Automotive Industry in Croatia

Desk Research Report 2017

XSIGHTS
RESEARCH AND CONSULTANCY

OTOMOTİV ENDÜSTRİSİ İHRACATCILARI BİRLİĞİ OİB

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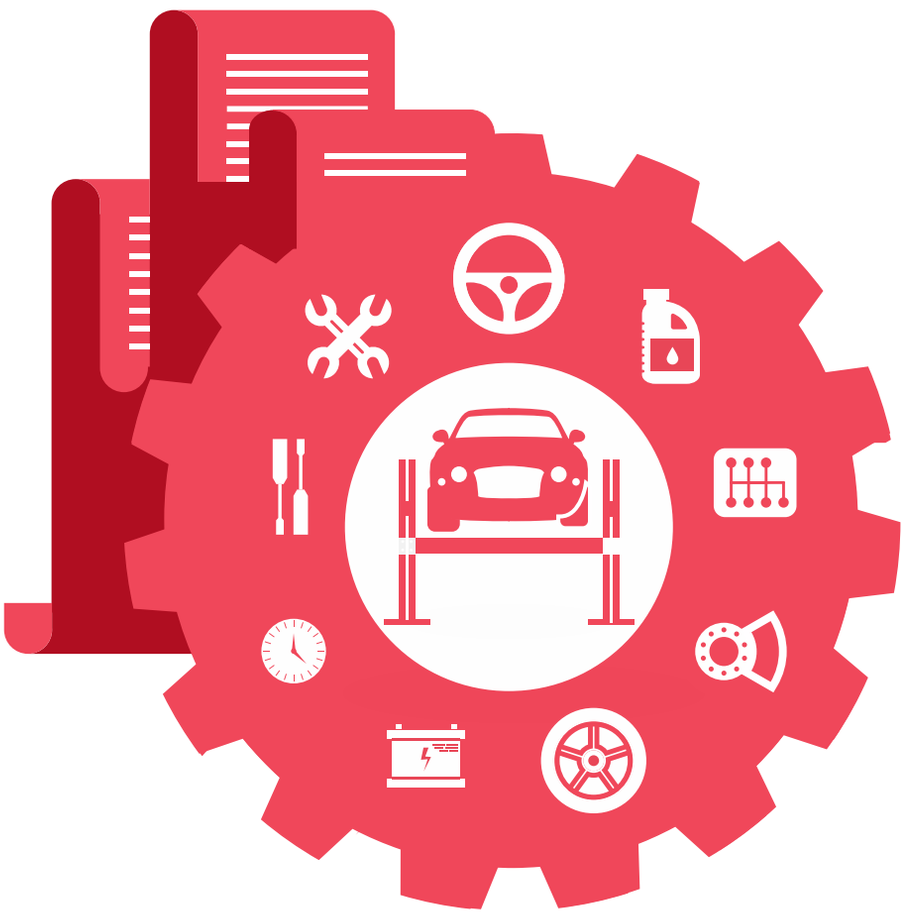


General Economic Situation in Croatia

Croatia extends from the foothills of the Julian Alps in the north-west and the Pannonian Plain in the east, over the Dinara mountain range in its central region, to the Adriatic coast in the south. Area 56,594 km2, with an additional 31,067 km2 of territorial waters.

As the newest member of the European Union, Croatia now has access to the rest of the EU and the business opportunities that it provides. Businesses can import and export goods within the EU without restrictions, opening up the greater part of the European market with little effort.

Croatia's geo-strategic location in Central and South East Europe, on the border between the east and west, as well as its location on the Adriatic Sea, and especially its ports, make it highly appealing to the business market.

The national money is the kuna (HRK).M.sers is 70% of the European average.

Gross Domestic Product and Consumer Prices in Croatia

Gross Domestic Product and Consumer Prices

Gross Domestic Product of Croatia grew 2.9% in 2016 compared to last year . This rate is 13-tenths of one percent higher than the figure of 1.6% published in 2015.

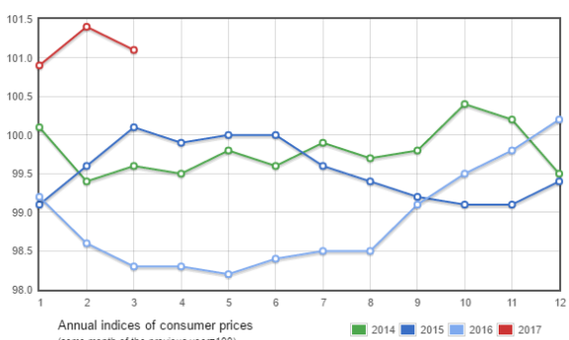
The GDP figure in 2016 was $50,427 million, Croatia is number 81 in the ranking of GDP of the 196 countries that we publish. The absolute value of GDP in Croatia rose $1,751 million with respect to 2015.

The GDP per capita of Croatia in 2016 was $12,033, $454 higher than in 2015, it was $11,579. To view the evolution of the GDP per capita, it is interesting to look back a few years and compare these data with those of 2006 when the GDP per capita in Croatia was $11,360.

European Commission expects 3.1% DGP growth for Croatia in 2017.hicles and motorcycles at an annual level.

In 2016, Croatia's consumer prices fell by an annual average of 1.1% after a 0.5% contraction in 2015, data from the country's statistics office.

The price decline was mostly instigated by imported deflationary pressures whereby the decline in energy prices was joined by a decline in food prices caused by external factors, according to the local unit of Raiffeisen Bank International.



Source: Croatian Bureau of Statistics

Date	GDP Mill.$	GDP Growth (%)
2016	50,427M.$	2.9%
2015	48,676M.$	1.6%
2014	57,080M.$	-0.5%
2013	57,770M.$	-1.1%
2012	56,486M.$	-2.2%
2011	62,237M.$	-0.3%

Date	GDP per capita	Annual Change
2016	12,033$	3.9%
2015	11,579$	-14.0%
2014	13,469$	-0.8%
2013	13,574$	2.6%
2012	13,235$	-9.0%
2011	14,538$	7.7%

Source: http://countryeconomy.com/

Croatia
Labour Market

The comparison between the unemployment data obtained by the Labour Force Survey according to the Croatian Employment Service and those obtained from other administrative data records shows that in the fourth quarter of 2016 the unemployment rate obtained from the administrative records was higher (14.3%) than the ILO (International Labour Organisation) unemployment rate (13.4%). In the same period, there were 12 thousand more unemployed persons on average according to the Survey than according to the Croatian Employment Service.

A high level of emigration and continued outflows from inactivity into early retirement led to declines in labor force participation. Thus, the employment rate remained at a low 44.5%, far below the EU average.

tis. '000

	X – XII. 2015.	I. – III. 2016.	IV. – VI. 2016.	VII. – IX. 2016.	X. – XII. 2016.
Working-age population (15+)	3 579	3 574	3 568	3 563	3 558
Labour force	1 876	1 824	1 843	1 829	1 824
Persons in employment	1 575	1 544	1 607	1 629	1 579
Unemployed persons	301	280	236	200	244
Inactive population (15+)	1 703	1 749	1 725	1 734	1 734
			%		
Activity rate	52,4	51,1	51,7	51,3	51,3
Employment rate	44,0	43,2	45,0	45,7	44,4
Unemployment rate	16,1	15,4	12,8	10,9	13,4

Source: Croatian Bureau of Statistics

Automotive Industry in Croatia

The development of the Croatian automotive industry is based on a long tradition in related sectors such as metal production, welding, plastics manufacturing and engineering. Croatian companies dealing with the production of automotive parts have a tradition in high-precision manufacturing with zero tolerance for breakdowns and the main competitive advantage is the excellent quality of their products. Over three quarters of the added value in the automotive industry is realized in the production of components for installation and activities related to the development of vehicles and related processes. On the Croatian market are companies that have successfully integrated into the system of supplying spare parts for the world's top automobile manufacturers (PSA, GM, Fiat, BMW, Audi, Ford, Renault, Toyota, Volvo, etc).

Croatia also boasts the production of electric cars XD (DOK-ING and Concept One – Rimac Automobili). The benefits of joining the automotive industry in Croatia is a well-educated workforce, excellent infrastructure and proximity to the markets and automotive production facilities in the countries of Western and Central Europe.

- 130 companies in the automotive sector in Croatia with 2,013 employees.
- It is estimated that an additional 7,000 people are employed in related industries
- Average gross salary paid in the automotive industry is € 1,011 (2012)
- Share of the automotive industry in total exports is 1.8%
- About 90% of the revenue in the automotive industry is generated through exports

The automotive industry in Croatia employs about 10,000 people in over 130 companies and generates profit of about US$600 million. Croatia mostly produces automotive parts and software. Two most prominent car manufacturers in Croatia are DOK-ING and Rimac Automobili, while Crobus produces buses. The automotive industry accounts for approximately 1.8% of all Croatian exports, while 90% of profits in the industry itself are derived from exports.

Automotive parts manufacturers in Croatia are well-integrated into the global parts supply chain, such as AD Plastik, which produces for Volkswagen. Other Croatian companies produce parts for PSA Peugeot Citroën, General Motors, Fiat, BMW, Audi, Ford, Renault, Toyota and Volvo, among others.

Specialised vehicle producers rely very much on their own creativity and ability to innovate. Their success comes from operational excellence in identifying and successfully filling niche market needs.

Vehicle Parc & Avarage Age

The average age of vehicles driving on Croatian roads is 13.5 years now, while in 2007 it was 9.95 years, the Croatian Chamber of Commerce (HGK) says, adding that this is a direct consequence of the prolonged economic crisis. The average age of cars is 12.5 years.

The Vehicle Centre of Croatia (CVH), which is in charge of technical inspections of vehicles in the country, has stated that the median age of cars that underwent technical inspection in 2014 was 13.07, as against 9.95 in 2007 when it was close to the median age of cars in the European Union.

In 2014 the average age of cars used in the EU was 9.65, according to statistics provided by the European Automobile Manufacturers' Association (ACEA).

Motor Vehicle Sales & Most Popular Brands in Croatia

In 2016 there were a total of 103,583 registered passenger cars, of which 44,106 were new and 59,477 were imported from other countries.

A total of 44,106 new passenger vehicles were sold in Croatia in 2016, up 23.4% on the year, and December recorded a 65% year-on-year jump in sales, with 3,475 new vehicles sold, the Promocija Plus market research agency said on Thursday.

Across 2016, Japanese and Korean manufacturers have made inroads into the Croatian market, impacting the long-held dominance of European manufacturers. That said, European manufacturers still account for six out of the Top 10 best-selling brands in Croatia.

Volkswagen vehicles were the top sellers, with 6,445 cars sold, followed by Opel, with 4,135 cars sold, Renault (3,715), Skoda (3,567) and Ford (2,822). Volkswagen and Opel both trail the market at +12% each and see their respective market share thaw to 14.7% and 9.5% but remain in control of the brands charts. Renault surges 33% to overtake Skoda (+16%) and snap the third spot overall. Ford remains 5th despite a 39% growth, while Suzuki gains 6 spots and 92% to #6 and Hyundai is up 8 ranks and a spectacular 129% to #7. Toyota (+42%), Mercedes (+44%), Volvo (+45%), Fiat (+59%), Smart (+108%), Alfa Romeo (+169%), Infiniti (+171%) and Jaguar (+383%) all take off in what will be remembered as a fantastic year in Croatia.
The Volkswagen Golf was the biggest seller last year, with 2,241 cars sold, followed by Renault Clio (1,734), Skoda Octavia (1,706), Opel Astra (1,569) and Ford Focus (1,533). Suzuki Vitara leaps to #6 overall for its first full year in market, up 171% on 2015. The Renault Mégane (+30.5%), Ford Fiesta (+31%), Hyundai Tucson (+110%) and Hyundai i30 (+262%) also impress inside the Top 20. Further down, the Skoda Superb (+129%), Toyota Corolla (+177%), Mazda CX-3 (+197%), VW Tiguan (+247%), Hyundai i20 (+286%), BMW X1 (+288%) and Dacia Logan (+427%) are among the biggest gainers this year. The Fiat Tipo (#72) leads all-new nameplates.
Hyundai has seen strong demand for its i30 small family car model, which is manufactured in the Czech Republic.

Across 2016, French carmaker Renault has overtaken Skoda for third position within the PC segment. The Captur crossover SUV is selling well in Croatia, alongside the Clio.

Diesel cars accounted for 57.4% of the vehicles sold in 2016 (25,323), followed by 17,948 petrol engine vehicles (40.7%). Sales also included 48 electric cars (0.1%), 332 hybrid cars (0.8%) and 455 natural gas vehicles (1%).

In 2008, about 60% or more than 50,000 new cars were bought by individual citizens, however in 2016, out of 44,106 new cars, citizens bought just 15,507 cars (30.6%), while 30,599 cars were purchased by businesses (enterprises, companies, rent-a-car companies, the state etc.).

