorously, supported by high capacity utilisation, FDI inflows, and the rising absorption of EU funds.
- HICP inflation is set to remain at 2.3% in 2018 thanks to moderating food price dynamics and selective VAT cuts. After these temporary factors fade, inflation is expected to rise to 3.0% in 2019.
- Employment growth is expected to moderate as available labour reserves become exhausted. The unemployment rate is projected to decrease further to below 4.0%. In addition to administrative wage hikes over 2017 and 2018, labour shortages are contributing to wage growth, although their impact on labour costs is being mitigated by significant cuts in social contributions. Nonetheless, rising production costs are already becoming apparent in the prices of more labour-intensive services and in construction costs.



GDP Growth 2014-2019

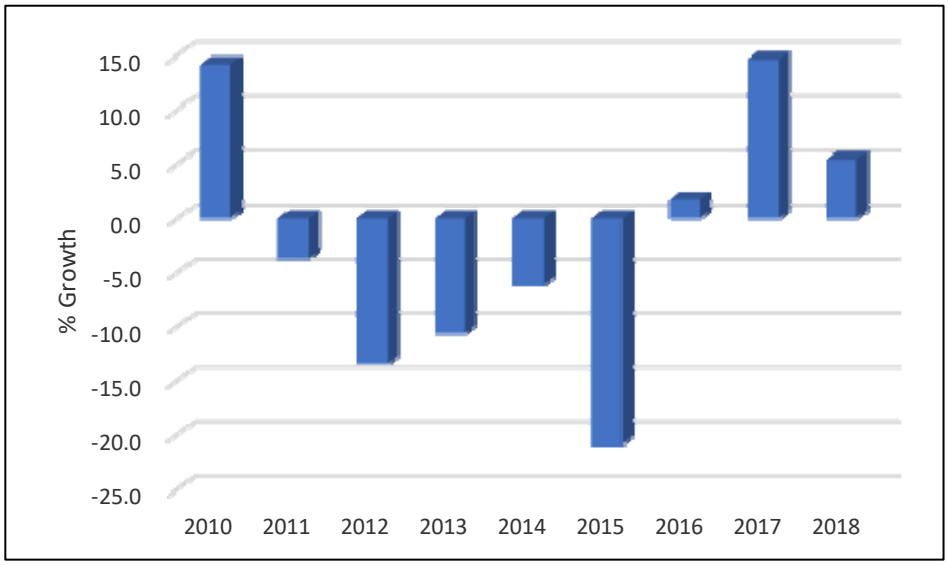
Hungary Leading Economic Indicators

	Actual			Forecast		
% Increase	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Growth of GDP	4.2	3.4	2.2	4.0	4.0	3.2

Source: EU Economic Forecast May 2018

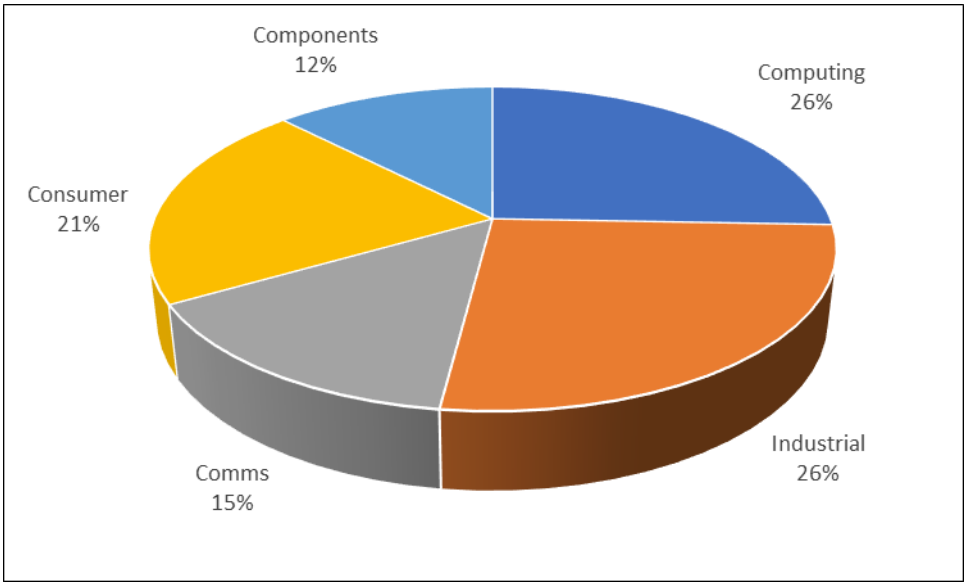
4.5.2 Electronics Industry Overview

- In terms of electronics production Hungary is the largest producer in CEE with, in US dollar terms, a 21.2% share of the region's output.
- Following the sharp contraction in the production of mobile phones in the country since 2010 the structure of the industry has changed with industrial accounting for a 26.5% share, computing (excluding office equipment) 23.9% and consumer 20.9%.



Percentage Growth in Hungarian Electronics Production 2010-2018 (US$)

- In US dollar terms electronics output increased by 14.6% in 2017 and followed the modest increase of 1.6% in the prior year. In local currency output increased by 11.6% in 2017 and 2.6% in 2016.



