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for Southeast Europe



Industry Report

Manufacture of computer,
electronic and optical products
2016
ROMANIA

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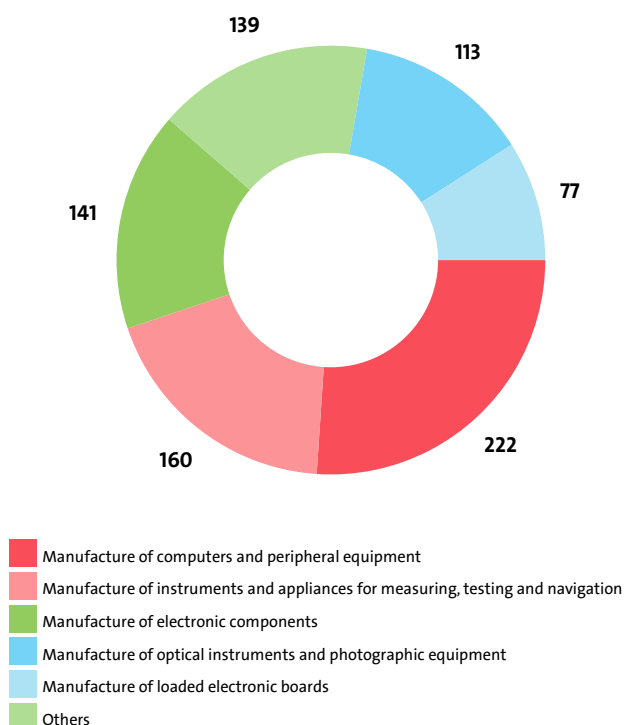
I. KEY INDICATORS

- The Manufacture of computer, electronic and optical products industry in Romania was represented by 852 companies at the end of 2016, compared to 863 in the previous year and 815 in 2014.
- The industry's net profit amounted to RON 262,601,254 in 2016.
- The industry's total revenue was RON 8,857,976,269 in 2016, down by 1.86% compared to the previous year.
- The combined costs of the companies in the Manufacture of computer, electronic and optical products industry reached RON 8,526,766,370 in 2016, down by 1.69% year-on-year.
- The industry's total revenue makes up 0.95% to the country's Gross domestic product (GDP) in 2016, compared to 1.05% for 2015 and 0.84% in 2014.
- A total of 30,284 people were employed in the Manufacture of computer, electronic and optical products industry in 2016, compared to 31,174 in 2015 and 25,549 in 2014.
- Most of the companies in the industry are based in Bucharest, followed by Timis and Iasi.

II. INTRODUCTION

In 2016 the companies in the Manufacture of computer, electronic and optical products industry numbered 852, distributed in 10 sectors.

INDUSTRY STRUCTURE BY SECTORS AND NUMBER OF COMPANIES



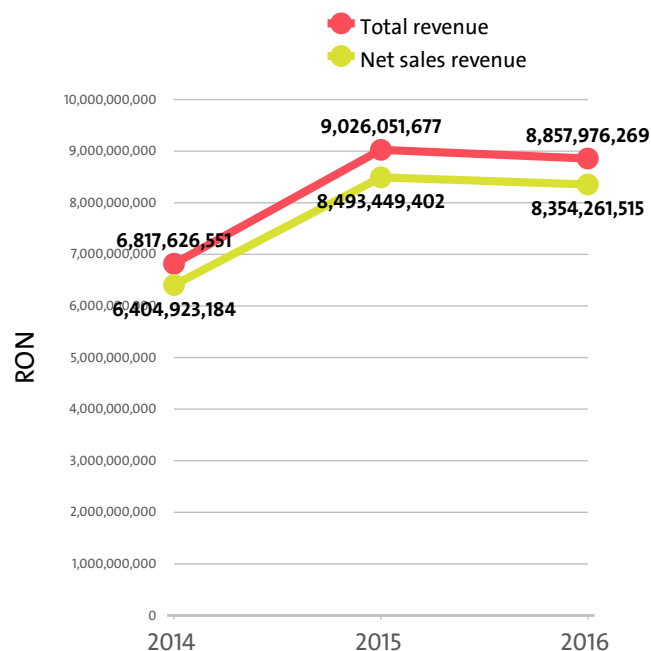
In 2015 there were a total of 863 companies operating in the industry. In 2014 their number totalled 815.

NUMBER OF COMPANIES IN MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS INDUSTRY BY SECTORS

SECTOR	2016	2015	2014
MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT	222	229	228
MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION	160	163	153
MANUFACTURE OF ELECTRONIC COMPONENTS	141	145	131
MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT	113	111	104
MANUFACTURE OF LOADED ELECTRONIC BOARDS	77	74	71
MANUFACTURE OF COMMUNICATION EQUIPMENT	65	65	65
MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT	35	35	32
MANUFACTURE OF CONSUMER ELECTRONICS	29	32	23
MANUFACTURE OF WATCHES AND CLOCKS	9	8	7
MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA	1	1	1

III. REVENUES

The total revenue in the industry was RON 8,857,976,269 in 2016, RON 9,026,051,677 in 2015 and 6,817,626,551 in 2014.