On the other hand, the vast majority of 59,477 imported cars ended with private persons, which shows that Croats have not stopped buying cars, but they started buying used vehicles from the EU.

Registrations of new commercial vehicles in Croatia increased 24.0% last year, reaching 9,705, provisional data of the European Automobile Manufacturers' Association, ACEA.
Registrations of new light commercial vehicles of up to 3.5 tonnes rose 22.1% to 8,173 units in 2016, while registrations of new heavy commercial vehicles climbed 36.1% to 1,060.
Within the HCV segment, Volvo Trucks, MAN Truck and Bus, Mercedes-Benz and Scania are among the leading players.

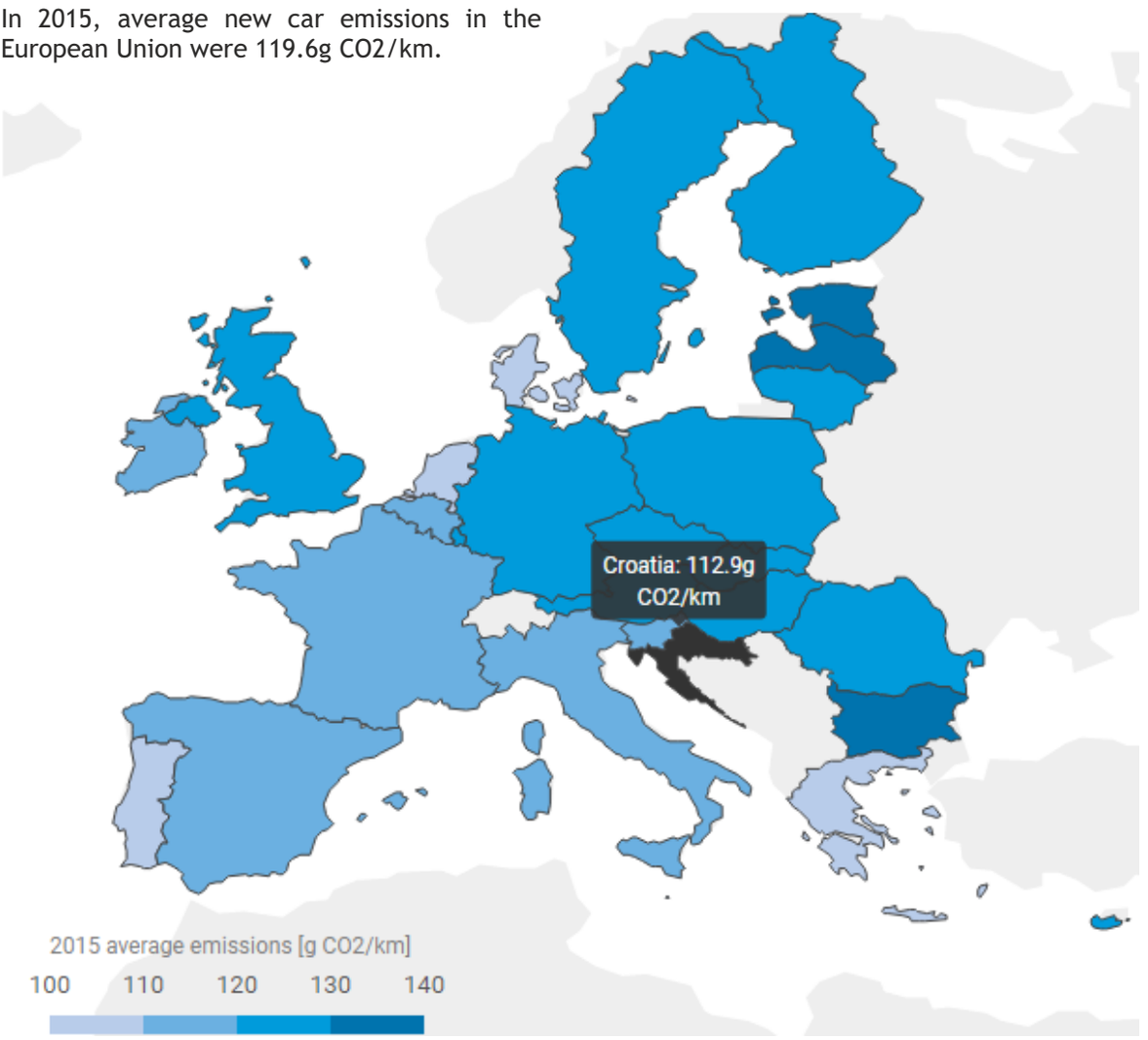
Used Car

Among used cars, Croats were most likely to buy cars between four to five years old, which is an improvement compared previous years when people mostly sought aged between 10 and 12 years. Still, Dthe average age of imported cars was 8.5 years, similar to the last few years.

Golf was the most sought after model among used vehicles. In 2016, as many as 6,718 used Golf cars were imported, the following another Volkswagen model, Passat with 3,296 registration, while the third was BMW 3 series with 2,627 units.

Emissions

In 2015, average new car emissions in the European Union were 119.6g CO2/km.



Source:EEA

Production

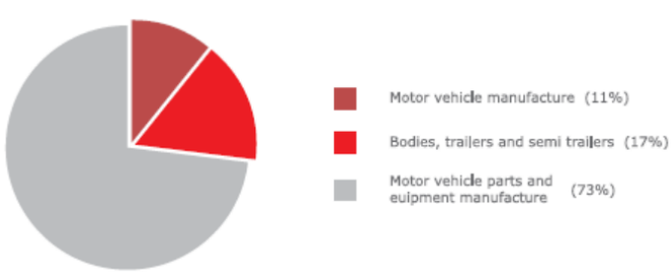
The automotive sector in Croatia represents a very important segment of the total manufacturing base from the perspective of exports and gross value-added. The most developed sub-sectors in Croatia are the manufacturing of automotive components and special-purpose vehicles.

The automotive value chain is currently undergoing changes whereby electronic component suppliers will have a more significant role in the development of the sector globally over the next fifteen years. This reflects the continued rise in electronic parts used both in internal combustion engines and in new electric vehicles. Consequently, there will be a need for alliances and co-developments with partners from other industries. For example, this is seen as an essential strategy to achieve further growth in areas such as battery manufacturing, electric component supply, telecommunications and IT.

In recent years there are emerging companies in the area of electro-mobility, engineering and IT technologies related to automotive that unlike traditional sub-sectors record high growth rates both in revenue and number of employees. Significant growth in both revenue and number of employees have been recorded at foreign owned companies who are not competing on the open market but who have production dedicated exclusively for foreign owners who take over design, marketing and sales activities.

Regarding R&D activity, Croatia's auto component manufacturers don't have a very significant input since Tier 1 companies and OEMs are the innovation drivers in the sector while the majority of Croatian manufacturers are involved in the car manufacturing process at the level of 2nd and 3rd tier suppliers.

Structure of total revenues in automotive industry sector



Source: Croatian Chamber of Commerce

Sector Segmentation

Automotive component parts producers compete on the open market and face tough competition at regional and global levels and are greatly impacted by global developments. Contracts are granted based on merit –quality certificatations obtained and previous performance, but often in a very competitive way (e.g. auctions) which leaves little opportunity to climb up the value-chain. Even though these companies have traditionally been the biggest part of the automotive sector in Croatia, they face a slow but steady decrease in the number of employees in recent years, as other countries in South East Europe have been able to offer lower prices at that lower level of the value-chain (mass-production). These companies are usually well represented through different (activity or region specific) business clusters.

Specialised vehicle producers rely very much on their own creativity and ability to innovate. Their success comes from operational excellence in identifying and successfully filling niche market needs. These companies usually enjoy high degrees of autonomy in their business decision-making and when successful, they can expand rapidly. These companies are usually well represented through different business clusters.

Foreign-owned subsidiary companies that are focused on manufacturing exclusively for the „parent“ company abroad and are not competing on the open market but get orders internally from the owner abroad (Germany, Italy..). Such companies have had remarkable results. These companies tend not to get very much involved in business cluster activities as they focus on execution of „parent“ company directions.

Supply of automotive engineering services is a high value added activity. Resulting from exceptional competency levels within dedicated Croatian faculties, such engineering services are being sold abroad to companies with high quality / cost ratios. This is an expanding sub-sector, which has not been well connected due to the relatively small size and the diversity of the end customer. Some of these enterprises take part in different business clusters.

Innovative and new-tech based auto-related services (e.g. navigation, fleet management, traffic control, energy systems) have the same characteristics in terms of demand and profitability. They offer even greater opportunities in that they are often ground-breaking in nature. This lowers the competitive advantage enjoyed by the more traditional sector players, making this area of activity ripe for new and emerging market entrants. Such companies are not involved in traditional automotive business clusters and are often not perceived as part of the automotive industry in Croatia, even though they reperesent an increasing portion of the new vehicles and thus global automotive revenues.

Produced an average of 500–600 vehicles (up to 900) yearly. Buses were exported to China, Finland, Great Britain, Egypt and other countries. **The company** also produced motorcycles until it went defunct in 2000. Other companies, such as Đuro Đaković have been producing military vehicles, such as M-95 Degman tank and LOV-1 armored vehicle. The company also manufactured Patria AMV vehicles under license.

Restaurant and brewery owner IPIM d.o.o. launched a truck based on the Kia K2700 in 2003. Designed for promotional purposes, the vehicle featured a retro-styled, stainless steel body and a 2.7 liter engine producing 80 horsepower. It retailed for €42,500 and was mainly exported to other European countries.

Electric vehicle (EV) production is another area drawing the attention of a few specialist automakers within Croatia. Croatia produced its first electric city concept car DOK-ING Loox in 2012. The first car was sold to the Zagreb Faculty of Engineering. In 2015, the company produced two electric buses for the city of Koprivnica as part of the project Civitas Dyn@mo. Zagreb-based manufacturer DOK-ING has been developing the Loox, a small three-seater city car which can reportedly accelerate from zero to 100km/h in 7.7 seconds, with a range of over 200km, according to the company's website. DOK-ING also designs specialist vehicles in the areas of de-mining and fire-fighting.

•Another local automaker in the EV segment is supercar manufacturer Rimac Automobili, based in Sveta Nedelja, which has designed the Concept One and is now developing the Concept S.

•Croatian auto production is driven primarily by Crobus - a subsidiary of local automotive giant AutoZubak - which manufactures buses using a Scania drivetrain at a factory in Zagreb. In 2013, Croatian bus manufacturer CROBUS signed a 2.1 billion Croatian kuna deal (€280 million) to produce and export 2,000 buses to Iraq, with the first buses delivered in the same year.

The same year, privately owned Rimac Automobili produced Rimac Concept One, a two-seat high-performance electric sports car. Concept One has been described as the world's first electric supercar becoming the world's fastest accelerating electric automobile until 2015. The car was exported during the same year, and was the first car exported abroad in the country's history. As of 2016, all of the eight Concept Ones manufactured were sold. The company subsequently unveiled the improved Rimac Concept S at the 2015 Geneva Motor Show. The company's subsidiary Greyp Bikes also started mass production and export of its own brand of high performance electric bikes. Greyp dealerships were opened in countries such as United Kingdom, Switzerland, Norway, and Luxembourg. The Rimac group also produces and manufactures engines and other electrical parts for other companies, such as the liquid cool battery pack for Koenigsegg, [11] claimed as the most power-dense battery pack to date. In 2017, they were producing battery systems for Aston Martin. It also produces entire vehicles for other companies, such as the Applus Volar-E for Applus+ IDIADA.

AutoZubak

AutoZubak is one of Croatia's largest auto-related companies. The company is a representative for VW's brands - VW, Audi, Seat, Škoda and Porsche - in Croatia, as well as a distributor of Shell oils and lubricants, and Michelin tyres.

AutoZubak owns Crobus, which manufactures buses at a plant near Zagreb. AutoZubak also operates the Oryx rent-a-car business, roadside assistance and driver training school, as well as a network of showrooms, service centres and parts stores across the country.

AutoZubak has a diversified presence over new and used car sales, bus production (via its Crobus subsidary), servicing and spare parts.

Autozubak has over 35 years' experience of working with VW and Audi in Croatia.

Top Automotive Suppliers in Croatia

The automotive industry in Croatia is represented solely by automotive components manufacturing. Croatian spare parts manufacturers deliver more complex and high value added products (instead of competing in mass production like car assembly) which requires higher technical skills, innovation, flexibility and design.

