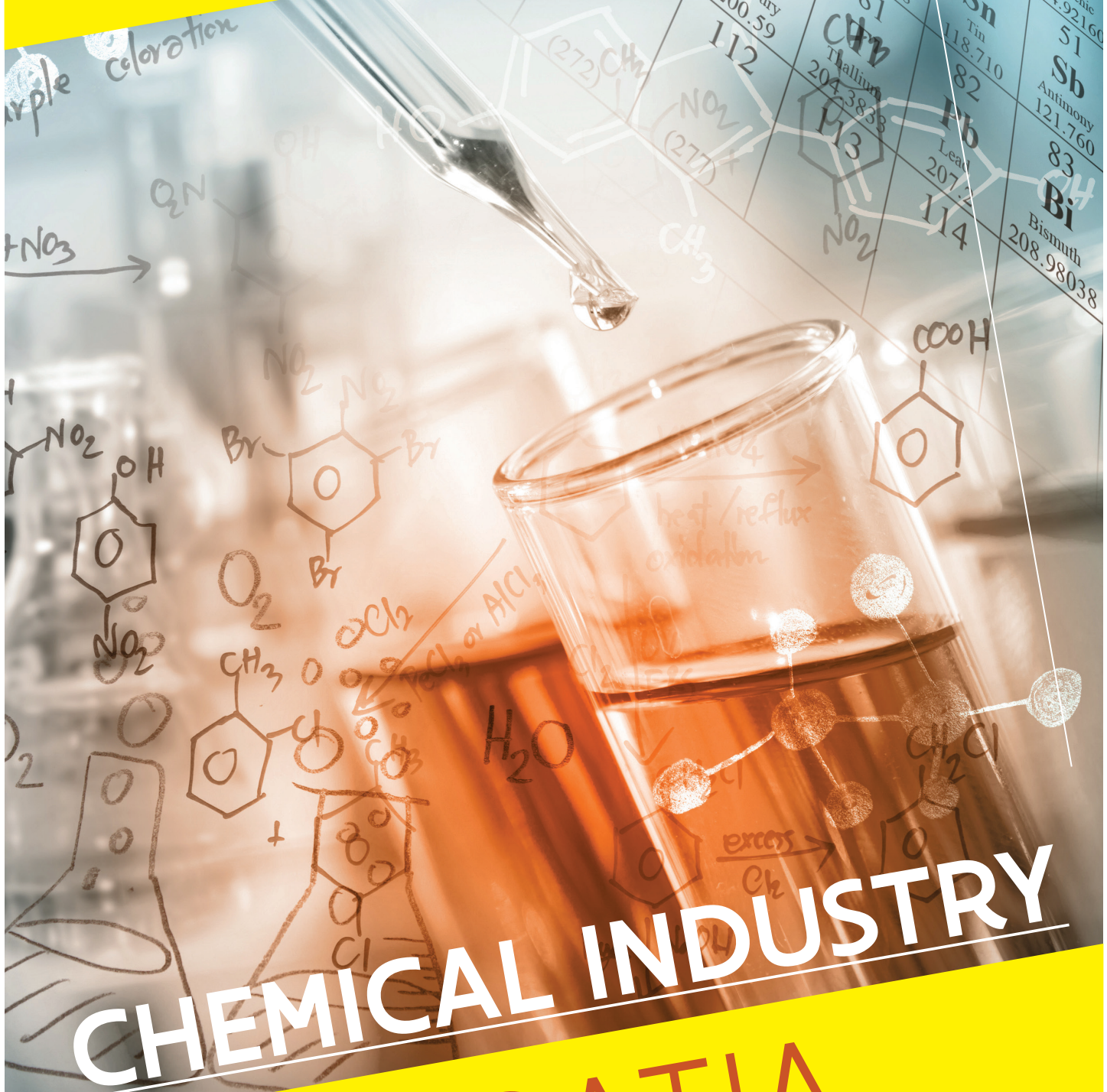




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CHEMICAL INDUSTRY IN CROATIA

FLANDERS INVESTMENT & TRADE MARKET SURVEY



The Chemical Industry in Croatia

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Table of contents

Croatia	2
Economic Indicators	3
The croatian chemical industry	4
Description of the chemical sector in Croatia as compared to other chemical industries in the region	4
Main Characteristics of the Croatian Chemical Industry	11
Manufacturing of chemical products	12
Manufacturing and Production Sectors	12
Industry – Companies	13
Pliva	13
Saponia	13
Petrokemija	13