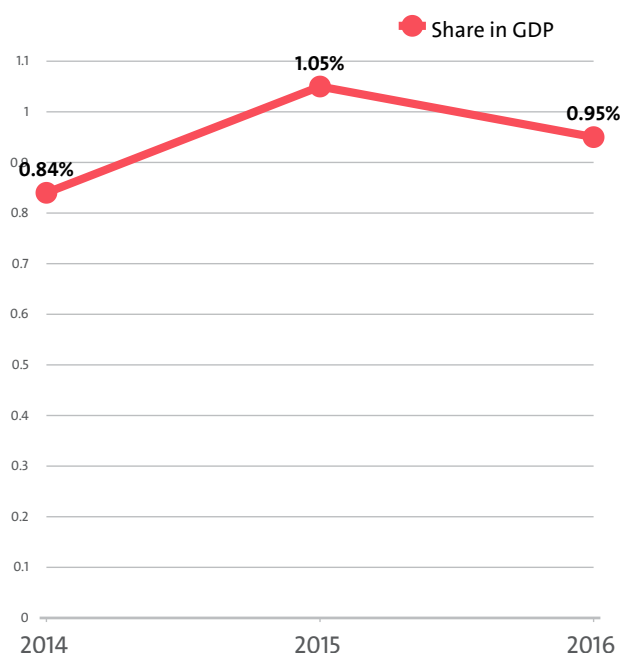


The companies in the Manufacture of computer, electronic and optical products market of Romania earned combined net sales revenues of RON 8,354,261,515 in 2016.

In annual terms, sales marked a fall of 1.64% compared to 2015. In comparison to 2014 they increased by 30.43%. In 2015 sales rose by 32.61% year-on-year.

The Manufacture of computer, electronic and optical products industry total revenue make up 0.95% to the country's GDP in 2016, compared to 1.05% for 2015 and

0.84% in 2014.

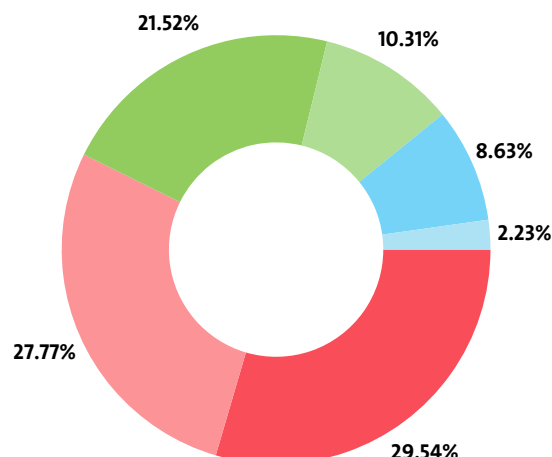


We expect, based on the trend in the last three years, the total revenue of the Manufacture of computer, electronic and optical products industry to change at a compound annual growth rate (CAGR) of 13.99% in 2017.

NET SALES REVENUE BY SECTORS

RANK	SECTOR	NET SALES REVENUE (RON)
1	MANUFACTURE OF ELECTRONIC COMPONENTS	2,467,661,825
2	MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION	2,319,822,095
3	MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT	1,797,819,541
4	MANUFACTURE OF COMMUNICATION EQUIPMENT	861,631,816
5	MANUFACTURE OF LOADED ELECTRONIC BOARDS	721,383,478
6	MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT	110,833,258
7	MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT	48,427,408
8	MANUFACTURE OF CONSUMER ELECTRONICS	22,307,479
9	MANUFACTURE OF WATCHES AND CLOCKS	4,044,253
10	MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA	330,362

INDUSTRY'S NET SALES REVENUE STRUCTURE BY SECTORS



- Manufacture of electronic components
- Manufacture of instruments and appliances for measuring, testing and navigation
- Manufacture of computers and peripheral equipment
- Manufacture of communication equipment
- Manufacture of loaded electronic boards
- Others

The highest growth, of 15.89%, was recorded by Manufacture of loaded electronic boards, while Manufacture of consumer electronics registered the sharpest decline, of 56.45%.

TOP COMPANIES' REVENUE BY SECTORS

SEGMENT	COMPANY	TOTAL REVENUE (RON)	NET SALES REVENUE (RON)
MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT			
	CELESTICA (ROMANIA) SRL	1,214,607,063	1,148,680,414
	BENCHMARK ELECTRONICS ROMANIA SRL	345,377,042	329,714,297
	MAGUAY IMPEX SRL	39,618,217	36,795,603
MANUFACTURE OF LOADED ELECTRONIC BOARDS			
	SYSTRONICS SRL	252,868,778	247,934,041
	GDS MANUFACTURING SERVICES SA	196,342,274	182,973,660
	CONNECTRONICS ROMANIA SRL	146,739,333	136,710,161
MANUFACTURE OF ELECTRONIC COMPONENTS			
	STEINEL ELECTRONIC SRL	446,220,697	441,688,859
	FLEXTRONICS ROMANIA SRL	427,091,721	393,382,708
	PLEXUS SERVICES RO SRL	402,885,855	371,060,979
MANUFACTURE OF CONSUMER ELECTRONICS			
	ELECTRA SRL	18,067,751	13,081,195
	ROMAUDIOVIDEO SRL	4,482,191	4,432,289
	INNOTECH DESIGN SRL	3,214,218	1,890,372
MANUFACTURE OF WATCHES AND CLOCKS			
	ORAEXACTA SYSTEMS S.R.L.	1,952,859	1,939,599
	APEL INDUSTRIES SRL	1,065,656	1,060,325
	ISIS SRL	862,447	857,500
MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION			
	EMERSON SRL	679,454,749	671,990,088
	AEM SA	406,871,931	327,198,425
	ELECTROMAGNETICA SA	260,149,347	236,993,496
MANUFACTURE OF COMMUNICATION EQUIPMENT			
	KATHREIN ROMANIA SRL	643,940,355	612,973,371
	INTRAROM SA	67,703,627	54,229,502
	ROHDE & SCHWARZ TOPEX SA	47,919,224	46,857,703
MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT			

OPHIR OPTICS SRL	53,381,967	43,120,748
IOR SA	20,012,490	16,959,966
PRO OPTICA SA	11,057,855	11,153,394
MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT		
PHM COMSERV SRL	12,319,274	12,186,656
RAGUSE MEDIZINISCHE PRODUKTE ROMANIA SRL	10,805,840	10,393,929
HV SHIELDING SRL	8,946,889	8,850,988
MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA		
STUDIO SPERANTA SRL	331,129	330,362

The top 10 companies in terms of total revenue in Manufacture of computer, electronic and optical products accounted for 57.34% of the industry's total in 2016, 54.71% in 2015 and 55.89% in 2014.