1. AD Plastik d.d. Solin

- Produces an array of car interior and exterior plastic products
- Around 1000 employees

2.AVL-AST d.o.o. Zagreb

- Produces engine and gearbox software
- Around 80 employees

3. Boxmark Leather d.o.o. Trnovec Bartolovecki

- Produces leather seating
- Around 1500 employees

4. DIV d.o.o. Samobor

- Produces screws
- Around 200 employees

5. Fenor-Nino d.o.o. Nova Raca

- Produces springs
- Around 25 employees

6.P.P.C Buzet d.o.o. Buzet (Cimos group)

- Produces engine parts, circuits, gearbox parts, break parts
- Around 350 employees

7.SAS Strojogradnja d.o.o. Zadar

- Produces specialized machinery for the autoindustry

8.Selk d.d. Kutina

- Processes ceramic filters, resonators, piezo actuators, and multilayer capacitors
- Around 1500 employees

9.Unidal d.o.o. Vinkovci-Lapovci

- Produces parts for gearboxes and various undercarriage bearings
- Around 120 employees

10.Gumara Cavic d.d. Zagreb

- Produces specialized rubber products
- Around 60 employees

11.Metalni Lijev TCG d.o.o. Benkovac

- Produces cast aluminium engine bearings, pumps, wiper bearings, ABS casings...
- Around 270 employees

12.Maziva-Zagreb d.o.o. Zagreb

- Produces grease, lubricants and similar products
- Around 340 employees

13.Tehnomeral Vrbovec

- Produces spare parts
- Around 20 employees

14.Lipik Glas d.d. Lipik

- Produces windshields and other glass parts
- Around 300 employees

15.Eeloda d.o.o. Zagreb

- Produces electromechanical devices, switches, hydro switches...
- Around 60 employees

16.Hittner d.o.o. Bjelovar

- Produces braces, hinges, gears, gearboxes...
- Around 70 employees

17.Ivanal d.o.o. Lozovac

- Produces aluminium parts for anti-vibration support
- Around 100 employees

18.Feroimpek automobilska industrija d.o.o. Bregana

- Produces rings and casings for bearings
- Around 220 employees

19.Koncar - Alati d.d.

- Produces tools for tin processing and casts for pressure moulding
- Around 80 employees

20.TUP d.d. Dubrovnik

- Produces brushes for motor vehicles: metal, metal/plastic, graphitic; and metal/graphitic products; brushes for electromotors and alternators

21.ESCO d.o.o. Bjelovar

- Produces springs
- 96 employees

22.MUNJA d.d. Zagreb

- Produces batteries
- Around 100 employees

23. Harburgfreudenberger d.o.o. Belišce

- An industry leader in the hydraulic rubber press machinery production
- Produces hydraulic presses for the production of tires
- Around 400 employees

24. BSI d.o.o. Zadar

- Does counceling, planning, calculation for welding in the automotive industry
- Makes 3D projects in CAD programs
- 6 employees

25. HSTEC d.d. Zadar

- Designs and produces high-speed precision electromotors
- Around 40 employees

26. Starco GS

- Manufacturing over 1 million wheels each year and serving a broad range of OEM and aftermarket customers
- Employs 200 people
- Produces springs

Ad Plastik

AD Plastik d.d. is a company engaged in the manufacture of plastic products, mainly for the automotive industry. Its car products are divided into two groups: interior products, comprised of instrument boards, roofs, door paneling, panel pockets, thermally formed carpets, central console, backseat shelf, column paneling, steering column paneling, window handles, door handles, arm rests, hand brake paneling, ashtrays, ceiling light fixtures, and roof handles, and exterior products, comprised of front and back painted bumpers, fog lights fixtures and covers, decorative profiles, front air intake, fender lining and fuel tank lining.

The Company also offers other plastic products, including household products, packaging materials, injection and extruded products, products for the electric industry, seats for stadiums and garden products. It has three subsidiaries, in Russia, Slovenia and Romania.

Basic financial indicators 2014 vs. 2015. (1EUR = 7,5 HRK)

AD PLASTIK d.d.	2014.		2015.	
	in 000 HRK	in 000 EUR	in 000 HRK	in 000 EUR
Revenues	681.090	90.812	836.087	111.478
Net profit	12.724	1.696	32.550	4.340
No. of employees	912		1.013	

Source: Poslovna Hrvatska

Its customers include Revoz Novo Mesto, Volkswagen, BMW, Renault, Peugeot, Citroen, Ford, Opel, SM, and many others.

- 1000 employees
- More than 90% of all production is exported
- Own Product development and design
- Factories in Russia, Romania and Slovenia
- Certificates: ISO 9001, ISO TS 16949, ISO 14001, Q1

AVL – AST

AVL is the world's largest privately owned company for development, simulation and testing technology of powertrains (combustion engines, transmissions, hybrids, electric drive, batteries and software) for passenger cars, trucks and large engines.

Basic financial indicators 2014 vs. 2015. (1EUR = 7,5 HRK)

HSTEC d.d.	2014.		2015.	
	in 000 HRK	in 000 EUR	in 000 HRK	in 000 EUR
Revenues	41.075	5.476	54.372	7.249
Net profit	3.334	444,53	3.803	507,1
No. of employees	65		72	

Source: Poslovna Hrvatska

Croatia is the center for software development (simulation software and automation software for test beds) as well as an active partner in projects for automotive OEM-s (Daimler, Audi, PSA, Renault, Suzuki, Nissan, Toyota...) contributing in the area of computer simulations of complex physical processes in engines and powertrains.

- Founded in 1996
- 80 employees, mostly high qualified engineers
- 100% of all products is exported
- Turnover is 3.1 million EUR (2008)
- Software development and advanced numerical simulations (FEM, MBS, CFD)

DIV

DIV group has more than 120 years of tradition. Currently it is one of the leading screw production factories in Europe. It is present in six countries, and has more than 750 employees.

Company headquarters are in Samobor, along with a production facility specialized in hot and cold forging methods. Its largest production facility is in Knin.

The company is constantly aiming to grow and utilize newest technologies.

HSTE

A company founded in 1997 develops, designs, and produces precision high-speed electro-motors. It develops various high precision techniques for engineering, design and automatization of specialized auto industry production machinery.

Since founding the company HSTEC has developed a wide range of motor spindles and electric drives for direct application in machining centers and machine tools. A flexible team of highly skilled mechanical and electrical engineers with great working experience in development, design and production of special machine tools, and implementation of industrial robots offers optimum solutions in industrial automation. HSTEC is an export oriented company on EU markets such as: Germany, Austria, Slovenia and USA market.

HSTEC is a licensed user of AAB robotic systems.

Rimac Automobili Ltd.

Rimac Automobili was founded with the vision to create the sportscar of the 21st century. It's a hardcore technology company with the mission to re-shape different industries and bring sportscars to the next level. Company develops and produces a full range of EV components and provides support from the project start until serial production. In the car industry world Rimac company is recognized by the fastest racing car on electric power – Concept One

Basic financial indicators 2014 vs. 2015. (1EUR = 7,5 HRK)

Rimac automobili Ltd.	2014.		2015.	
	in 000 HRK	in 000 EUR	in 000 HRK	in 000 EUR
Revenues	10.566	1.408	31.340	4.178
Net profit	621	82,8	1.753	233,7
No. of employees	33		80	

Source: Poslovna Hrvatska

ELODA Ltd.

ELODA d.o.o. is Croatian leading manufacturer of automotive electrical parts such as various switches and indicators. ELODA was founded in 1983. as a small family workshop manufacturing hydraulic brake light switches. Dynamic growth started in early nineties with special impact on following aspects:

- Implementation of quality management system, process planning and promoting development capabilities
- Improvement of organizational structure
- Expansion of product range
- Assurance of resources
- Improvement of electronic data processing
- Growing contacts with renown European manufacturers in automotive field

Market expansion:

- Increase of customers
- Supplying to OEM
- Development and supply of hydraulic brake light switches for FTE Automotive
- Development and supply of various kind of switches and indicators for Robert BOSCH
- Development and supply of pressure switches for WABCO Europe
- Development and supply of brake light switches for CONTINENTAL Teves

Basic financial indicators 2014 vs. 2015. (1EUR = 7,5 HRK)

Source: Poslovna Hrvatska Eloda Ltd.	2014.		2015.	
	in 000 HRK	in 000 EUR	in 000 HRK	in 000 EUR
Revenues	11.094	1.479	13.730	1.830
Net profit	73	9,73	277	36,93
No. of employees	48		48	

Source: Poslovna Hrvatska

Lth Metalni Lijev Ltd.

Company in Croatia was founded in 1980 and joined the LTH Castings Group in 1999. After resuming the production in the early 90s, the company focus was predominantly raw part production. Today, using the advantages of a traditional industrial environment and the Group's synergies LTH Metal cast offers a wide range of machining and is the LTH Castings's group most “lean” site. Using fully automated casting machines, machining centres and dedicated machines the facility typically manufactures aluminium anti-vibration and breaking system components as well as water and vacuum pump housings for the automotive industry. Using lean structures, the site can is particularly cost efficient with high volume production.

Basic financial indicators 2014 vs. 2015. (1EUR = 7,5 HRK)

LTH Metalni lijev Ltd.	2014.		2015.	
	in 000 HRK	in 000 EUR	in 000 HRK	in 000 EUR
Revenues	211.125	28.150	272.359	36.314
Net profit	31.801	4.240	45.484	6.064
No. of employees	349		384	

Source: Poslovna Hrvatska

Feromimpex Automobilska Tehnika Ltd.

Feroimpex company was established in 1976, based on the foundations of a small locksmith workshop, producing screws and springs. Over the years a small shop grew into a workshop manufacturing machine parts for textile industry. Today, Feroimpex is a modern company, operating on Croatian and European markets. With well-established team of experts and more than 280 employees, it achieves top results in a demanding production of bearings, parts for automobile and railway industry, as in tool manufacture and wind plant bearing parts. During the last couple of years it has entered the very top of Croatian economy. Its manufacturing facilities are spread on the area of about 10 000 m2, which is the result of the last investment cycle.

Basic financial indicators 2014 vs. 2015. (1EUR = 7,5 HRK)

Feroimpex Automobilska Tehnika Ltd.	2014.		2015.	
	in 000 HRK	in 000 EUR	in 000 HRK	in 000 EUR
Revenues	231.961	30.928	287.021	38.269
Net profit	16.666	2.222	14.561	1.941
No. of employees	285		340	

Source: Poslovna Hrvatska

Foreign Players in Croatia

Owing to the recent trend that saw the biggest automotive producers in the world investing in automotive vehicle production in Central and Eastern Europe, Croatia is witnessing a growing interest of big multinationals to invest on its territory. The Croatian Government has recognized this trend and has started many initiatives in order to support it.

Epcos

The biggest European and the second biggest world developer and producer of passive electronic. Their Croatian company SELK is a dominant producer of Piezo Actors using nanotechnology.

- 72 mil. EUR investment
- 1.400 employees
- 16,3 mil. EUR/year turnover

What attracted EPCOS to invest:

- Quality of production and production cycle organization
- Quality of workforce
- Modern machinery (7,5 mil EUR investment by SELK)

Boxmark Leather

Austrian company, worldwide leading supplier of high quality chrome free surface leather and finished leather components.

- 50 mil. EUR investment
- 3.000 employees
- Clients: Audi, Porsche,..

Basic financial indicators 2014 vs. 2015. (1EUR = 7,5 HRK)

Boxmark Leather Ltd.	2014.		2015.	
	in 000 HRK	in 000 EUR	in 000 HRK	in 000 EUR
Revenues	2.592.546	345.672	2.695.530	359.404
Net profit	-22.145	-2.952	-280.188	-37.358
No. of employees	3.426		3.808	

Source: Poslovna Hrvatska

Cimos - P.P.C. Buzet

P.P.C. Buzet d.o.o. is an integral part of the business system CIMOS d.d. Koper. Founded in 1969, it exists under the name of CIMOS since 1972. The basic activity of the company is research, development and manufacture of car parts for first assembly of known car manufacturers.

The company's production program comprises the manufacture of engine parts and assemblies, elements from braking systems, body parts and gear parts. In the manufacturing process of the products, P.P.C. Buzet has the important role of as global development supplier. Focus is in the field of total life cycle of products, from planning, development, industrialization and manufacturing processes.

- 650 employees
- Own product development and design
- Certificates: ISO/TS 16949;2002, ISO 14001, OHSAS 18001
- Clients: PSA, HTT, Ford, BMW

Tradition in automotive industry is a guaranty of high quality products, competent workforce and a continuous innovation. High standards of quality are also visible in delivery deadlines and competitive prices.

Every day more than 150,000 different items are shipped from P. P. C. Buzet to most known manufacturers in car industry in France, Germany, Italy, England, USA, Romania, Austria and India.