CROATIA

The Republic of Croatia is a South-Eastern European country of roughly 4.2 million inhabitants. The capital city is Zagreb. Other major cities include Split, Rijeka and Osijek. The country shares borders with Slovenia and Hungary to the north, Bosnia and Herzegovina to the east, Serbia to the northeast, and Montenegro to the southeast, additionally Croatia has a long maritime border with Italy in the Adriatic Sea. It was part of the Socialist Federal Republic of Yugoslavia until 1991, when the country became independent and adopted a parliamentary democracy following the dissolution of Yugoslavia. Croatia has a significant amount of natural resources and varying active business sectors in a multitude of industries. The business sector in Croatia managed to expand greatly in the late 1990's playing a major role in the nation's recovery following the 4-year Homeland War.



Since that time, Croatia has enjoyed exponential growth with a sustained increasing GDP of 4-5% per year and stable macroeconomic factors as a low inflation rate and a low Croatian Kuna/Euro and USD rate. These factors attracted foreign investments and subsequently led towards Croatia's membership in the European Union on July 1st, 2013. Despite economic and political progression Croatia still faces many challenges in the future.

These challenges include a relatively high unemployment rate (10.5%)¹, an excessive dependency on the unpredictable hospitality and tourism industry, and an increasing gross external debt.

Economic Indicators²

<i>Indicator</i>	<i>Croatian market</i>	<i>Belgian market³</i>
<i>Population</i>	<i>4 171 779 (2016 est.)</i>	<i>11,289,900 (2016 est.)</i>
<i>Human Development Index (IDH)</i>	<i>0.827 (2015)</i>	<i>0.896(2015)</i>
<i>GDP growth rate</i>	<i>3.0% (2016)</i>	<i>1.2% (2016)</i>
<i>GDP</i>	<i>€ 48, 730 B (2016)</i>	<i>€ 420,901 B (2016)</i>
<i>GDP (per capita)</i>	<i>€ 10 922 (2016)</i>	<i>€ 45 308 (2016)</i>
<i>GDP (Composition by sector) (2016)</i>		
- <i>Agriculture</i>	<i>4.20%</i>	<i>0.7 %</i>
- <i>Industry</i>	<i>26.60%</i>	<i>21.1 %</i>
- <i>Services</i>	<i>69.20%</i>	<i>77.2 %</i>
<i>Inflation Rate</i>	<i>-1.1% (2016)</i>	<i>1.7 % (2016)</i>
<i>Average Monthly Salary (gross) (2017)</i>	<i>€ 1090</i>	<i>€ 3401</i>
<i>Average Monthly Salary (NET) (2017)</i>	<i>€ 809</i>	<i>€ 1920</i>
<i>Unemployment Rate</i>	<i>10.6% (2017)</i>	<i>8,1 %(2017)</i>
<i>Exports</i>	<i>12.41 Billion Euro (2016)</i>	<i>250.8 Billion Euro (2013)</i>
<i>Import</i>	<i>19.98 Billion Euro (2016)</i>	<i>251.7 Billion Euro (2016)</i>

¹ <http://countryeconomy.com/unemployment/croatia>

²

³ <http://www.diplomatie.gouv.fr/fr/dossiers-pays/belgique/presentation-de-la-belgique/>

<i>Global Competitiveness Index (2016-2017)</i>	<i>4.15</i>	<i>5.25</i>
<i>Public Debt as % of GDP (2016)</i>	<i>84.2%</i>	<i>99.6%</i>
<i>Main Commercial Partners</i>	<i>Germany, Italy, Slovenia, Bosnia and Herzegovina, Austria, Hungary</i>	<i>Germany, France, Netherlands, United Kingdom, United States, Italy, China, Ireland</i>
<i>Currency</i>	<i>Kuna (HRK)</i> <i>1 HRK=0,13€ (2017)</i>	<i>Euro (€)</i>
<i>Average Exchange Rate/Dollar</i>	<i>6.15 HRK (2017)</i>	<i>0.83 Euro (2017)</i>

Croatia's economy operates as an open market accessible to all investors. As Croatia is a member of the European Union, foreign investors are not subject to any additional laws or regulations. Investors from other nations can operate under the same structures as local actors.