TOP 10 COMPANIES BY TOTAL AND NET SALES REVENUE IN THE INDUSTRY

RANK	COMPANY	TOTAL REVENUE (RON)	NET SALE REVENUE (RON)
1	CELESTICA (ROMANIA) SRL	1,214,607,063	1,148,680,414
2	EMERSON SRL	679,454,749	671,990,088
3	KATHREIN ROMANIA SRL	643,940,355	612,973,371
4	STEINEL ELECTRONIC SRL	446,220,697	441,688,859
5	FLEXTRONICS ROMANIA SRL	427,091,721	393,382,708
6	AEM SA	406,871,931	327,198,425
7	PLEXUS SERVICES RO SRL	402,885,855	371,060,979
8	BENCHMARK ELECTRONICS ROMANIA SRL	345,377,042	329,714,297
9	ELECTROMAGNETICA SA	260,149,347	236,993,496
10	SYSTRONICS SRL	252,868,778	247,934,041

The total revenues of the top 10 companies in the Manufacture of computer, electronic and optical products were 0.55% of GDP in 2016, compared to 0.57% for 2015 and 0.47% in 2014.

The top 10 by assets in the Manufacture of computer, electronic and optical products industry made up RON 4,275,848,440, or 51.18% of the total net sales revenue.

TOP 10 BY TOTAL ASSETS IN THE INDUSTRY

RANK	COMPANY	RON
1	CELESTICA (ROMANIA) SRL	601,607,386
2	EMERSON SRL	585,192,942
3	AEM SA	401,744,231
4	ELECTROMAGNETICA SA	392,153,951
5	KATHREIN ROMANIA SRL	365,989,114
6	PLEXUS SERVICES RO SRL	340,917,828
7	FLEXTRONICS ROMANIA SRL	329,771,541
8	INTRAROM SA	193,258,076
9	BENCHMARK ELECTRONICS ROMANIA SRL	186,478,313
10	HANNA INSTRUMENTS SRL	153,216,548

TOP 10 COMPANIES BY TOTAL REVENUE IN THE FIELD MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT WERE:

COMPANY	RON
CELESTICA (ROMANIA) SRL	1,214,607,063
BENCHMARK ELECTRONICS ROMANIA SRL	345,377,042
MAGUAY IMPEX SRL	39,618,217
CERTO INDUSTRIE SRL	36,926,463
FEPER SA	33,962,644

MAGUAY COMPUTERS SRL	28,341,407
ATEX COMPUTER SRL	15,562,103
BRINEL PC PROD SRL	12,833,773
GDM RO ELECTRONICS SRL	12,187,694
S.T.G. SWITCH TECHNOLOGY GUNTHER SRL	11,603,486

The 10 largest companies in terms of total revenue in sector Manufacture of computer, electronic and optical products earned total revenue of RON 1,751,019,892 and accounted for 19.77% of the industry's total revenue.

TOP 10 COMPANIES BY TOTAL REVENUE IN THE SECTOR MANUFACTURE OF LOADED ELECTRONIC BOARDS WERE:

COMPANY	RON
SYSTRONICS SRL	252,868,778
GDS MANUFACTURING SERVICES SA	196,342,274
CONNECTRONICS ROMANIA SRL	146,739,333
PANDUIT EUROPEAN SOLUTIONS SRL	99,237,219
ERGAD TECHNOLOGY SRL	15,451,638
LUMITECH SRL	8,848,522
RSX ENGINEERING SRL	6,196,080
TEHNOLOGISTIC SRL	5,815,423
ROEL MANUFACTURING INDUSTRIES SRL	5,193,802
MIBATRON SRL	4,069,443

The 10 largest companies in terms of total revenue in sector Manufacture of computer, electronic and optical products earned total revenue of RON 740,762,512 and accounted for 8.36% of the industry's total revenue.

TOP 10 COMPANIES BY TOTAL REVENUE IN THE SECTOR MANUFACTURE OF ELECTRONIC COMPONENTS WERE:

COMPANY	RON
STEINEL ELECTRONIC SRL	446,220,697
FLEXTRONICS ROMANIA SRL	427,091,721
PLEXUS SERVICES RO SRL	402,885,855
MIELE TEHNICA SRL	219,132,565
KENDRION AUTOMOTIVE (SIBIU) SRL	177,881,088
VARTA MICROBATTERY SRL	133,849,430
EVEREL ROMANIA SRL	109,949,219
SUMIDA ROMANIA SRL	105,989,375
WENGLOR ELECTRONIC INNOVATION LITO SOCIETATE IN COMANDITA	71,312,791
ELECTRONICA P.M.A. SRL	48,469,569

The 10 largest companies in terms of total revenue in sector Manufacture of computer, electronic and optical products earned total revenue of RON 2,142,782,310 and accounted for 24.19% of the industry's total revenue.

TOP 10 COMPANIES BY TOTAL REVENUE IN THE MARKET MANUFACTURE OF CONSUMER ELECTRONICS WERE:

COMPANY	RON
ELECTRA SRL	18,067,751
ROMAUDIOVIDEO SRL	4,482,191
INNOTECH DESIGN SRL	3,214,218
CODEC SRL	663,061
THOMAS CONSULT SRL	516,779
MAGNASCI SRL	389,238
FAE DRONES SRL	362,494
CODEC ELECTRONICS PROD SRL	203,223

MICADI EXPERT GRUP SRL	189,848
PENTAGAZ SRL	189,253

The 10 largest companies in terms of total revenue in sector Manufacture of computer, electronic and optical products earned total revenue of RON 28,278,056 and accounted for 0.32% of the industry's total revenue.