Basic financial indicators 2014 vs. 2015. (1EUR = 7,5 HRK)

CIMOS – P.P.C. Buzet Ltd.	2014.		2015.	
	in 000 HRK	in 000 EUR	in 000 HRK	in 000 EUR
Revenues	499.774	66.636	533.293	71.105
Net profit	-31.531	-4.204	21.405	2.854
No. of employees	1.242		1.290	

Source: Poslovna Hrvatska

Kostel Promet

Kostel Promet d.o.o. was established in 2001 and is engaged in sewing seating systems for vehicle interiors, especially for the needs of the automotive industry. It started the business by producing headrests in cooperation with its business partner Johnson Controls NTU Slovenj Gradec, Slovenia. The first sewing services the company provided were for the Renault Clio range.,

Today, Kostel Promet d.o.o. works on ranges for major car brands such as Volkswagen, Mercedes Benz, BMW, Skoda, Ford, Volvo, Toyota and Land Rover with daily production of 13 000 units.

- 100 employees

Basic financial indicators 2014 vs. 2015. (1EUR = 7,5 HRK)

Kostel Promet Ltd.	2014.		2015.	
	in 000 HRK	in 000 EUR	in 000 HRK	in 000 EUR
Revenues	84.201	11.226	110.625	14.750
Net profit	613	81,73	387	51,6
No. of employees	290		397	

Source: Poslovna Hrvatska

Alstom

A worldwide leader in equipment and services for power generation and rail transport. In Croatia, the company works on design, production and assembling of steam turbines.

- 680 employees
- Design and product development in Karlovac
- Certificates: QS-9000, ISO-17025, ISO/TS 16949

Eurozappa

talian company, one of the world's largest companies manufacturing hand tools and components for machinery and automotive industry. TANG, their company in Croatia, is involved in forging products and tools, machine and vehicle parts and components.

- 1,5 million EUR Investment
- 100 employees

Saınt Jean Industries

A worldwide established innovative corporation, specialized in the development and manufacturing of high integrity/critical safety aluminum components and sub-assemblies for the automotive, truck, motorcycle and industrial markets.

- Certificates: QS-9000, ISO-17025, ISO/TS 16949, ISO 9001
- Clients: leading European and world's brands: Peugeot, Citroen, Volkswagen, GM, Volvo, Hyundai.
- 118 employees

Yazaki

A global Japanese automotive corporation, manufacturer of Electrical/ Electronic Distribution System (EEDS) with 87 manufacturing operations in 38 countries on six continents. Designs and develops an innovative range of products for automotive industry. In Croatia, the company employs top skill professionals engaged in research and development of electronic parts for vehicles.

- Top design & prototype center in Zagreb
- Certificates: QS-9000, ISO-17025, ISO/TS 16949, ISO 9001

Source: Company Data, mti.hu, autopro.hu

- Clients: DaimlerChrysler, GM, Honda, Toyota and others

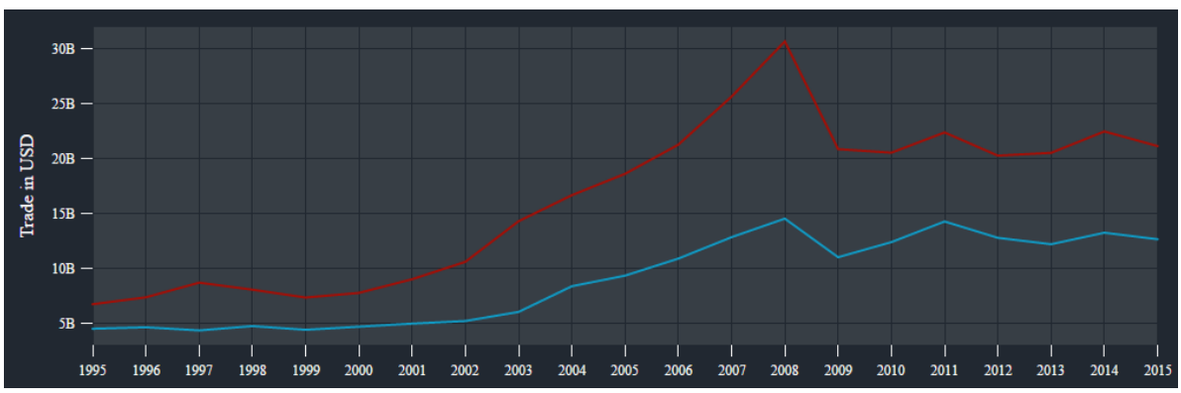
Starco

STARCO has manufacturing entities in the UK, Croatia, Sri Lanka and a joint venture in China. In 2015, STARCO moved its specialised wheel manufacturing from a small factory in Switzerland, to its ISO 9001 and 14001 certified Croatian manufacturing centre in Beli Manastir. In the continued quest for improved efficiency, enhanced manufacturing quality and better customer service, STARCO Europe has taken the decision to transfer the manufacturing of STARCO GS wheel range to the company's award winning steel wheel factory in Beli Manastir, Croatia.

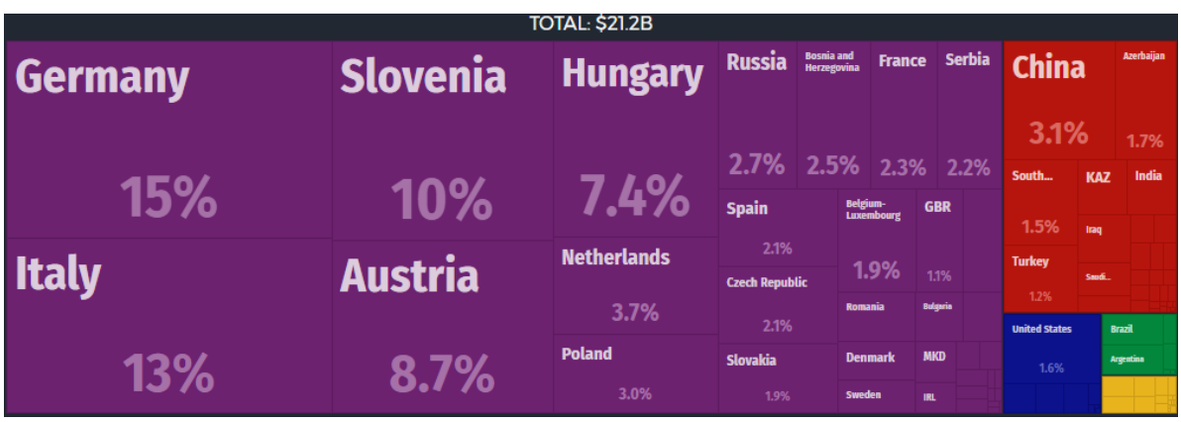
In Croatia, STARCO employs 200 people, manufacturing over 1 million wheels each year and serving a broad range of OEM and aftermarket customers directly from Croatia or through the company's extensive European sales and distribution network. The factory in Beli Manastir is ISO 9001 certified and consistently achieves excellent quality ratings by many leading agricultural and industrial OEM customers.

Foreign Trade

Croatia is the 76th largest export economy in the world and the 37th most complex economy according to the Economic Complexity Index (ECI). In 2015, Croatia exported $12.7B and imported $21.2B, resulting in a negative trade balance of $8.49B. In 2015 the GDP of Croatia was $48.7B and its GDP per capita was $22.5k.
As compared to their trade balance in 1995 when they still had a negative trade balance of $2.23B in net imports.



The top import origins are Germany ($3.13B), Italy ($2.75B), Slovenia ($2.15B), Austria ($1.84B) and Hungary ($1.57B).

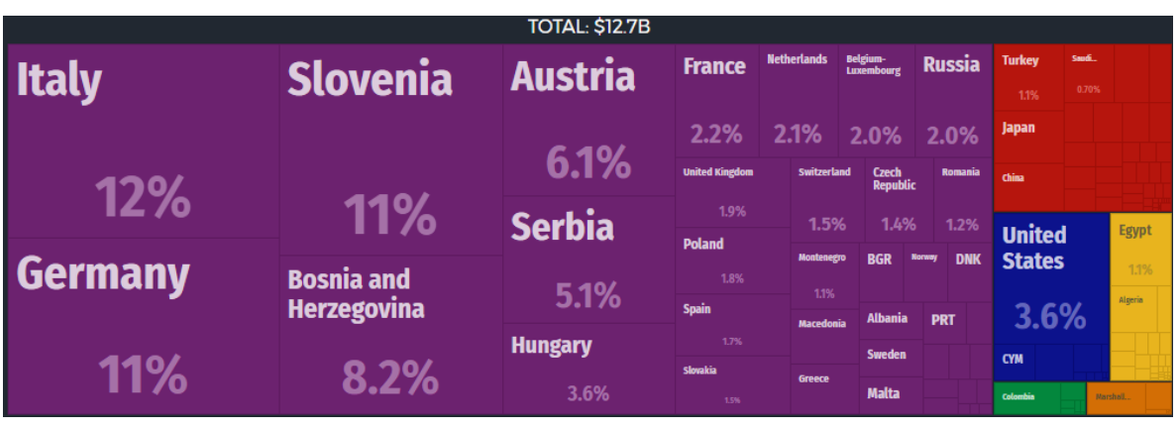


The top exports of Croatia are Refined Petroleum ($771M), Packaged Medicaments ($480M), Electricity ($363M), Sawn Wood ($356M) and Electrical Transformers ($297M), using the 1992 revision of the HS (Harmonized System) classification. Its top imports are Crude Petroleum ($1.1B), Refined Petroleum ($778M), Cars ($704M), Electricity ($651M) and Packaged Medicaments ($574M).

Croatia Imports of Vehicles other than railway, tramway was US$1.57 Billion during 2016, according to the United Nations COMTRADE database on international trade. Import countries can be seen in below table.

Country	Value
Germany	$647.79M
Slovenia	$250.94M
France	$118.01M
Hungary	$113.41M
Italy	$76.86M
Czech Republic	$53.70M
Austria	$49.25M
Belgium	$45.67M
Netherlands	$27.37M
Turkey	$25.17M

The top export destinations of Croatia are Italy ($1.55B), Germany ($1.41B), Slovenia ($1.39B), Bosnia and Herzegovina ($1.04B) and Austria ($775M).



Country	Value
Germany	$136.47M
Slovenia	$114.20M
France	$37.98M
Italy	$26.36M
Belgium	$23.49M
Hong Kong	$23.34M
Bosnia And Herzegovina	$18.58M
Turkey	$15.48M
Austria	$14.71M
Serbia	$13.36M

Sources: www.tradingseconomics.com Federal Statistics Service

Croatia Exports of Vehicles other than railway, tramway was US$499.64 Million during 2016, according to the United Nations COMTRADE database on international trade. At least 90% of the Croatian automotive sector production is exported yearly to Germany, Austria, Italy, France and other European countries for clients like Volkswagen Group, Ford, Opel, BMW and Renault as seen in below table. Croatia exports mainly electronic components, safety systems, braking systems, seats and steering wheels.

Direct contribution from the automotive sector to exports amounts to €167 million while indirect contribution estimated at €450 million.

FDI in Figures

Despite continuing challenges, Croatia welcomes foreign investment. The government is willing to meet at senior levels with interested investors and to assist in resolving problems. Strengths in the Croatian economy include low inflation, a stable exchange rate, developed infrastructure, and membership in the European Union (EU). Historically, the most promising sectors for investment in Croatia have been tourism, telecommunications, pharmaceuticals, and banking.

After experiencing a period of growth in 2005-2008, foreign direct investment inflows to Croatia collapsed as an effect of the global economic crisis. The tourism sector was particularly affected. Since then, FDI flows have been struggling to return to their pre-crisis levels. In 2015 they went down again to USD 174 million, after having shown signs of recovery in 2014, their highest level since 2009.

In addition to an unfavourable economic context, Croatia suffers from a poor image linked to corruption, high taxes and an inefficient judicial system, though reforms have been attempted in recent years. According to the World Economic Forum (WEF) 2017, the country ranks 77th on the Global Competitiveness Index. Still, the country has high-quality infrastructure and high touristic potential. The country ranks 43rd out of 190 economies in the World Bank's 2017 Doing Business report, three position down since the previous assessment.

In general terms, in Croatia automotive industry is very much investment-ready. This needs to be addressed through government support in attracting the sort of investment that will push the Croatian automotive sector further up the value chain - with more Tier 1 enterprises and, perhaps, an Original Equipment Manufacturer (OEM) locating in Croatia.

There is a growing auto parts supply chain developing within Croatia. In November 2015, Tyrepress reported that Swiss firm Starco GS, a subsidiary of Danish company Starco, had shifted its wheel production operations from Sübingen, Switzerland to Beli Manastir in Croatia. According to Starco, the decision will allow the GS range of products to reach a wider market.

A 28-year old entrepreneur from Croatia, Mate Rimac, has been included in Forbes' 2017 European edition of its 30 Under 30 list. The founder of Rimac Automobili, a developer and producer of high-performance electric cars, was selected in the category of industry Rimac Automobili, based in Sveta Nedelja - a town in the Zagreb County, was founded in 2009 with the vision to create the sports car of the 21st century.