THE CROATIAN CHEMICAL INDUSTRY

Description of the chemical sector in Croatia as compared to other chemical industries in the region.

The chemical, pharmaceutical, plastics and rubber processing industries represent infrastructural segments of the Croatian economy. Chemical sciences and its associated industries have a historical tradition in the Republic of Croatia. This long history and tradition has led to Croatia possessing a skilled and well-educated labor force in the chemical industry, which has become one of the nation's main comparative advantages in the global chemical market.

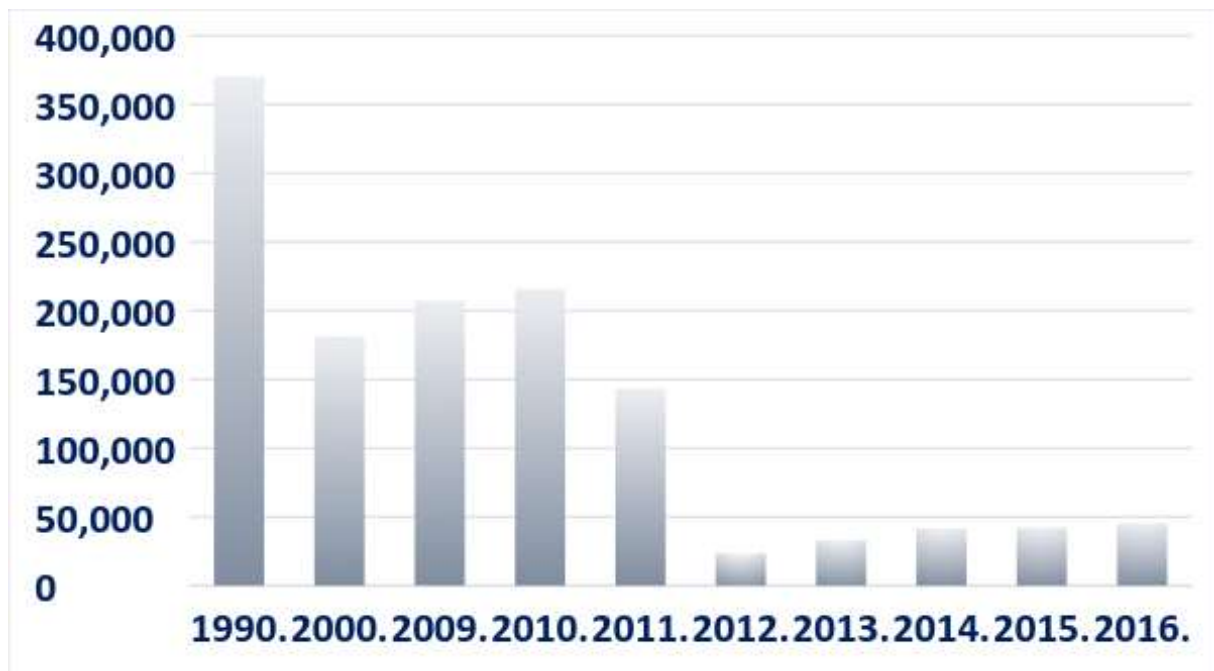
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The most significant sectors of the Croatian chemical industry are pharmaceuticals, mineral fertilizers, technical gases and pesticides, polymer rubber and plastic products, detergents, and

finally paints and varnishes. Production in the chemical industry composed 4.1% of total Croatian manufacturing in 2015⁴.

In the most recent decade there has been a significant decrease in the production of chemical plastics, pesticides, and other agricultural chemicals⁵.