TOP COMPANIES BY TOTAL REVENUE IN THE INDUSTRY MANUFACTURE OF WATCHES AND CLOCKS WERE:

COMPANY	RON
ORAEXACTA SYSTEMS S.R.L.	1,952,859
APEL INDUSTRIES SRL	1,065,656
ISIS SRL	862,447
NOAH WATCHES SRL	101,908
ONCESCU COMPANY SRL	39,027

The largest companies in terms of total revenue in sector Manufacture of computer, electronic and optical products earned total revenue of RON 4,021,897 and accounted for 0.05% of the industry's total revenue.

TOP 10 COMPANIES BY TOTAL REVENUE IN THE INDUSTRY MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION WERE:

COMPANY	RON
EMERSON SRL	679,454,749
AEM SA	406,871,931
ELECTROMAGNETICA SA	260,149,347
DPR DRAXLMAIER PROCESE DE PRODUCTIE ROMANIA SRL	157,133,207
HANNA INSTRUMENTS SRL	141,420,084
ELSTER ROMETRICS SRL	140,425,630
ELSACO ELECTRONIC SRL	125,293,302
AEROTEH SA	74,151,520
FLUID GROUP HAGEN SRL	68,051,318
E-TESTBOARDS SRL	60,517,015

The 10 largest companies in terms of total revenue in sector Manufacture of computer, electronic and optical products earned total revenue of RON 2,113,468,103 and accounted for 23.86% of the industry's total revenue.

TOP 10 COMPANIES BY TOTAL REVENUE IN THE FIELD MANUFACTURE OF COMMUNICATION EQUIPMENT WERE:

COMPANY	RON
KATHREIN ROMANIA SRL	643,940,355
INTRAROM SA	67,703,627
ROHDE & SCHWARZ TOPEX SA	47,919,224
ELETTRA COMMUNICATIONS SA	38,006,971
FELIX TELECOM SRL	36,856,703
MICROROM SRL	28,891,006
INTERACTIVE SYSTEMS & BUSINESS CONSULTING SRL	9,184,772
INTEX PRIM SRL	4,857,225
DIGITAL TELECOMMS SRL	4,680,434
COMTELEPREST SRL	4,136,315

The 10 largest companies in terms of total revenue in sector Manufacture of computer, electronic and optical products earned total revenue of RON 886,176,632 and accounted for 10.00% of the industry's total revenue.

TOP 10 COMPANIES BY TOTAL REVENUE IN THE INDUSTRY MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT WERE:

COMPANY	RON
OPHIR OPTICS SRL	53,381,967
IOR SA	20,012,490
PRO OPTICA SA	11,057,855
FILTROPTIC SRL	10,638,291
MIDAVI SERV SRL	2,986,991
BRINA SRL	2,009,504
OPTIMOBIL SRL	1,631,891
SPLENDIA GROUP SRL	1,553,775
OPTIMEC PROD SRL	1,442,481
TESORO IMPEX SRL	1,382,166

The 10 largest companies in terms of total revenue in sector Manufacture of computer, electronic and optical products earned total revenue of RON 106,097,411 and accounted for 1.20% of the industry's total revenue.

TOP 10 COMPANIES BY TOTAL REVENUE IN THE FIELD MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT WERE:

COMPANY	RON
PHM COMSERV SRL	12,319,274
RAGUSE MEDIZINISCHE PRODUKTE ROMANIA SRL	10,805,840
HV SHIELDING SRL	8,946,889
CORAMED MEDIZINISCHE PRODUKTE SRL	7,689,134
CARFEA SRL	1,931,034
ITM AMIRO SA	1,614,681
KLEVIS GRAFI DESIGN SRL	1,317,336
ADAPTARE RECUPERARE KINETOTERAPIE SRL	1,059,739
GENERAL ELECTRO SRL	821,041
DATRONIX COMPUTER SRL	656,749

The 10 largest companies in terms of total revenue in sector Manufacture of computer, electronic and optical products earned total revenue of RON 47,161,717 and accounted for 0.53% of the industry's total revenue.

TOP COMPANIES BY TOTAL REVENUE IN THE SECTOR MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA WERE:

COMPANY	RON
STUDIO SPERANTA SRL	331,129

IV. EXPENSES

The combined costs of the companies in the Manufacture of computer, electronic and optical products industry reached RON 8,526,766,370 in 2016.

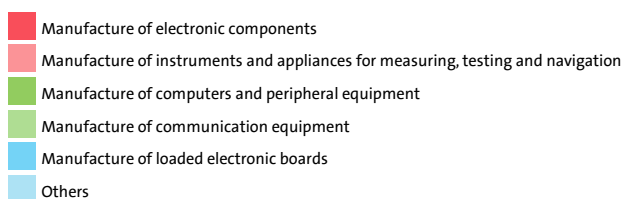
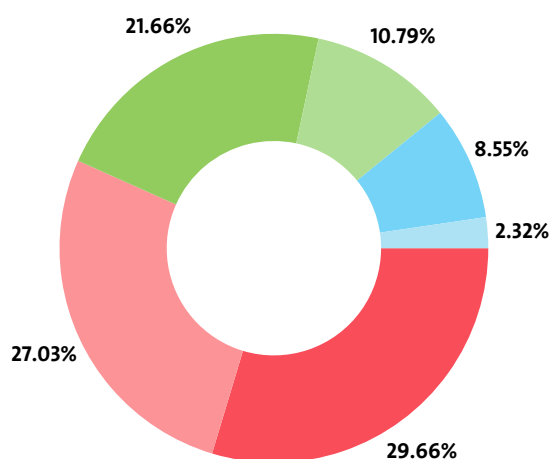
In annual terms, total expenses dropped by 1.69% compared to 2015 and rose by 31.49% in comparison to 2014.