Croatian plastic products manufacturer AD Plastik signed a sales and purchase deal with France's Faurecia Automotive Holdings for the 40% share AD Plastik holds in trading company Faurecia ADP Holding. Faurecia ADP Holding is a 100% owner of Faurecia ADP based in Luga, Russia. AD Plastik is selling a total of 278,136 shares in Faurecia ADP Holding to Faurecia Automotive Holdings. The price of the transaction was not disclosed. Via the transaction Faurecia Automotive Holdings is now the sole owner of both Faurecia ADP Holding and Faurecia ADP.

In October 2016, Croatian manufacturer AD Plastik announced that it had signed a EUR2.5mn deal with German carmaker VW to supply door handles for the Golf Variant, Golf Sportsvan, Touran and Tigua models for a minimum four year period.

Future Expectations & Trends

The production of vehicles and auto parts remains a niche activity, but there may be scope for growth over the medium term, given Croatia's low labour costs and EU membership. Croatian auto component suppliers should continue to focus on niche segments, where they can produce high quality output satisfying customer needs. Mass production of higher value added products and manufacturing of niche products in low volumes are alternative models for success.

There is also a growing auto parts supply chain developing within Croatia, with further suppliers likely to enter the country over the forecast period, given the country's low labour costs, EU membership and proximity to key export markets.

The automotive components industry is highly export oriented (especially in countries which don't have Tier 1 or OEM companies) and dependent on access to capital. Therefore the areas of accessing credit and trading across borders are the most important for the future development of the automotive industry in Croatia.

Over the long term, electric vehicle production could be a potential area for development. Two Croatian companies (DOK-ING and Rimac Automobili) have been developing concept electric vehicles in recent years.

The start of bus production by Crobus could develop a local auto supply chain.

The most popular cars fall within the cheaper compact and sub-compact segments, which limits the profitability of Croatian operations to foreign carmakers.

Low levels of per capita income and high levels of debt and unemployment remain constraints on consumer spending, reducing demand for new vehicles.

Small local market mean multinational distributors cannot exploit economies of scale.

It is expected that VW's dominance of the Croatian new car sales market to continue into 2017 and beyond. This bodes well for a continued strong performance by its local dealership partner AutoZubak. The company's Oryx rent-a-car business should also continue to benefit from strong inbound tourism flows to Croatia over the forecast period.

Over the medium term, consumers look likely to continue to upsize their vehicles by moving more towards larger vehicles, such as SUVs, as incomes rise.

The continued strong performance of volume brands in Croatia suggests that the spending power of middle and lower income groups is rising as well.

Used cars remain more popular than new cars within Croatia at the present time, which will have a negative impact on average age of cars on roads.

Car rental market will continue to support car sales with Croatia likely to benefit from increased tourism flows, given ongoing fears about the security situation within many rival tourist destinations in the Middle East.

LCV sales will remain robust amid a recovering macroeconomic backdrop, with these vehicles continuing to prove popular for both business and personal use by Croatian consumers.

HCV sales should benefit from a positive outlook for the key Freight Transport sector, although reduced spending on infrastructure projects by the government may counter-balance this.

Investment Incentives in Automotive Sector

Attitude toward Foreign Direct Investment

Croatia is open to foreign investment; the Croatian government continues to prioritize attracting foreign investors. All investors, both foreign and domestic, are guaranteed equal treatment by law. There are no laws or practices that discriminate against U.S. investors, however, bureaucratic and political barriers remain. One of the greatest barriers is the country's inefficient and sometimes unpredictable legal system. The backlog of unresolved judicial cases peaked at 1.6 million in 2004 and has slowly been reduced to under 600,000 pending cases. Because of this large overhang, even the simplest matters can take years to resolve. Investors agree that an unpredictable regulatory framework, lack of transparency in administrative procedures, and lack of structural reforms weigh heavily upon the investment climate. Corporate income tax legislation and a Strategic Investment Act, which came into force during the last government (2011-2015), were passed with the intention to help investors streamline large projects.

Why You Should Choose to Invest in Croatia

Strong Points

Croatia has a number of strong points:

- An advantageous geographical location along the Adriatic Sea;
- A skilled multilingual workforce;
- Good quality infrastructures: Croatia continues to invest heavily in transportation, telecommunications and energy infrastructures.

Weak Points

Croatia still has to face a number of challenges in order to become competitive:

- the country suffers from certain structural weaknesses amongst which are the current account imbalance, a significant private foreign debt and a trade deficit;
- the country also has an image problem. It is more known for tourism than as and investment opportunity. Croatia is also suffering from a backlash of years of war; and
- the legal and administrative systems are slow and could use some improvement.

Government Measures to Motivate or Restrict FDI

Croatia is open to foreign investment. The government has committed itself to increasing foreign investment and has taken measures to improve the investment climate in the country, for example, depending on the type of activity (manufacturing, technology centers, supporting services), through tax reductions and employment incentives. Amongst the main measures established by the government, we can name in particular:

- Equal treatment of nationals and foreigners;
- Low company administrative fees; and
- Laws protecting intellectual property.

Over 15.000 foreign companies have chosen Croatia.

- Incentives up to 60% of investment costs
- Tax relief for reinvested earnings
- Foreign companies continuously expand their business operation in Croatia

Attractive tax incentives, double taxation avoidance agreements with numerous countries and 0% customs within the EU.

- 0% profit tax up to 10 years
- No customs for all EU member states
- Double taxation avoidance agreements with 55 countries

All measures are established to create an attractive framework for investors and to make Croatia a valid foreign investment recipient.

Source: HCSO Hungarian Central Statistics Office

Reasons to invest in Automotive Industry in Croatia:

To attract large international automotive suppliers Croatia relies on the huge concentration of motor vehicle manufacturers within 600 km from Zagreb, such as in Slovenia, Serbia, Hungary, Slovakia, Germany, Austria and Italy. Another benefit are the low shipping costs for manufacturers in Asia and the Middle East.

- Wide range of automotive suppliers from Tier1 to Tier3 with development potential and free capacity available.
- Small supplier structure allows flexibility and fast reaction to your needs. Use local and regional expertise from Croatian manufacturers.
- Short distance to markets and car production plants in Western and Eastern Europe
- Transportation and storage costs reduction (potential in logistics)
- Possibility of just in time delivery thanks to modern transport infrastructure
- Croatia's proximity to strong auto parts manufacturers in the region (Austria, Italy, Slovakia…)
- Tremendous shipping costs savings possible, especially for Asian and Middle east manufacturers
- Motivated, qualified and productive workforce at competitive costs
- Quality that meets European standards:
- Local companies achieved complete integration into the international chain of part suppliers for world well-known car producers
- Certificates + export figures (growth and ratio) prove quality and growth potential
- Advantage of the Free Trade Agreement between Croatia and EU/CEFFA
- Possibility to expand in Croatian traditional markets (ex-Yugoslavian countries, CEFTA, Russia).

Attractive Investment Incentives

Incentives	
Tax incentives	0% - 10% profit tax rate
Employment incentives	€3,000 – €18,000 per employee
Incentives for Innovation and Development	20% of the eligible cost of buying the equipment/machinery (up to € 0.5 million)
Incentives for Initial and Capital Expenses of the Investment Project	Cash grant in amount of 20% of the eligible costs (up to € 1.0 million)

The country offers a wide range of incentives: direct support for creating new jobs of up to €18,000 per each new job created; support of up to €1 million for capital expenditure; support of up to €0.5 million grants for R&D activities and tax holidays for periods up to 10 years or until the maximum aid intensity of incentives is reached. The Strategic Investments Projects Act is also critical as it enables faster implementation of investment projects declared of national interest.

- matching up to 60% of the investment costs
- giving up to € 18.000 per every newly created workplace
- foreseeing up to € 1 million worth-cash grants for capital costs of the investment
- providing profit tax holidays for new investments · access to the EU structural funds

Incentive measures for investment projects

Incentive measures for investment projects in the Republic of Croatia are regulated by the Act on Investment Promotion (OG, No. 102/15) and pertain to investment projects in:

- manufacturing and processing activities,
- development and innovation activities,
- business support activities,
- high added value services.

Incentive measures can be used by enterprises registered in the Republic of Croatia investing in fixed assets the minimum amount of:

- € 50,000 together with creating at least 3 new jobs for microenterprises
- € 150,000 together with creating at least 5 new jobs for small, medium and large enterprises.

Classification of enterprises is done in accordance with the GBER.

The amount of aid shall be calculated as a percentage of investment value, which is determined on the basis of eligible investment cost. Eligible investment costs are:

- tangible (value of land/buildings and plant/machinery) and intangible assets (patent rights, licences, know-how),or
- gross wage calculated over a period of two years

The minimum period for maintaining the investment and newly created jobs linked to an investment is five years for large enterprises, and three years for small and medium-sized enterprises, but no less than the period of use of the incentive measures.

Enterprise catagory*	Number of employees and	Annual turnover	or	Annual balance sheet
Large	≥ 250	> 50 million €	or	> 43 million €
Medium	< 250	≤ 50 million €	or	≤ 43 million €
Small	< 50	≤ 10 million €	or	≤ 10 million €
Micro	< 10	≤ 2 million €	or	≤ 2 million €

* when classifying enterprises one should also consider affiliated enterprises

Profit tax incentives

Investment amount (€ mil)	Number of newly employed	Period (years)	Period of employment (years)	Profit tax rate
<1	5 (3 for micro)	10 (5 for micro)	3 (SME's), 5 (large)	10%
1-3	10	10	3 (SME's), 5 (large)	5%
>3	15	10	3 (SME's), 5 (large)	0%

Employment Incentives

Country Unemployment Rate	Incentive Ratein Relation to Eligible Costs of Opening New Workplaces*	Increase for Technology Innovation and Development Centres	Increase for Business Support Strategic Activities and High Added Value Investment Activities	Incentives for innovation and development activities
<10%	10% (max. 3,000 €) for employing groups of persons covered by Article 9. paragraph 3. of Regulation*	+50% (1,500 €)	+25% (750 €)	20% of the eligible cost of buying the equipment/machinery (up to € 0.5 million)All the equipment/machinery has to be high technology
10-20%	20% (max. 6,000 €) for employing groups of persons covered by Article 9. paragraph 3. of Regulation*	+50% (3,000 €)	+25% (1,500 €)	
>20%	30% (max. 9,000 €) for employing groups of persons covered by Article 9. paragraph 3. of Regulation*	+50% (4,500 €)	+25% (2,250 €)	

*Please note that the Regulation on Investment Promotion (NN 31/16) prescribe in more detail employment incentives.

Employment Aid

Aid for recruiting unemployed persons and employed persons who are at risk of losing their jobs, may be granted to for-profit enterprise.

Enterprise/Employer in terms of allocation of employment aid, is any entity engaged in an economic activity, irrespective of its legal form (in accordance with Article 1 of Annex 1 of Commission Regulation (EU) no. 651/2014 of 17 June 2014 (hereinafter: the Regulation)), i.e.

Any legal or natural person who by performing an economic activity participates in trade of goods and services, regardless of its form and purpose (in accordance with Article 2 of Act on State Aid (OG, 47/14)).

Non-profit organizations engaged in economic activity may also fall under the definition of an employer if they can prove that together with the non-economic activities they have also performed economic activities. The aid may be granted for the employment of a defined target group for performing jobs within the economic activities of the employer.

Enterprises/Employers are classified in line with the Article 2 of Annex 1 of Regulation, according to the indicators that were identified on the last day of the year preceding the fiscal year for which the financial statement was drawn up.

Employment aid may be granted to:

- Employers, where aided employment will lead to a net increase in the number of employees in relation to the average number of employees in the last 12 months. The average number of employees represents the calculation of changes in the number of employees for each month in the past 12 months,
- Employers, who did not have increased employment within the last 12 months, but have justifiably vacant positions which they will fill with the aided employment. Justifiable vacancies should be the result of voluntary departure, disability, retirement, voluntary reduction of working time or legal departure for breach of duty, and not a result of redundancy,
- Employers, who have no employees or who exist for less than 12 months for one worker on the condition that they had one employee for the last 6 months.

Number of persons for whom the employer can get aid may not exceed 50% of the average number of employees in the past 12 months.

ENTERPRISE CATEGORY	STAFF HEADCOUNT*		ANNUAL TURNOVER*		ANNUAL BALANCE SHEET TOTAL*
Large	> 250	and	> 50 million €	or	> 43 million €
Medium	< 250		≤ 50 million €		≤ 43 million €
Small	< 50		≤ 10 million €		≤ 10 million €
Micro	< 10		≤ 2 million €		≤ 2 million €

As large enterprises/employers are also classified: banks, savings banks, building societies, electronic money institutions, insurance companies, leasing companies, investment fund management companies, pension funds and pension insurance companies.