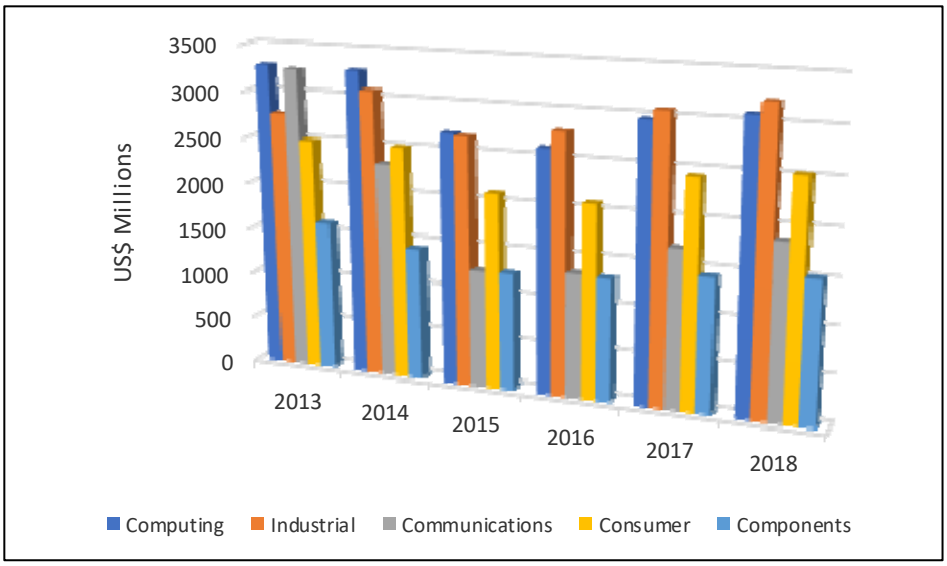
Hungarian Electronics Industry by Sector 2017

Summary of Hungarian Electronics Production

US$ Millions	2013	2014	2015	2016	2017	2018
Computing	3277	3268	2677	2604	2960	3075
Industrial	2764	3070	2655	2780	3060	3212
Communications	3245	2300	1248	1325	1695	1867
Consumer	2492	2495	2097	2077	2423	2521
Components	1603	1418	1253	1307	1430	1518
Total	13381	12551	9930	10093	11568	12194

Notes: Computing includes office equipment; Industrial combines control and instrumentation and medical and industrial; and communications combines fixed and wireless communications (inc. defence). Due to computer rounding the summary figures above may differ slightly from the figures presented in the main tables.

- After declining in both 2015 and 2016 output for the computer segment increased by 14.5% in 2017 or by 11.6% in local currency. Increased production of servers for the Chinese company Lenevo by the world's second largest EMS Flex at its plant in Sarvar, helped boost output during the year.



Hungarian Electronics Production by Sector 2013-2018

- As highlighted the communications and radar segment has seen its share of production decline as the major manufacturers of mobile phones closed facilities in the country. In 2010, at its peak, the segment accounted for 37% of overall output but had fallen to 6.2% in 2016. 2017 however, saw production surge by an estimated 47.2% with growth driven by a sharp increase in the production of instruments and appliances for radar and navigation.

- Hungary has a strong tradition in consumer electronics. In value terms the production of TVs increased by 16.1% (13.1% in local currency) and is forecast to increase by a further 4.7% in 2018. The production of digital cameras increased for the second consecutive year in 2017 and is forecast to increase again in 2018 although growth is expected to be modest.

- Boosted in part by the decision by Harman International, the US-headquartered manufacturer of audio systems, to expand its manufacturing operations in the country the production of audio equipment increased by 8.4% (5.6% in local currency) and is forecast to increase by a further 5% in 2018.

- The growth in the industrial segment has been driven by significant investment form major industrial groups such as the US companies GE, Honeywell and Emerson. GE is the largest US investor in

Hungary with around 12,500 employees. The company has 12 manufacturing plants, three technology centres and three regional headquarters in the country. Other leading industrial companies include Bosch and National Instruments.

- A number of companies have established automotive electronics facilities in the country, including Continental, Bosch, Valeo and Delphi, to supply Hungary's and Europe's automotive industry.
- Components accounted for 12.4% of output in 2017 and in the short-term should benefit from increased demand on the back of rising prices due to component shortages.
- Hungary has been a popular location for EMS providers the company attracting both large volume manufacturers as well as smaller companies focused on more complex manufacture. Tier One suppliers include Foxconn through its subsidiary PCE Paragon Solutions, Flex, Jabil and Sanmina as well as leading European EMS companies including Zollner (Germany), Scanfil (Finland) and MELECS (Austria). The country is also home to Videoton the leading indigenous EMS provider in CEE and according to *Reed Electronics Research* the fifth largest in Europe.

Outlook

- The focus of the Hungarian electronics industry is undergoing a major transition with industrial, led by control and instrumentation increasing its overall proportion of electronics output. Output in the once dominant wireless communications segment however is expected to stabilize as the impact of declining mobile phone production fades while production in the computer and video and audio equipment segments is set show low single-digit growth. Companies operating in the consumer electronics segment however, will face increasing pressure on costs which could see companies relocating production to operations outside of Hungary.
- The country will also continue to play an important role as a production base for automotive electronics.
- Hungary's established infrastructure, broad network of suppliers and skilled workforce will continue to make it an attractive location despite rising costs in relation to other CEE countries. An increased emphasis on R&D will also continue as companies looking to exploit existing operations and resources in the country.