We expect, based on the trend in the last three years, the total costs of the Manufacture of computer, electronic and optical products industry to change at a compound annual growth rate (CAGR) of 14.67% in 2017.

TOTAL COSTS BY SECTORS

RANK	SECTOR	TOTAL COSTS (RON)
1	MANUFACTURE OF ELECTRONIC COMPONENTS	2,528,992,326
2	MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION	2,304,528,576
3	MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT	1,846,919,407
4	MANUFACTURE OF COMMUNICATION EQUIPMENT	919,987,339
5	MANUFACTURE OF LOADED ELECTRONIC BOARDS	728,927,113
6	MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT	121,009,094
7	MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT	44,933,046
8	MANUFACTURE OF CONSUMER ELECTRONICS	26,992,984
9	MANUFACTURE OF WATCHES AND CLOCKS	4,101,369
10	MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA	375,116

INDUSTRY'S TOTAL COSTS STRUCTURE BY SECTORS



Manufacture of loaded electronic boards marked the highest annual increase in total expenses, of 15.62%, while total expenses decreased the most, by 61.71%, for Manufacture of consumer electronics.

The biggest spenders in the industry, with costs of over 10% of industry's costs, numbered 18, including BENCHMARK ELECTRONICS ROMANIA SRL, AEM SA, ELSTER ROMETRICS SRL, GDS MANUFACTURING SERVICES SA, SYSTRONICS SRL. The medium spenders, or those in the 5% and 10% range count 6 and include EVEREL ROMANIA SRL, WENGLOR ELECTRONIC INNOVATION LITO SOCIETATE IN COMANDITA, HANNA INSTRUMENTS SRL, PANDUIT EUROPEAN SOLUTIONS SRL, SUMIDA ROMANIA SRL. Below 5% threshold are 828 companies, including TONER FACTORY PROD SRL-D, ARLEN ELECTRONIC SRL, VISION EXPERT OPTIC SRL, DW COMPUTER SRL, ARCAS TRADING SRL.

Employment expenses in the Manufacture of computer,

electronic and optical products industry rose by 6.23% on the year to RON 1,491,800,159 in 2016.

The highest growth in labour costs, of 20.08%, was registered by Manufacture of loaded electronic boards, while Manufacture of magnetic and optical media marked the sharpest fall, of 6.90%.

The monthly costs per employee in the Manufacture of computer, electronic and optical products industry averaged RON 4,105 in 2016, RON 3,754 in 2015 and RON 3,478 in 2014.

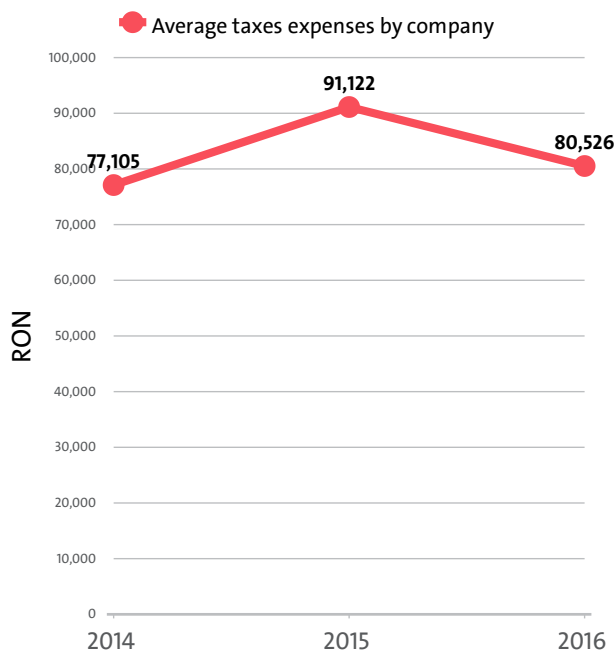
EMPLOYMENT EXPENSES IN MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS BY SECTORS IN 2016

RANK	SECTOR	EMPLOYMENT EXPENSES (RON)	AVERAGE EXPENSES PER EMPLOYEE (RON)
1	MANUFACTURE OF ELECTRONIC COMPONENTS	545,986,463	46,459
2	MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION	516,239,799	61,479
3	MANUFACTURE OF COMMUNICATION EQUIPMENT	151,679,672	49,087
4	MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT	121,402,873	43,020
5	MANUFACTURE OF LOADED ELECTRONIC BOARDS	103,096,493	38,613
6	MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT	33,406,562	36,670
7	MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT	12,696,286	28,340
8	MANUFACTURE OF CONSUMER ELECTRONICS	5,902,050	38,575
9	MANUFACTURE OF WATCHES AND CLOCKS	1,188,619	33,961
10	MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA	201,342	33,557

THE TOP 10 COMPANIES BY AVERAGE MONTHLY COSTS PER EMPLOYEE IN THE INDUSTRY

RANK	COMPANY	RON
1	WENGLOR SENSORIC ROMANIA SRL	12,405
2	ELSTER ROMETRICS SRL	10,122
3	AEROTEH SA	8,789
4	MONITRON SRL	8,530
5	ROHDE & SCHWARZ TOPEX SA	8,283
6	KIMBALL ELECTRONICS ROMANIA SRL	8,238
7	PFL XACTTOOLS SRL	7,959
8	MIBATRON SRL	7,904
9	X-GEM SAS RUEIL-MALMAISON SUCURSALA BUCURESTI	7,600
10	ASAL TEHNIC SRL	7,216

The industry's tax expenses stood at RON 68,608,645 in 2016. In 2015 it paid taxes of RON 78,639,034. In 2014 the industry paid RON 62,840,682 in taxes.