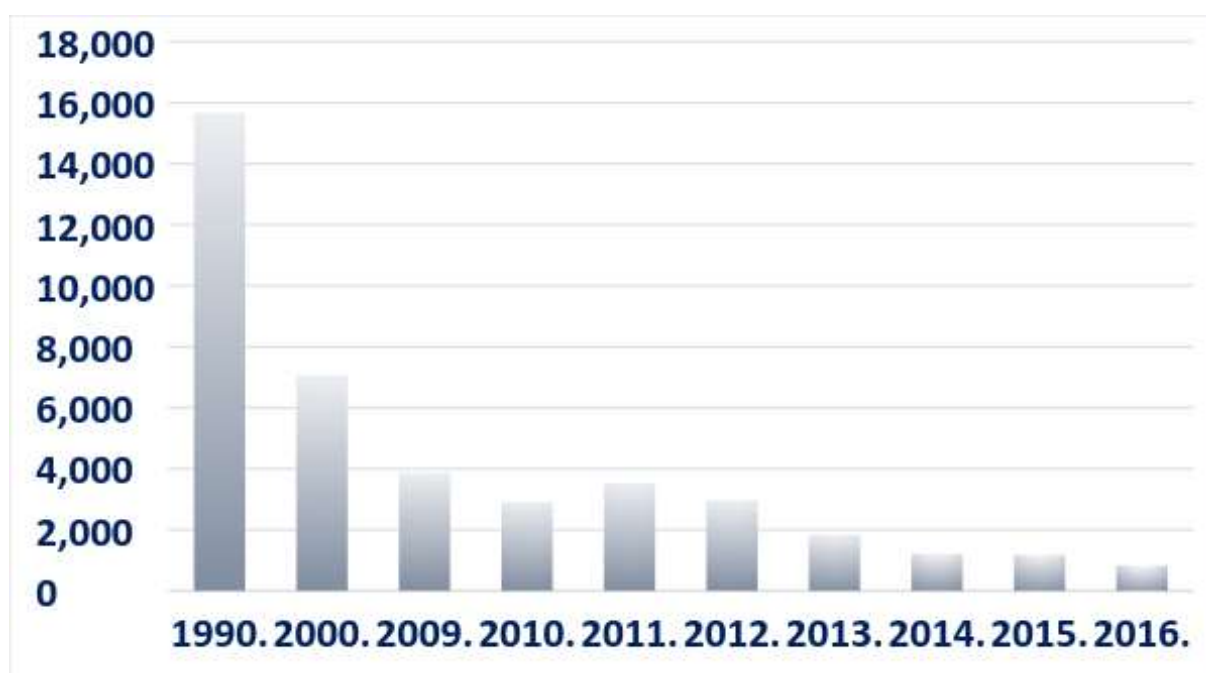
Production of plastics and other related products in tons



⁴ <https://www.chemlandscape.cefic.org/country/croatia/>

⁵ Petarcic, Renata. *Economic Movement in the Chemical Industry of the Republic of Croatia*. Croatian Chamber of Economy. 2017.

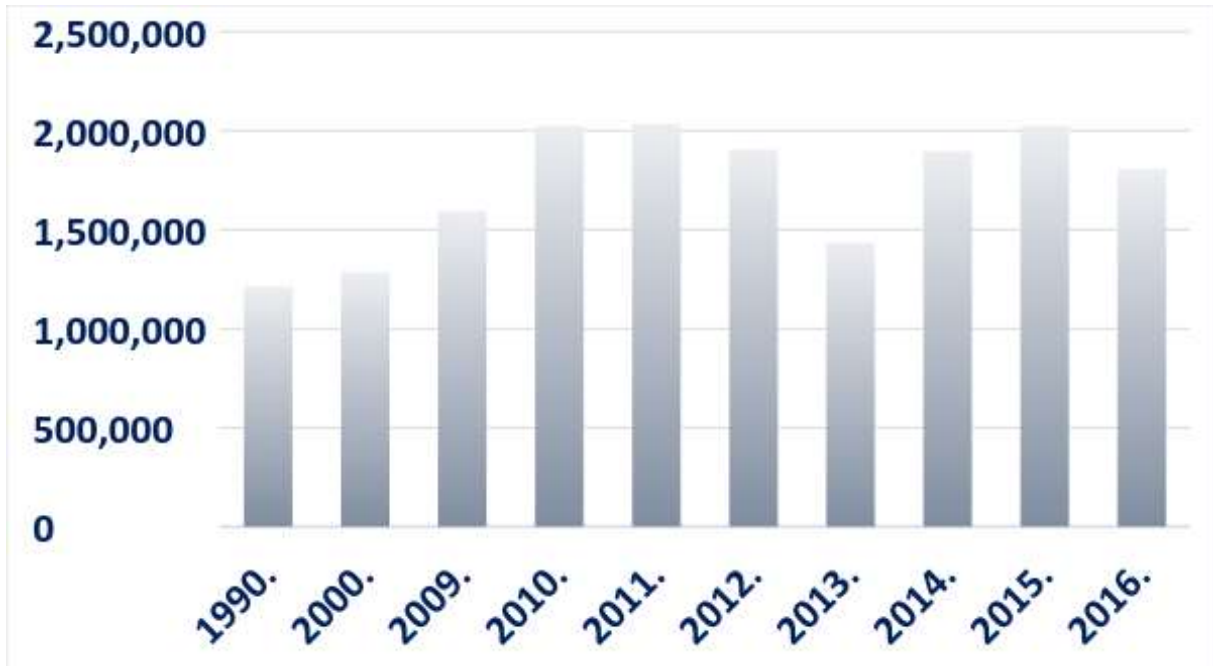
Production of pesticides and other agricultural chemicals