* When calculating staff headcount and financial amounts one has to take into account also partner enterprises (proportional to the percentage interest in the capital or voting rights (whichever is greater) and linked enterprises (100%) as prescribed in Annex I of Commission Regulation (EU) N°651/2014 of 17 June 2014

The intensity of employment aid may not exceed:

- 50% of the annual cost of gross wages for workers without occupation and workers working in occupation earned in programs of secondary education,
- 30% of the annual cost of gross wages for workers with occupation earned in programs of higher education for small and medium sized enterprises/employers,
- 30% of the annual cost of the gross wage for all groups of people who are employed with the aid for a large enterprise /employer,
- 75% of the annual cost of the gross salary for all groups of enterprises/employers for the aided employment of people with disabilities.

Eligible costs are the costs of worker's gross salary for a maximum period of 12 months following recruitment. Aid intensity or subsidy is calculated according to the amounts provided for monthly gross salary for a maximum of 12 months. The initial amount of the subsidy is determined by the amount of the minimum wage for persons with no occupation and with primary school while for other levels of education the basic rate is increased by a certain percentage in accordance with the average wages for that level of education.

Individuals employed through the measures of employment aid must represent a net increase in the number of employees of the employer, compared with the average number of employees in the last 12 months before the date of application. This increase in the number of jobs must be maintained for a period of 12 months.

Aid for employment may not be granted:

To employers whose funds for the work and wages of workers are provided from the state budget and/or the state budget under special contracts with the state and public administration (such as privately owned kindergartens, family care homes for elderly and disabled people, contracted health clinics, etc.), regardless of the ownership status,

- For the employment of the owner, co-owner, founder, board member, director, the office manager or the person whom the employer must employ to fulfil the legal requirements (professionals, managers, design engineers, etc.),
- To family farms that are not in the profit or income tax system,
- To employers who have no employed workers,
- To employers who, in the last six months, have reached a decision/decisions to terminate employment contract due to business reasons, regardless of the position for which they seek aid,
- To employers who have outstanding obligations according to the Certificate of Tax Administration with the exception of employers who have the Decision of the Ministry of Finance's Tax Administration regarding the payment of arrears in instalments,
- For workers that the employer/applicant for support would assign to work for another employer,
- To companies and crafts owned /founded by legal persons which had business conditioned layoffs in the last 6 months,
- To companies and crafts owned and/or founded by legal persons, for the employment of unemployed persons who have previously worked in other companies and crafts of their owners and/or founders who seeks support,
- To employers who do not have the financial records for the previous business year.

Crafts and independent activities with no employees can use aid for employment or vocational training for work without employment for one person provided that the owner of the craft is registered for compulsory pension and health insurance as a craft. This exemption does not apply to independent crafts and activities which are beneficiaries of the aid for self-employment and the contractual obligation has not yet expired.

Employers, who are applicants for a grant for the employment of persons who had their professional training at another employer, need to advertise need for the worker. An

employment contract with the co-financed person must be concluded on full-time basis.

Workers for whom the contractual obligations under the contract of granting employment aid based on employment aid measures from 2015 is ongoing are not included in the calculation of average employment. Employers cannot use aid for employment for those persons whose employment was subsidized in 2015.

For investment in development and innovation activities, a non-repayable grant shall be approved for the purchase of plant/machinery amounting to 20% of the actual eligible costs for purchasing plant/machinery, in the maximum amount of EUR 500,000 in equivalent HRK value, provided that the purchased plant/machinery represents high technology equipment.

Country Unemployment Rate	Incentives for Capital Expenses
10-20%	Cash grant in amount of 10% of the eligible costs of investments for: • construction of the new factory, production facility or tourist facility, • buying of new machines, i.e. production equipment, (max amount up to 0.5 million EUR with the condition that the part of investment in the machines / equipment equals at least 40% of the investment and that at least 50% of those machines/equipment are of high technology)
>20%	Cash grant in amount of 20% of the eligible costs of investments for: • construction of the new factory, production facility or tourist facility, • buying of new machines, i.e. production equipment, (max amount up to 1 million EUR with the condition that the part of investment in the machines / equipment equals at least 40% of the investment and that at least 50% of those machines/equipment are of high technology)

Incentive measures for labour-intensive investment projects

Number of newly created jobs	Increase of Support for creating new jobs
100 and higher	25%
300 and higher	50%
500 and higher	100%

Investment incentives for the investment in the minimum amount equivalent to € 13,000,000 provided that a minimum of 10 new University degree level jobs related to the investment project are created.

Incentives to Maintain the Current Business Activity	Incentives for Investment	Incentives Half and Half	Grace to Pay Tax Liabilities
through co-financing up to the differences in tax liabilities and liabilities arising from contributions determined in accordance with the regulations that were in force at the time of filing the application for approval of the status of aid beneficiary and tax liabilities and liabilities arising from contributions in accordance with the regulations in force at the time of calculation of those commitments, for a period of 10 years from the beginning of investment	through co-financing of the part of the tax liabilities to the state other than value added tax, or part of the amount of the obligatory contributions in the period to 10 years from the initial investment	through co-financing of: • up to 50% of tax due on income from employment, and/or: • up to 50% of income tax liability and advance payment of income tax.	through interest-free loan from the competent ministry for the payment of tax liabilities, except value added tax, for a period of three years from the beginning of investment

According to the procedure for applying for incentive measures under the Act on Investment Promotion (NN 102/15) an enterprise intending to acquire the status of a beneficiary of incentive measures must file an Application for the use of incentives using the prescribed forms either to the Ministry of Economy if it falls under the category of a large enterprise or to the Ministry of Entrepreneurship and Crafts if it falls under the categories of micro-, small or medium enterprise before the beginning of the investment.

On the 1 July 2013 Croatia will become a member of the European Union and a part of the European Single Market. From that day forward Croatia abandons her own tariff and trade system as well as free trade agreements with other countries and embraces in full the EU trade policy.

With the accession of Croatia to the European Union all bilateral and multilateral free trade agreements that were concluded by the Republic of Croatia will cease to be in force. Especially important is the CEFTA Agreement as it ensures more favourable conditions for export to the markets of CEFTA signatories than those that the European Union has for these markets.

As in the previous two enlargements, the EU will start consultations with the CEFTA countries with which it has concluded Stabilization and Association Agreements (Albania, Bosnia and Herzegovina, Montenegro, Macedonia and Serbia) for negotiations on the conclusion of additional protocols. The interest of the Republic of Croatia is to transfer to the greatest possible extent trade preferences that it now has with those countries in the framework of existing agreements in order to mitigate the changes of export conditions to some important trade partners of the Republic of Croatia upon entering the European Union.

With membership in the European Union, new markets will open for Croatia since it will implement free trade agreements that the European Union concluded with third countries.

With 0% profit tax up to 10 years, no customs for all EU member states, double taxation avoidance agreements with 55 countries, and cash incentives of up to €9,000 for each new job created, 'Croatias' tax incentives are appealing to global businesses

On January 1, 2017, Croatia woke to a new, reformed tax system which, the Government hopes, aims at ending the frequent and endless amendments and finally sets the grounds for an attractive investment environment. The Government has delivered a comprehensive reform by changing as many as 15 tax-related acts. Most of the provisions have entered into force on January 1, 2017, with certain exceptions which will take effect in 2018 or 2019.

The reason for this huge intervention into the tax system, as the Government explains it in its formal notice to the Croatian Parliament, is the high tax burden in comparison to surrounding countries and too many tax deductions, reliefs and exceptions with questionable effect.

Value Added Tax

The aforementioned tax analysis showed an increased burden of tax payers with smaller turnover, inadequate (too high) tax rate for certain goods and services, as well as high tax burden on imports of some categories of machinery and equipment. Therefore, in order to decrease the overall tax burden, enhance the economy, simplify the administration, build a stable, sustainable and easy tax system and provide stability to tax payers, the Government has proposed and the Parliament has accepted certain amendments to the VAT Act. Instead of three tax rates (25%, 13% and 5%), only two will be in use (25% and 13%), with certain goods and services reallocated. Pursuant to the Council Directive (EU) 2016/1065, the tax on voucher is introduced, but shall take effect only from January 1, 2019. The threshold for mandatory registration into VAT system has increased to 300,000 HRK (approx. 40,000 EUR), however will be applied only as of January 1, 2018. From January 1, 2017 the mandatory registration period for voluntary registration into VAT system has been decreased from 5 to 3 years. Additionally, it will now be possible to apply a tax deduction of 50% to advance VAT payment for acquisition or lease of motor vehicles the value of which does not exceed 400,000 HRK (approx. 53,000 EUR). For real estate exempt from VAT payment it will be possible to opt for VAT taxation provided that the tax payer is registered for VAT at the moment of transaction and has the right to deduct the advance VAT payment. Other amendments, inter alia, relate to import and customs issues, reciprocity in refunding VAT to third parties, new measures in case of suspicion of abuse of VAT ID number and the responsibility of taxpayers in case of fraudulent activities, mandatory content of an invoice as well as certain changes in the penalty section of the VAT legislation.

Corporate Income Tax (Profit Tax)

The reform aims at decreasing the tax burden for all taxpayers, particularly supporting start-ups and encouraging the development of small entrepreneurship. Thus, the tax rate has been decreased from 20% to 18% and for entrepreneurs with income lower than 3 million HRK (approx. 400,000 EUR) it shall be further discounted to 12%. Small taxpayers with annual income lower than 3 million HRK shall also have the option to choose the possibility to calculate the profit tax by using the cash method. For the sake of fiscal sustainability, as the Government explains, some interventions into the tax base (extension) have to be made and therefore the tax relief for reinvested profit has been removed seeing that only 0.70% of tax payers actually used this option. In this respect, some changes in the recognized tax deduction will also take effect: representation expenses will be set to 50% (currently 70%), whereas personal transportation expenses will be set to 30% (currently 50%), but the latter will only enter in force as of January 1, 2018. There are new provisions introduced regarding the advance pricing arrangements, and it will be possible to agree on an interest rate between affiliated companies by either using a transfer pricing method or the interest rate prescribed by the Ministry of Finance. In order to bypass the obstacle in form of bankruptcy and distraint proceedings, the Government has redefined certain conditions for writing off receivables and given the possibility to banks to write-off bad placements without having to initiate bankruptcy or distraint procedures (the latter will only be possible to be carried out during 2017).

Personal Income Tax

While the VAT Act and Profit Tax Act were amended in the form of act on changes and amendments, the Government has prepared an entirely new Personal Income Tax Act, as foreseen by the unique methodological and nomotechnics regulations for acts issued by the Croatian Parliament.

The analysis performed by the task force identified a high tax burden on salaries which impacts negatively the competitiveness of highly educated employees. In addition, the analysis emphasized the need for simplification of processes of determination of personal income tax as well as in the field of tax reporting to the authorities. Among the many changes in the Act, it is worth focusing on the fact that the previous tax rates of 12%, 25% and 40% have been changed into tax rates of 24% and 36% where the 24% applies to a monthly tax base up to 17,500 HRK (approx. 2,300 EUR), and the 36% to the base above this amount. These rates are reduced by 50% for certain taxpayers – pensioners and employees resident in certain local jurisdictions with a low development rate and in Vukovar. The basic personal allowance (which decreases the tax base) has been increased from 2,600 HRK to 3,800 HRK; however, the calculation of the allowance has been changed in terms of basis for its calculation and coefficients which will initially make the payroll calculation a bit more complex than it was until now. Another novelty is the introduction of two new terms: annual income and final income. Annual income is all income derived from employment, independent activity and other income, except income that is considered final and it will be determined through the annual tax return. Tax rate for annual income is 24% for annual tax base up to 210,000 HRK and 36% for the base exceeding this amount. The final income is considered to be income derived from property and property related rights, capital and insurance and it will be, depending on the source, taxable using rates of 12%, 24% and 36%, where such tax payers will not be able to use the personal allowance deduction nor submit the annual tax return. Many provisions regarding the annual tax return were unclear and subject to interpretation which has been attempted to be resolved by these amendments. Categories of taxable and non-taxable income have been redefined as has the definition of family

members that may be considered as supported family for purposes of tax deduction. The new Act also introduces the electronic Tax Card which will decrease the administrative burden with the Tax Offices.