EXPENSES ON TAXES BY SECTORS

RANK	SECTOR	RON	Y/Y CHANGE
1	MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION	34,628,064	-17.55%
2	MANUFACTURE OF ELECTRONIC COMPONENTS	15,917,573	-8.60%
3	MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT	6,786,865	-27.09%
4	MANUFACTURE OF LOADED ELECTRONIC BOARDS	5,754,612	61.98%
5	MANUFACTURE OF COMMUNICATION EQUIPMENT	3,703,023	-5.75%
6	MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT	914,359	-17.52%
7	MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT	671,753	-39.51%
8	MANUFACTURE OF CONSUMER ELECTRONICS	222,062	13.72%
9	MANUFACTURE OF WATCHES AND CLOCKS	10,334	-45.20%
10	MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA	0	0 %

V. PROFITABILITY

The industry's net profit amounted to RON 262,601,254 in 2016, compared to a net profit of RON 273,737,553 in 2015 and a net profit of RON 269,913,019 in 2014.

TOP 10 COMPANIES BY HIGHEST NET PROFIT IN MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS

RANK	COMPANY	RON
1	EMERSON SRL	42,088,453
2	STEINEL ELECTRONIC SRL	24,599,697
3	BENCHMARK ELECTRONICS ROMANIA SRL	20,856,906
4	HANNA INSTRUMENTS SRL	18,966,365
5	E-TESTBOARDS SRL	15,146,226
6	FLEXTRONICS ROMANIA SRL	13,074,606
7	MIELE TEHNICA SRL	12,807,635
8	AEROTEH SA	12,766,470

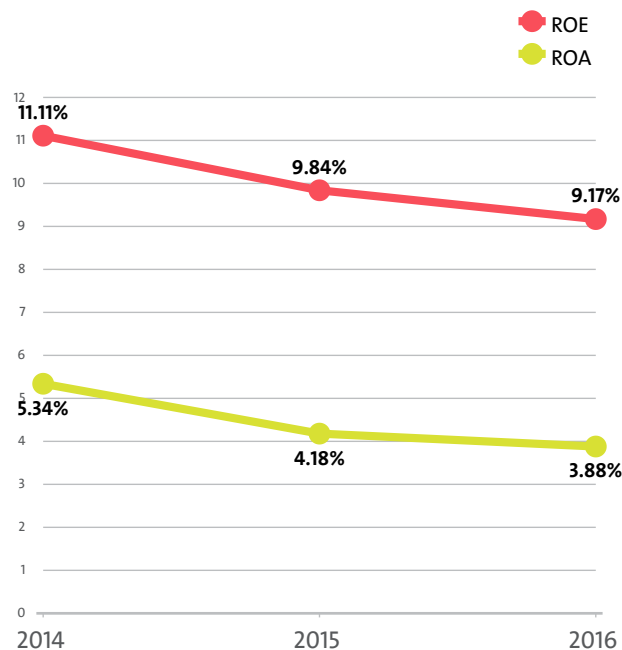
9	PRESSAFE SRL	10,661,209
10	SYSTRONICS SRL	10,305,954

TOP COMPANIES BY HIGHEST NET LOSS IN MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS

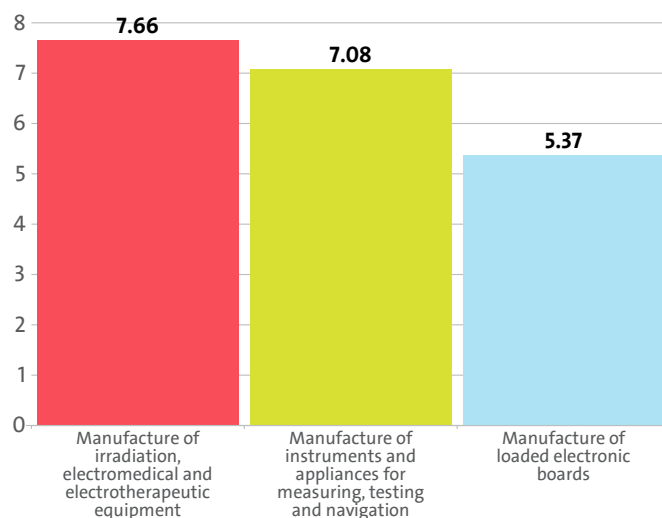
RANK	COMPANY	RON
1	PLEXUS SERVICES RO SRL	23,342,903
2	INTRAROM SA	23,260,898
3	KIMBALL ELECTRONICS ROMANIA SRL	19,630,098
4	KATHREIN ROMANIA SRL	11,177,866
5	SHINHEUNG ELECTRONICS SRL	9,405,688

The Manufacture of computer, electronic and optical products industry's return on equity (ROE) is 9.17% compared to 9.84% in 2015 and 11.11% in 2014.

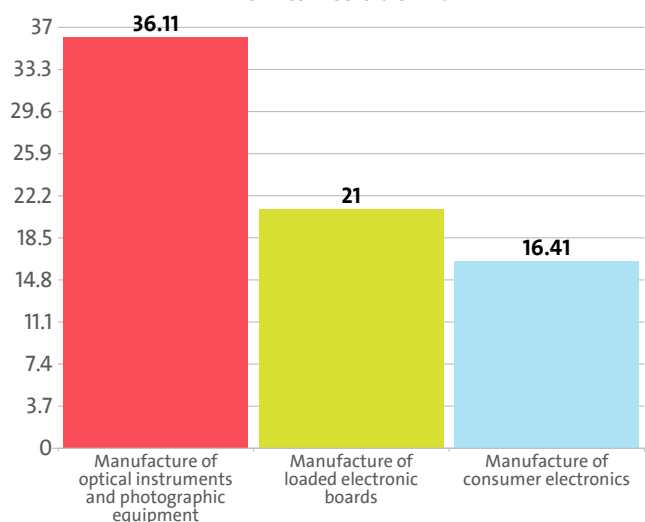
The Manufacture of computer, electronic and optical products's return on assets (ROA) was 3.88%, while in 2015 it amounted to 4.18% and 5.34% in 2014.