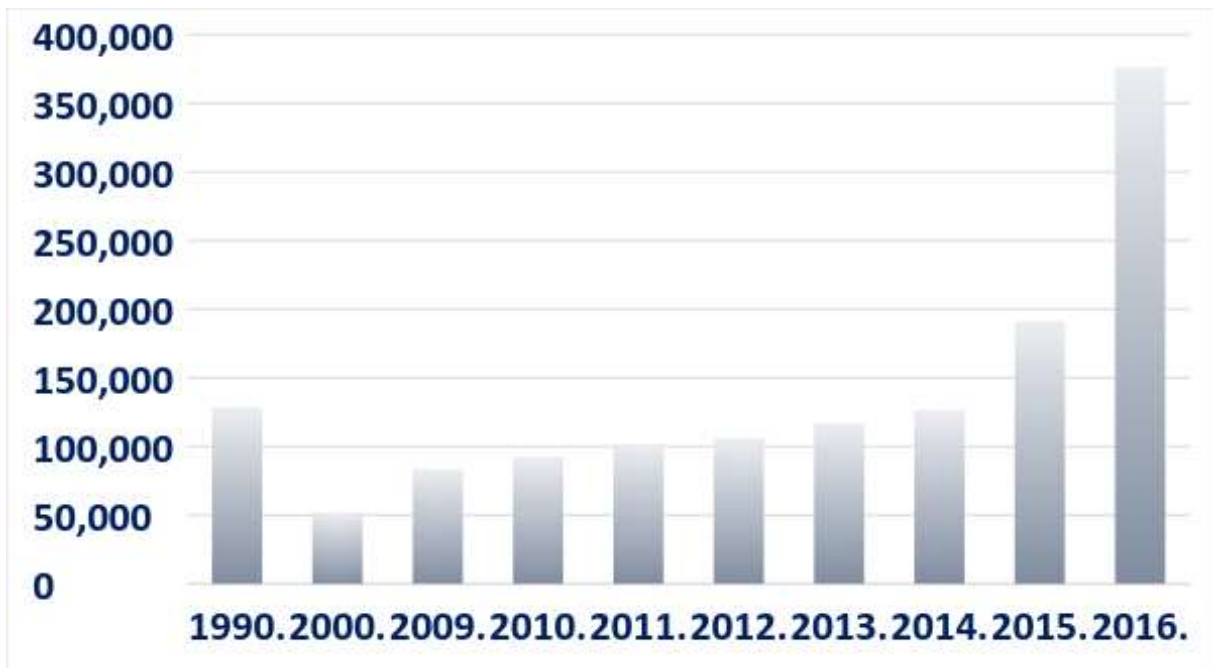
On the other hand, the production of mineral fertilizers, as well as the production of soap and cleaning products has increased⁶

⁶ Petarcic, Renata. *Economic Movement in the Chemical Industry of the Republic of Croatia*. Croatian Chamber of Economy. 2017.

Production of mineral fertilizers in tons



Production of soaps and other cleaning chemicals in tons



The manufacture of basic pharmaceutical products in Croatia has been steadily increasing in recent years. This is mostly due to the competitively cheap labor force (average pharmaceutical hourly wage is € 9.2/hour). This has led to pharmaceutical production taking up 4% of all gross domestic exports in Croatia⁷.