Strategic Investment Projects of The Republic of Croatia Are:

- Private, public or public- private investment projects which include the construction of buildings;
- in the field of:
  - economy, energy, tourism, transport, infrastructure, electronic communication, postal services, environmental protection, public utilities, agriculture, forestry, water management, fishery, health care, culture, science, defence, judiciary, technology and education;
- which of implementation:
  - creates conditions for the employment of the larger number of workers, depending on the type and location of the project,
  - significantly contributes to the development or improvement of conditions and standards for the production of goods and provision of services,
  - introduces and develops new technologies that are increasing competitiveness and efficiency in the economy or public sector and/or,
  - rises the overall level of safety and quality of life of citizens and environmental protection,
  - has a positive effect on more economic activities and the implementation of which creates added value,
  - contributes to sustainable development and environment and space protection,
  - largely contributes to competitiveness of the Croatian economy;
- which are in line with:
  - the physical planning documents with the exception of implementing physical planning documents (urban development plan and detailed arrangement plan) if the same are not already adopted,
  - commitments under international treaties,
  - strategic documents of the EU and Republic of Croatia;
- which have a total value of capital investment costs:
  - equal to or greater than HRK 150.000.000,00, or
  - equal to or greater than HRK 75.000.000,00, and have the ability to be co-financed from the funds and programs of the European Union , or
  - equal to or greater than HRK 20.000.000,00, and are realized in assisted areas , or in the units of local (regional) self-government of the 1st group or in the units of local self-government of the 1st and 2nd groups, in accordance with the act governing the regional development of the Republic of Croatia, or on islands , or if the investment falls within the area of agriculture and fisheries;
- and if private investment project, if the investment relates to:
  - Production and Processing Activities
  - Development and Innovation Activities
  - Business Support Activities
  - Activities of High Added Value Services
  - Activities in Energy Sector
  - Infrastructure
  - Activities related to Agriculture and Fisheriesthe administrative burden with the Tax Offices.

Conducting Business in Turkish Automotive Industry

Turkish government explicitly declares intentions to develop automotive industry to become one of the leading car manufacturers in the world.

Regardless of the location of the investment, all automotive industry investments in Turkey (including sub industry investments) are supported by several measures. Local and foreign investors have equal access to.

Regional Investments Incentive Scheme Measures

Incentive Item		Region I	Region II	Region III	Region IV	Region V	Region VI
VAT exemption		+	+	+	+	+	+
Custom duty exemption		+	+	+	+	+	+
Tax reduction as of investment contribution rate	Out of OIZ	15%	20%	25%	30%	40%	50%
	Within OIZ	20%	25%	30%	40%	50%	55%
Social Security Premium Support (employer's share)	Out of OIZ	2 Years	3 Years	5 Years	6 Years	7 Years	10 Years
	Within OIZ	3 Years	5 Years	6 Years	7 Years	10 Years	12 Years
Land allocation		+	+	+	+	+	+
Interest support	Local loans	-	-	3 Points	4 Points	5 Points	7 Points
	Foreign currency loans			1 Points	1 Points	2 Points	2 Points
Social Security Premium Support (Employee's Share)		-	-	-	-	-	10 Years
Income Tax Withholding Allowance		-	-	-	-	-	10 Years

Institution	SME or General	
KOSGEB	SME	Gives R&D, innovation and industrial application incentives.
TÜBİTAK	General	Uses industry incentives by Ministry of Economy; R&D investments receive R&D tax discount of %100 as of 2008; the companies that use law no:5746 discount cannot use law no:5520 discount at the same time.
Ministry of Science, Industry, and Technology	General	Supports attempts of cumulative industrialization with legislation called "Cumulative Support Program Legislation"; support amount provided by ministry without payback, for business plan cannot be more than 50% of budget, while for each supported area cannot be more than 75% of the budget.
TTGV	General	Supports two types of R&D projects •Technology development projects support (suspended in current in 2013): "Technological product" and "Technological Process Innovation" , classified as R&D projects are supported; maximum support is 1 million USD, maximum support duration is 2 years and supports need to be paid-back •Advanced technology projects support: Companies applying for this support have R&D projects in food processing, biomedical, or climate control technologies); manufacturing and software companies are targeted and can receive a maximum support of 3 million USD to be paid back in three years.

Croatia vs Turkey

According to the current Doing Business 2017 World Bank report, Croatia is in the 43rd place out of 190 countries. With 43rd place out of 190 countries the Republic of Croatia reached the group of countries such as Hungary (41) and Belgium (42), while leaving behind Moldova (44), Cyprus (45), Serbia (47), and making significant shift away from the countries in the region (montenegro 51, Kosovo 60, Bosnia and Herzegovina 81).

Turkey is in the 69rd place out of 190 countries, behind Croatia which offers more incentives and less tax to investors.

	Croatia	Turkey
0% profit tax	x	
Employment incentives	x	
Tax relief for reinvested earnings	x	
Incentives for innovation and development activities	x	x
Tax incentives for R&D		x
VAT exemption		x
Exemption from import customs		x
Reduced social contribution rates		x
Tax Exemptions in Specific Economic Zones		x
Tax exemptions in Technolgy Development Zones		x
TUBITAK (Scientific and Technological Research Council of Turkey) support		x
Export Support		x
Interes Rate Support		x

3. Labor Costs in Automotive Sector

Employment in the Automotive Sector

Croatia's relatively low labour costs in the automotive components industry could place the country at a competitive advantage in relation to the other EU economies. However, labour costs represent only one factor in the price competitiveness equation, which also depends to a large extent on productivity. Therefore it is essential to further support increases in productivity in the automotive sector through access to developing technology and international quality standards. In order to support expansion of the automotive sector, the cost and availability of capital play very important roles.

Unemployment is relatively high but government efforts to stimulate employment with various programs of incentives for employers. But, with all of these stimulate programs the level of unemployment remains a significant social and economic burden. Although this indicators is worthy to mention that Croatia has a high skilled and educated workforce in different fields.

The automotive sector employs between 0.6% and 0.8% of all workers in manufacturing industry nation-wide. However, it is well known that the automotive sector is not considered to be a labour intensive industry since production automation plays a key role in increasing the competitiveness and output quality of the sector.

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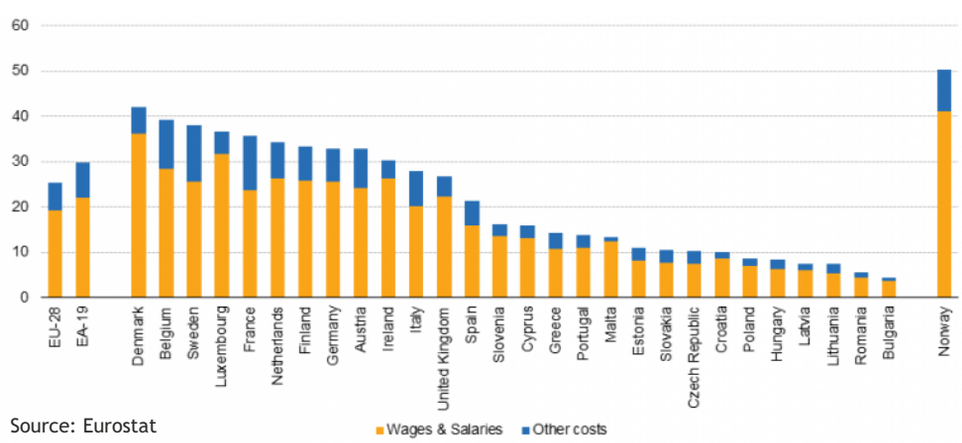
Croatia's relatively low labour costs in the automotive components industry could place the country at a competitive advantage in relation to the other EU economies.

The automotive industry is not only labour intensive but also needs qualified personnel to produce highly complex, high-performance, quality products. Today, automotive products are more complex and sophisticated than ever, requiring high levels of know-how to underpin technological and organisational innovation. The availability of qualified labour remains one of the more significant competitiveness factors. Labour productivity in the automotive sector is still far below the EU average and, more worryingly, below the majority of competing countries. Therefore it is essential to further support increases in productivity in the automotive sector through access to developing technology and international quality standards.

In order to support expansion of the automotive sector, the cost and availability of capital play very important roles. Recognising the relatively low margins in the automotive sector, the cost of capital plays a very important role for the sectors ability to expand and upgrade its manufacturing activities. The cost of capital is one of the major problems for the Croatian automotive component industry.

In 2016, average hourly labour costs were estimated at EUR 25.4 in the EU-28 and at EUR 29.8 in the euro area (EA-19). However, this average masks significant gaps between EU Member States, with hourly labour costs ranging between EUR 4.4 and EUR 42.0.

In Croatia average hourly labour costs were estimated below EUR 10.0.



Source: Eurostat

Termination of employment

The notice period for termination is no longer on hold during vacation, paid leave or periods of temporary work disability. If, however, a work disability occurs during the notice period, the employment relationship automatically terminates six months from delivery of a resolution on termination. The previous arrangement caused major problems for employers, not only making it impossible for them to monitor the time of the actual termination of employment but also because of potential abuses by employees.

In cases of wrongful termination, the indemnity has been reduced from a maximum of 18 to the maximum of eight salaries. Furthermore, an employer who plans to terminate more than 20 employees need not prepare a collective redundancy plan.

The new Labour Act has also finally clarified the existence of a different termination treatment during the probation period. Now, the courts may not develop the practice that termination during the probation period is as hard as during regular employment.

The amendments primarily aim to enable employers to keep work positions and restructure quickly, as well as to respond to the frequent issue of employee abuses.

Source: Manpower

4. Taxes on Automotive Sector

1. Taxes On Acquisition

1.1. VAT

The purchase of motor vehicles is subject to VAT at the rate of 25%.

1.2. Special Tax on Motor Vehicles

The first registration of a motor vehicle is subject to the payment of a 'special tax'.

The tax is based on the price of the vehicle (Table 1), its CO2 emissions and the type of fuel used (Tables 2 and 3). To obtain the amount of tax due for a given vehicle, the relevant rates from Table 1 and Table 2 or 3 should be added up and applied to the sales price of the vehicle.

Variables:
ON = Basic charge (amount in HRK for 1g/km Co2)
PC = Selling price
EN = Fee calculated on the basis of the value of CO2 and basic charge
PP = Special tax
PP = (ON + EN) + PC
Example: Car price HRK 89,984.00 (including value added tax at 25%)
Co2 emissions = 110g

The vehicle's tax base is calculated as follows:
Basic charge (ON) = petrol CO2 emissions (g/km) of 90 to 120 = HRK 620
Selling price (PC) = HRK 0-100,000 (Table 1) x 1% = HRK 89,984.00 × 1% = HRK 899.84
IN = CO2 value of the vehicle - lowest value from that CO2 group x amount in HRK for 1g/km CO2 (Table 3) = (110 - 90) x HRK 135 = HRK 2,700
PP = (620 + 2,700) + 899.84 = HRK 4,219.84

1.Sales price

Vehicle price in HRK	%
0.00-100,000.00	1
100,000.01-150,000.00	2
150,000.01-200,000.00	4
200,000.01-250,000.00	6
250,000.01-300,000.00	7
300,000.01-350,000.00	8
350,000.01-400,000.00	9
400,000.01-500,000.00	15
500,000.01-600,000.00	20
500,000.01 ve üzeri	25

Diesel fuel

Co2 emissions (g / km)	Basic charge in HRK	Final price in HRK
70-85	185	55
85-120	1,010	175
120-140	7,135	1,150
140-170	30,135	1,250
170-200	67,635	1,350
<200	108,135	1,450

Petrol, liquefied petroleum gas, natural gas and diesel fuel meeting the Euro 6 exhaust gas emission standard

Co2 emissions (g / km)	Basic charge in HRK	Final price in HRK
75-90	95	35
90-120	620	135
120-140	4,670	450
140-170	13,670	700
170-200	34,670	1,200
<200	70,670	1,300

1. Taxes On Ownership

This tax is due annually and based on the power of the engine expressed in kW and the age of the vehicle. The rates are as follows

Engine power (kw)	HRK		
	≤2 yıl	2-5 yıl	5-10 yıl
0-55	300	250	200
56-70	400	350	250
71-100	600	400	400
101-130	900	700	600
> 130	1,500	1,200	1,000

Importing used cars

The procedure with importing a used car is the same as with importing a new one. When a physical person buys a used car from abroad from a private person he has to get a sale contract verified at a notary and at the local customs the physical person gets a EUR1 certificate which proves the European origin of the vehicle. For used cars of the value up to 6,000 Euros you don't need a EUR1 certificate, but a statement from the supplier about the European origin of the vehicle.

If you paid for the car in the full (gross) amount, you can get a tax refund (tax free), when you are leaving the European Union. When you come to the border, the procedure is the same as with the new car. However, the most important thing is that the used car corresponds to the Croatian terms and conditions for homologation. So, before you buy a car on your own, you should contact a licensed person in Croatia who issues a homologation form for a certain vehicle to eliminate this risk factor. At the same time you should be extremely careful when buying a car imported from the United States or a car which was intended to be sold in the United States.

In fact, such cars can he homologised and registered in Germany, because they do not need a verification from the manufacturer, but only an individual check-up. In Germany the parts are changed, that is the cars are modified, which is not possible in Croatia and the verification from the manufacturer is modified. In Germany the verification from the manufacturer can be modified, which is not the case in Croatia. So, a car can have an engine which satisfies the Euro IV, but because of some small details (lights, tail lamp, glasses…) which do not fit our homologization terms and conditions it cannot be driven in Croatia.