LEADING INDUSTRY'S SECTORS BY ROA



LEADING INDUSTRY'S SECTORS BY ROE



TOP 10 COMPANIES BY HIGHEST AVERAGE NET PROFIT PER EMPLOYEE IN MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS

RANK	COMPANY	RON	COMPANY HEADQUARTERS (CITY)
1	HANNA INSTRUMENTS SRL	1,580,530	SALAJ
2	TIVAN PLAST SRL	921,284	BIHOR
3	CREATIVE ENGINEERING SOLUTIONS SRL	283,779	BUCHAREST
4	OPHTHAQUINT SRL	276,830	CARAS-SEVERIN
5	UNO ELECTRONICS SRL	273,404	MURES
6	RETINA CO SRL	269,903	BUCHAREST
7	KLEVIS GRAFI DESIGN SRL	261,726	PRAHOVA
8	MEDXRAY EQUIPMENT SRL	259,492	MURES
9	RSX ENGINEERING SRL	252,496	TIMIS
10	AUTOZONE SRL	250,551	TIMIS

About 20.00% of the 10 leading companies in terms of net profit per employee are located in Bucharest, while 20.00% are Timis-based and 20.00% are headquartered in Mures.

The average net sales revenue per employee in the Manufacture of computer, electronic and optical products industry amounted to RON 275,864 in 2016, up by 1.25% compared to 2015 and up by 10.04% compared to 2014.

The Manufacture of computer, electronic and optical products sector generated an average RON 292,497 in total revenue per employee. In 2015 and 2014 the figure was RON 289,538 and RON 266,845, respectively.

The average total revenue per company in the Manufacture of computer, electronic and optical products industry dropped to RON 10,396,686 in 2016 from RON 10,458,924 in 2015. The 2014 value was RON 8,365,186.

A company in the Manufacture of computer, electronic and optical products field made on average a net sales revenue of RON 9,805,471 in 2016, compared to RON 9,841,772 in 2015 and RON 7,858,801 in 2014.

The Manufacture of computer, electronic and optical products industry made 0.70% of the overall sales country-wide, decreasing its market share by 0.04 pp.

AVERAGE REVENUES PER EMPLOYEE IN MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS IN 2016

SECTOR	AVERAGE NET SALES REVENUE (RON)	AVERAGE TOTAL REVENUE (RON)	NUMBER OF EMPLOYEES
MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT	637,073	670,014	2,822
MANUFACTURE OF LOADED ELECTRONIC BOARDS	270,181	284,504	2,670
MANUFACTURE OF ELECTRONIC COMPONENTS	209,978	220,050	11,752
MANUFACTURE OF CONSUMER ELECTRONICS	145,801	188,914	153
MANUFACTURE OF WATCHES AND CLOCKS	115,550	117,019	35
MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION	276,268	298,082	8,397
MANUFACTURE OF COMMUNICATION EQUIPMENT	278,845	294,173	3,090
MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT	121,661	138,820	911
MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT	108,097	111,056	448
MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA	55,060	55,188	6

AVERAGE REVENUE PER COMPANY IN MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS IN 2016

SECTOR	AVERAGE NET SALES REVENUE (RON)	AVERAGE TOTAL REVENUE (RON)	NUMBER OF COMPANIES
MANUFACTURE OF ELECTRONIC COMPONENTS	17,501,148	18,340,656	141
MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION	14,498,888	15,643,727	160
MANUFACTURE OF COMMUNICATION EQUIPMENT	13,255,874	13,984,523	65
MANUFACTURE OF LOADED ELECTRONIC BOARDS	9,368,617	9,865,267	77
MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT	8,098,286	8,517,023	222
MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT	1,383,640	1,421,516	35
MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT	980,825	1,119,160	113
MANUFACTURE OF CONSUMER ELECTRONICS	769,223	996,684	29
MANUFACTURE OF WATCHES AND CLOCKS	449,361	455,074	9
MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA	330,362	331,129	1

The total indebtedness of the companies in the Manufacture of computer, electronic and optical products industry was RON 3,781,387,593 versus RON 3,346,847,681 a year ago. In 2014 the industry's indebtedness totalled RON 2,521,142,455.

INDUSTRY'S INDEBTEDNESS BY SECTORS (RON)

SECTOR	2016	2015	2014
MANUFACTURE OF ELECTRONIC COMPONENTS	978,294,872	859,311,462	596,320,743
MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION	967,810,839	1,003,701,582	574,014,397
MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT	774,047,327	666,487,288	464,131,951
MANUFACTURE OF COMMUNICATION EQUIPMENT	480,415,457	347,226,867	386,103,263
MANUFACTURE OF LOADED ELECTRONIC BOARDS	332,673,181	257,565,575	302,613,141

MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT	174,429,492	132,491,989	129,156,036
MANUFACTURE OF CONSUMER ELECTRONICS	45,403,195	66,385,663	46,581,355
MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT	24,525,511	11,997,553	18,170,579
MANUFACTURE OF WATCHES AND CLOCKS	3,383,265	1,679,702	3,575,780
MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA	404,454		475,210

Debt-to-assets ratio of the companies in the industry is 0.56 in 2016. It was 0.51 in 2015 and 0.50 in 2014.