The majority of chemical manufactures in Croatia focus their operations on the domestic market. Despite this domestic focus, Croatian producers have oriented their manufacturing towards European Union standards. This has created a constant modernization process in the chemical industry which has significantly reduced costs. In regards to export oriented companies Croatian firms enjoy international quality certificates and operate under the same laws and rules as their EU competitors. Chemical-related exports and imports in Croatia have both been on the rise in recent years⁸.

Export (Izvoz) - Import (Uvoz) chemicals and chemical products

Godina	Izvoz (000 €)	Uvoz (000 €)
2008.	687.464	1.460.998
2009.	455.060	1.140.758
2010.	661.448	1.377.684
2011.	690.098	1.410.660
2012.	583.761	1.336.666
2013.	601.173	1.382.131
2014.	633.546	1.369.756
2015.	706.267	1.552.665
2016.	643.530	1.518.883

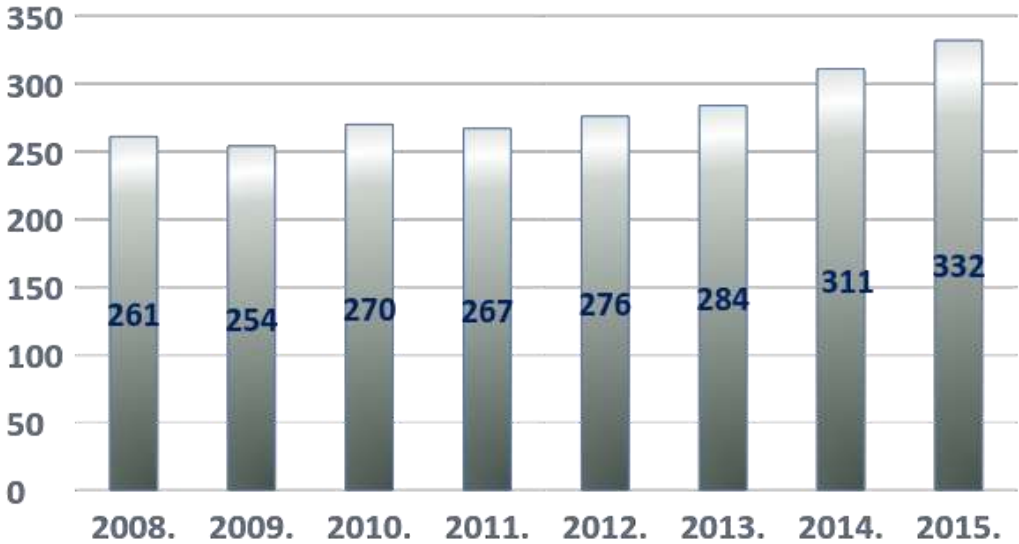
Izvor: FINA

⁷ <http://www.aik-invest.hr/en/sectors/pharmaceutical-industry/>

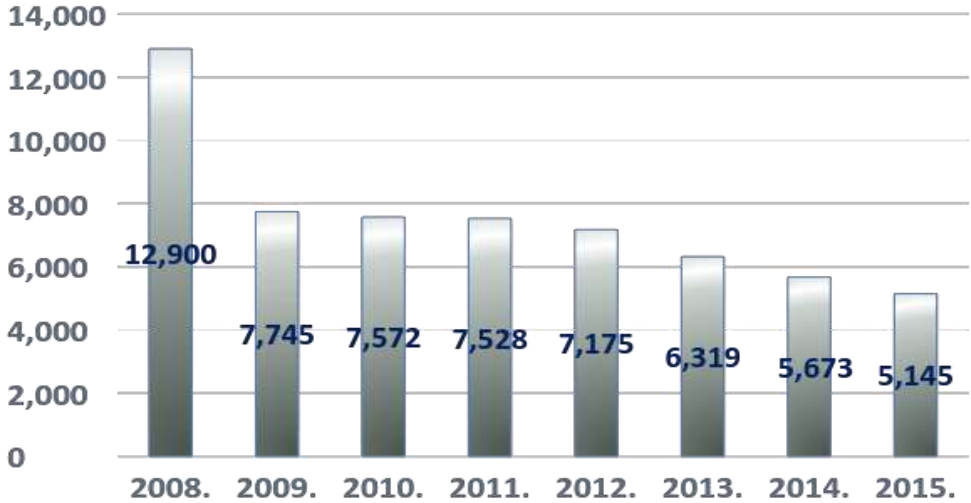
⁸ Petarcic, Renata. *Economic Movement in the Chemical Industry of the Republic of Croatia*. Croatian Chamber of Economy. 2017.