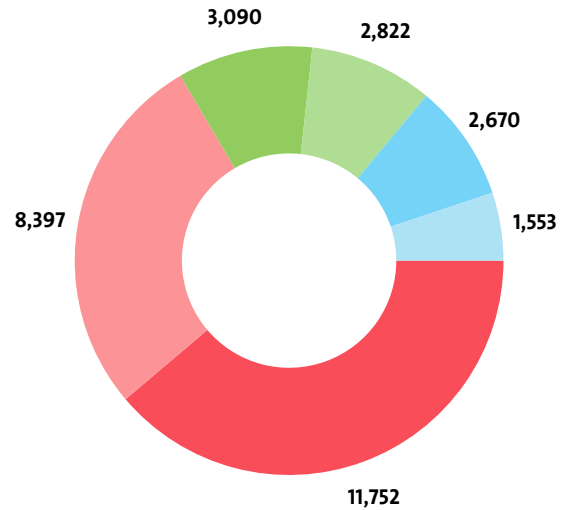
VI. EMPLOYMENT

A total of 30,284 people were employed in the Manufacture of computer, electronic and optical products field at the end of 2016, compared to 31,174 in 2015 and 25,549 in 2014.

NUMBER OF EMPLOYEES BY INDUSTRY SECTORS

SECTOR	NUMBER	SHARE OF INDUSTRY TOTAL
MANUFACTURE OF ELECTRONIC COMPONENTS	11,752	38.81%
MANUFACTURE OF INSTRUMENTS AND APPLIANCES FOR MEASURING, TESTING AND NAVIGATION	8,397	27.73%
MANUFACTURE OF COMMUNICATION EQUIPMENT	3,090	10.20%
MANUFACTURE OF COMPUTERS AND PERIPHERAL EQUIPMENT	2,822	9.32%
MANUFACTURE OF LOADED ELECTRONIC BOARDS	2,670	8.82%
MANUFACTURE OF OPTICAL INSTRUMENTS AND PHOTOGRAPHIC EQUIPMENT	911	3.01%
MANUFACTURE OF IRRADIATION, ELECTROMEDICAL AND ELECTROTHERAPEUTIC EQUIPMENT	448	1.48%
MANUFACTURE OF CONSUMER ELECTRONICS	153	0.51%
MANUFACTURE OF WATCHES AND CLOCKS	35	0.12%
MANUFACTURE OF MAGNETIC AND OPTICAL MEDIA	6	0.02%

ALLOCATION OF EMPLOYEES BY INDUSTRY'S SECTORS

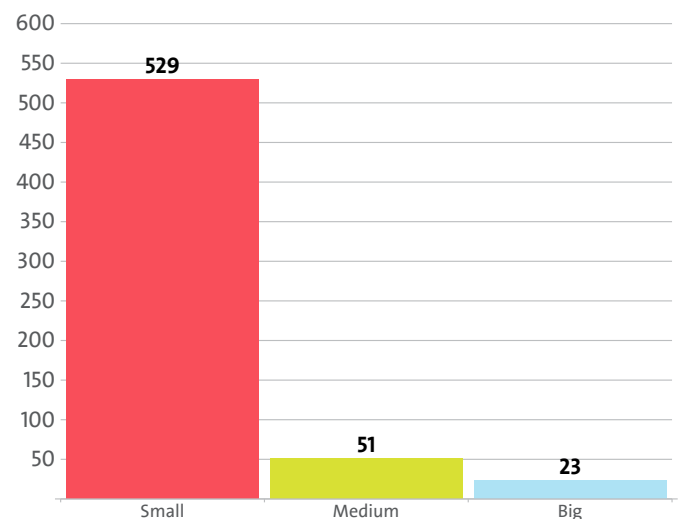


- Manufacture of electronic components
- Manufacture of instruments and appliances for measuring, testing and navigation
- Manufacture of communication equipment
- Manufacture of computers and peripheral equipment
- Manufacture of loaded electronic boards
- Others

The analysis on companies' sizes by the number of employees, shows that 529 firms have less than 50 employees*, 51 have between 50 and 250 employees* and 23 companies employ more than 250*.

** Companies without data in the number of employees at end of the year are not taken into consideration.*

COMPANIES IN THE INDUSTRY BY SIZE IN TERMS OF NUMBER OF EMPLOYEES



The employees of the leading 10 companies when it comes to numbers make up 49.26% of the workforce in the industry in 2016.

TOP 10 COMPANIES BY SHARE IN INDUSTRY'S TOTAL NUMBER OF EMPLOYEES

RANK	COMPANY	NUMBER OF EMPLOYEES	SHARE
1	FLEXTRONICS ROMANIA SRL	3,577	11.81%
2	EMERSON SRL	2,180	7.20%
3	KATHREIN ROMANIA SRL	2,011	6.64%
4	AEM SA	1,554	5.13%
5	SUMIDA ROMANIA SRL	1,340	4.42%
6	DPR DRAXLMAIER PROCESE DE PRODUCTIE ROMANIA SRL	982	3.24%
7	CONNECTRONICS ROMANIA SRL	928	3.06%
8	CELESTICA (ROMANIA) SRL	878	2.90%
9	PLEXUS SERVICES RO SRL	785	2.59%
10	BENCHMARK ELECTRONICS ROMANIA SRL	683	2.26%

The Manufacture of computer, electronic and optical products industry is the 42nd largest employer in the country with 30,284 employees with the largest employer being Retail trade, except of motor vehicles and motorcycles with 437,697 and Activities of extraterritorial organisations and bodies at the bottom with 1 employees.

We expect, based on the trend in the last three years, the number of employees of the Manufacture of computer, electronic and optical products industry to change at a compound annual growth rate (CAGR) of 8.87% in 2017.

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