In 2015 the total revenue of the Croatian chemical industry makes up 4.1% of the manufacturing industries total (EUR 861 million). A total of 332 companies employ 5.145 individuals (2.6% of employees in the manufacturing industry)⁹.

Number of companies



Number of employees



The manufacturing of chemicals is one of the most export oriented sectors of the Croatian economy. In 2015, 11% of all Croatian exports stemmed from the chemical industry¹⁰.

⁹ <https://www.chemlandscape.cefic.org/country/croatia/>

¹⁰ <http://atlas.media.mit.edu/en/profile/country/hrv/#Exports>

The majority of chemical companies are concentrated in larger cities, such as the capital Zagreb.

The vast majority of the 332 chemical manufacturing companies in Croatia are small to medium in size; however there are a significant number of large firms at play: the ten largest companies are as follows:

**TEN LARGEST COMPANIES IN THE CHEMICAL INDUSTRY –
Listed in order of highest revenue 2015¹¹**

No.	Name of the company	No. Employees
1.	PETROKEMIJA d.d.	1.617
2.	SAPONIA d.d.	834
3.	ADRIATICA DUNAV d.o.o.	54
4.	MESSER CROATIA PLIN d.o.o.	233
5.	HEMPEL d.o.o.	92
6.	SCOTT BADER d.o.o.	63
7.	IREKS AROMA d.o.o.	132
8.	CHROMOS-SVJETLOST d.o.o.	142
9.	LABUD d.o.o.	161
10.	AGROCHEM-MAKS d.o.o.	20

Under the umbrella of the Croatian Chamber of Economy, there is a professional Association for the Chemical Industry in Croatia (<https://www.hgk.hr/category/udruzenja/udruzenje-kemijske-industrije>). This branch represents the interests of its members via the work of the Council of the Association, and its associated sub-groups (Group of Paint and Varnish Producers, Agrochemicals Producers Group). Since October 2005, the Chemical Industry Association has been a member of the European Chemical Industry Association (CEFIC).

¹¹ Petarcic, Renata. *Economic Movement in the Chemical Industry of the Republic of Croatia*. Croatian Chamber of Economy. 2017.

Their catalogue

(https://www.hgk.hr/wp-content/blogs.dir/1/files_mf/katalog_kemija_za_tisak.pdf) records the activities of the Association of Chemical Industry of the Croatian Chamber of Commerce which represents companies at home and abroad and encourages business cooperation. The association also seeks to emphasize the importance of the chemical and pharmaceutical industry in Croatia and the significant role it plays in the general economy.

Main characteristics of the Croatian chemical industry

- Plays a significant role in the national economy
- Experienced and well-educated work force
- Dependent on the import of raw materials and resources
- Wide production range
- Good foundation and environment for entry, as well as cooperation and investment in the area of new technologies and production in order to encourage competitiveness.

MANUFACTURING OF CHEMICAL PRODUCTS

Strengths	Weaknesses
<ul style="list-style-type: none"> • Tradition in business and the familiarity of the companies • Internal knowledge • A higher proportion of highly educated workforce and products with higher added values in relation to processing industry • Satisfying quality of products according to EU standards • Installed capacities • Competitive prices • Satisfaction and loyalty of regular customers • Geographical proximity of the EU market 	<ul style="list-style-type: none"> • Decline of the total volume of production • Decline in the employment • Low added value and low productivity in relation to the EU • Lack of skilled staff • Obsolescence of machinery and equipment • Limited/underutilized production capacity • Low investments in R&D • A small number of new products • Low investments in marketing and promotion • No patents
Opportunities	Threats
<ul style="list-style-type: none"> • Increase in demand in certain market segments • Investment in R&D • Innovation in products and production processes • Application of new technology and knowledge transfer • Investment in the training and education of personnel • Opening universities • EU funds for financing environmental projects • Croatian accession to EU • Public education / promotion of the chemical industry as a branch 	<ul style="list-style-type: none"> • The possibility of obtaining the required quantities of raw materials in the market • Upward pressure on prices of energy and raw materials • Upward pressure on prices of external and utility costs • High costs of waste management and implementation of environmental, safety and security standards • Possible takeovers from multinational companies • Pressure to limit budget spending for medicines • negative public attitude towards the chemical industry

Manufacture of chemicals and chemical products (C20) – SWOT matrix

Manufacturing and Production Sectors:

- Basic pharmaceutical products and pharmaceutical preparations
- Perfumes and toiletry cosmetic products
- Soap and detergents, cleaning and polishing products
- Primary plastics
- Rubber products
- Fertilizers
- Pesticides and other agrochemical products

- Paints, varnishes and similar coatings, printing ink and fillers
- Technical gases
- Glues

Industry – Companies

PLIVA

<http://www.pliva.com/>

Pliva is a pharmaceutical company based in Zagreb. Pliva is notably one of the world's largest producers of the generic drug Adderall, which has become one of Pliva's largest revenue generators following a worldwide increase in ADD and ADHD diagnoses. Pliva is currently the largest pharmaceutical company in Southeastern Europe; it is also Croatia's third largest general exporter¹². Pliva has in recent years abandoned producing name-brand pharmaceuticals and instead exclusively manufactured generic products. In 2008 Pliva was acquired by the international pharmaceutical company Teva Pharma.

SAPONIA

<http://www.saponia.hr/>

Saponia dd is a firm based in Osijek that produces detergents, hygiene products, and industrial sanitation and cleaning products. Saponia was founded in 1894 as the first soap manufacturer in the Osijek region. The firm continued to operate independently until it was acquired by the Bosnian and Hercegovina based company Mepas.

PETROKEMIJA

<http://www.petrokemija.hr/>

Petrokemija is a Croatian chemical company which specializes in manufacturing agricultural fertilizers. It was founded in 1968 as a branch of the state-owned oil company INA.

In the late 1990s it was privatized and in 1998 it was incorporated as an independent joint stock company and listed at the Zagreb Stock Exchange. Petrokemija is, after INA, the second largest exporter in the country. It is one of 24 companies included in the CROBEX share index.

Links between academic and industrial sectors.

There are no strong and present links between the academic world and the chemical industry; however there is a history of occasional cooperation with the university system.

The Croatian chemical industry is represented by the Chemical Industry Association (<https://www.hgk.hr/category/udruzenja/udruzenje-kemijske-industrije>), the Plastic and Rubber Processing Industry Association (<https://www.hgk.hr/category/udruzenja/udruzenje-industrije-plastike-i-gume>), the Affiliation of Health Service Products Manufacturers

¹² <https://www.tportal.hr/biznis/clanak/top-10-najvecih-hrvatskih-izvoznika-20120615>

(<https://www.hgk.hr/category/zajednice/zajednica-proizvodaca-proizvoda-za-zdravstvo>), and the Affiliation of Manufacturers and Wholesalers of Detergents and Cosmetics (<https://www.hgk.hr/category/zajednice/zajednica-proizvodaca-i-veletrgovaca-sredstvima-za-pranje-ciscenje-i-kozmetiku>). These organizations seek to strengthen scientific and industrial cooperation between all actors in the Croatian chemical industry.

Opportunities for Growth

The Croatian chemical industry has several growth opportunities. Consumption of most chemical products per capita in Croatia has not yet reached EU levels. The production structure of the chemical industry should be changed to boost the competitiveness of the Croatian chemical industry, and to move to the production of high value-added products. Croatian assets are a highly skilled labor force supported by good scientific professionals and an excellent geostrategic location.

Smart Specialization Agenda

The Croatian government is currently working on a Smart Specialization Strategy in Croatia. This strategy will provide national support for smart, inclusive and sustainable growth of the chemical industry, based on a broader concept of innovation.

- http://www.regionalna-konkurentnost.hr/userdocsimages/Pametna_specijalizacija_i_%20rast_u_%20Republici_%20Hrvatskoj.pdf
- http://www.utt.unist.hr/files/prezentacije/2014_03_04_Split_RIS3/ris3_rajakovic_mingo.pdf