The difference between paying a toll for the imported used and an imported new car is in the fact that the taxes for a used car are bigger than those for the new car. In fact, for a used car with an engine up to 1600cc an additional tax of 50% is paid, and a tax up to 100% is paid for the cars with engines with more than 1600cc.

Regulations in Turkey

Although the readjustment of the automotive sales taxes was already at a high level, it ranks again the first with a significant increase in Turkey. This topic is still the most important problem of the sector.

Motor vehicle tax taken yearly depends on the age and the engine size of the vehicle for passenger cars and motorcycles.

Engine Size	Motor Vehicle Tax (Yearly)				
	1 - 3 age	4 - 6 age	7 - 11 age	12 - 15 age	16 and above age
Passenger Cars					
1301 - 1600 cm³	1.035,00	776	450	318	122
1601 - 1800 cm³	1.827,00	1.428,00	841	513	199
1801 - 2000 cm³	2.878,00	2.217,00	1.303,00	776	306
2001 - 2500 cm³	4.317,00	3.134,00	1.958,00	1.170,00	463
2501 - 3000 cm³	6.019,00	5.236,00	3.271,00	1.760,00	646
3001 - 3500 cm³	9.166,00	8.247,00	4.968,00	2.480,00	910
3501 - 4000 cm³	14.411,00	12.444,00	7.329,00	3.271,00	1.303,00
4001 cm³ and above	23.586,00	17.687,00	10.475,00	4.708,00	1.827,00
Motorcycles					
100 - 250 cm³	122	92	68	43	17
251 - 650 cm³	252	191	122	68	43
651 - 1200 cm³	646	385	191	122	68
1201 cm³ and above	1.565,00	1.035,00	646	513	252

Motor vehicle tax taken yearly depends on:
The age and the engine size of the vehicle for panel van and motor caravans,
The age for minibuses

The age and number of seats for buses
Maxiumum weight and age for truck, tractors and so on.

Type of vehicle & # of seats /	Motor vehicle tax (Yearly)		
Max total weight	1 - 6 age	7 - 15 age	16 and above age
1) Minibus	776	513	252
2) Panel van and motor caravans			
1900 cm³ and below	1.035,00	646	385
1901 cm³and above	1.565,00	1.035,00	646
3) Bus			
Max 25 people	1.958,00	1.170,00	513
26 - 35 people	2.348,00	1.958,00	776
36 - 45 people	2.613,00	2.217,00	1.035,00
46 people an above	3.134,00	2.613,00	1.565,00
4) Truck, trucktor and so on			
until 1.500 kg	697	463	228
1.501 - 3.500 kg	1.408,00	817	463
3.501 - 5.000 kg	2.115,00	1.760,00	697
5.001 - 10.000 kg	2.348,00	1.995,00	936
10.001 - 20.000 kg	2.821,00	2.348,00	1.408,00
20.001 kg and above	3.529,00	2.821,00	1.640,00

VAT

The sale of new passenger cars is subject to 18% VAT.

The VAT rate for the operational or financial leasing of the passenger cars is also 18 %.
The second hand sale of the passenger cars and that of the vehicles which are designed specifically for the passenger transportation is subject to VAT at the rate of 1 %.

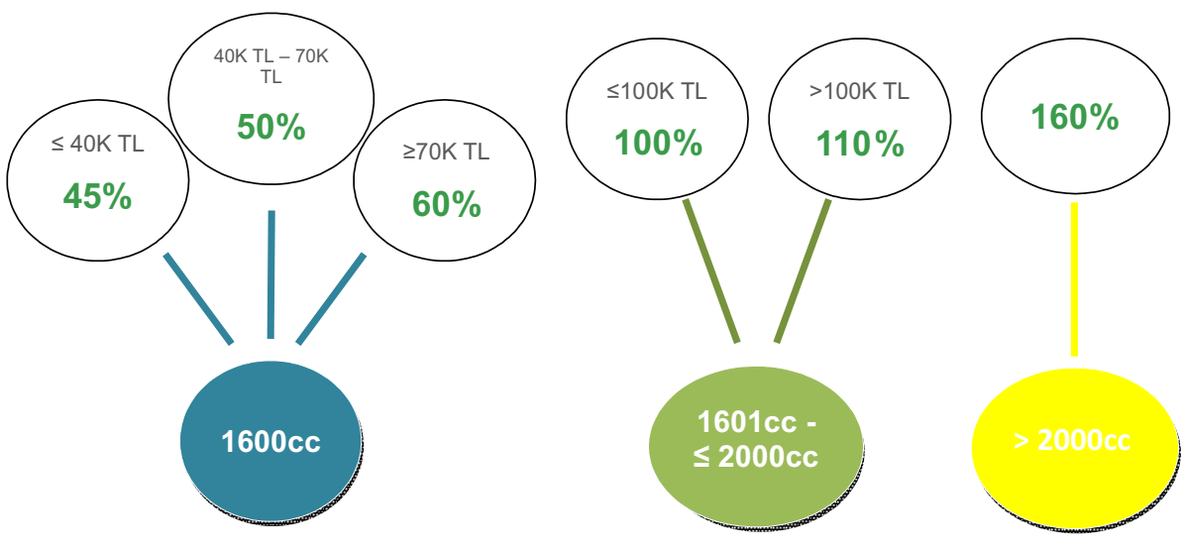
Special consumption tax

Special consumption tax is an indirect tax due for the list of the goods stated in its particular Law. The passenger cars are in this list and subject to special consumption tax.

For the hybrid engine passenger cars, special consumption tax ratio:

- If the engine does not exceed 1800cm3, the electric motor will exceed 50kW., the tax is 45%
- If the engine is between 1800cm3 - 2500cm3, the electric motor will exceed 100kW., the tax is 90%
- If the engine volume is 2500cm3 or more, there is no change, the tax is 145%.

Special consumption tax ratio for passenger cars with only electric engine is 10%.
Special consumption tax for passenger cars with combustion engine depends on the engine size and the price before tax as shown in below table in %.



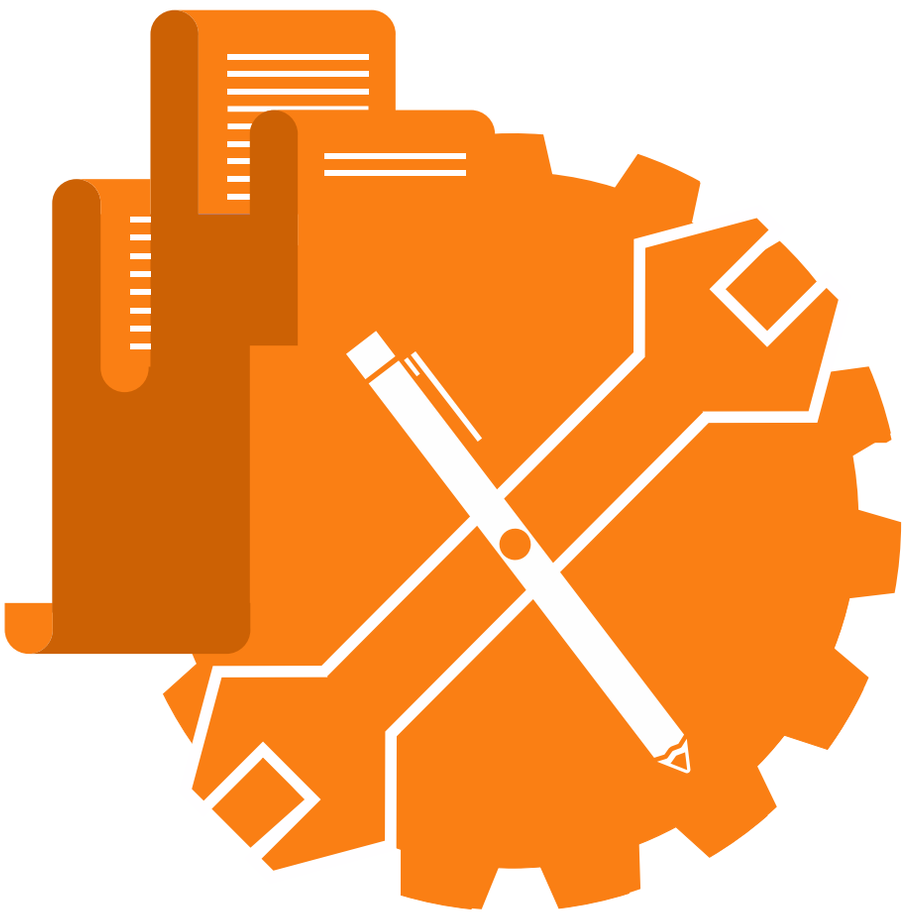
Croatia vs Turkey

İn Croatia the special tax is based on the price of the vehicle, its CO2 emissions and the type of fuel used.

In Turkey even though emission is not being considered in motor vehicle taxation, the total amount of tax paid is higher than in Croatia.

	Croatia	Turkey
Value-added tax (VAT)	x	x
Special tax - Registration fee	x	
Ownership tax	x	
Motor Vehicle tax (ownership tax taken yearly)		x
Special consumption tax		x

5. Education/Training in Automotive Sector



As English is often the preferred language for global investments, Croatia is worth a second look: 49% of the population speaks English (compare that to India, where 12% of the population speaks it).

Additionally, 34% of the Croatian population speaks German, and 14% Italian, making its population remarkably multilingual: a key factor for many businesses.

99% of secondary schools in Croatia are state owned schools so in that respect secondary level education is still highly dependent on public sector support. Output and quality levels of the secondary schools system is not sufficient to support the wide variety activities practiced in processing industries generally.

The Croatian educational system delivers education in technical, industrial and crafts secondary schools in 319 schools out of 715 in total. The bulk of the workforce engaged in automotive manufacturing is educated to second level standard. Therefore, support through vocational training institutions is very important and available through the secondary level education infrastructure spread across the country.

There are more than 130 higher educational institutions in Croatia. These consist of public and private universities, polytechnics /institutes and colleges of applied sciences.

There are two different types of study available to students:

- university studies: academic programs carried out solely at university;
- professional studies: professional programs carried out at polytechnics/institutes and colleges of applied science.

Costs for international students will range significantly from one school to the next as well as from one study program to the next. The level of tuition fees depends on the type of study program and its duration. It is therefore important that prospective students directly contact the higher education institution they are interested in for precise information about tuition fees.

For most undergraduate degree programs, international students can expect to spend about €800 to €2500 per year. The cost for technical schools tends to be significantly higher than this. The highest costing programs include those in the sciences and medical programs. The costs for post graduate education is more, but will range significantly from one school to the next. E.g., currently, tuition fees for undergraduate degree programmes in the humanities and social sciences can range from 6,000 Kuna (approximately 800 EUR) to 16,500 Kuna (approximately 2,200 EUR) per year, tuition fees for technical sciences are approximately 22,000 Kuna (approximately 3,000 EUR) per year and tuition fees for sciences and medical study are around 27,000 Kuna per year (approximately 3,600 EUR). Tuition fees for graduate and postgraduate programmes should be obtained by request directly from higher education institutions since they vary significantly.

Croatia's education system lags far behind other Western democracies and EU member states (Croatia joined the EU in 2013). The system is drastically out of date; it prioritizes a 19th-century ethos of knowledge-only learning—facts, figures, and so on—with no role for critical thinking, working with others, or practical experience.

Graduates are desperately unprepared for the job market, and the current education system does not prepare citizens to play an active role in the society.

Croatia has 1 university in the overall Times Higher Education World University Rankings. The highest-ranking university in Croatia is University of Zagreb, which is ranked at number 801+. No specific program for Automotive Engineering can be found in Croatia.

University of Zagreb

The university offers comprehensive study porgrammes leading to Bachelor's, Master's, and Doctoral degrees in the following fields: arts, biomedicine, biotechnology, engineering, humanities and social sciences and natural sciences. It employes more than 7,500 staff members and more than 77,000 students.

University of Split

The University of Split was established in 1974 and it is the second biggest university in Croatia. The university offers comprehensive study porgrammes in the following fields: arts, biomedicine, engineering, humanities and social sciences and natural sciences.

The Croatian automotive sector has three different cluster development initiatives which create very little synergies visible through inter-connectivity or through co-operation with academia. Such a co-ordinated approach is a necessity. As a result of limited cooperation with academia and the position of Croatian suppliers within the automotive value chain, R&D initiatives are visible only at the boundaries of the automotive sector (navigation, telemetry, fleet management, ICT based manufacturing as well as the novel area of electrically powered vehicles). Certain levels of innovation were introduced to Croatia by foreign companies (e.g. Yazaki, Saint-Jean Industries, Cimos, TDK-EPC, Boxmark) and domestic Tier 1 suppliers since they are active in the process of product commercialization jointly with innovation drivers. Some very perspective initiatives in the area of electric and mechanical engineering are visible at university level and they are co-operating with international global players in joint R&D projects.

The supply of automotive engineering services is a high value added activity. Resulting from exceptional competency levels within dedicated Croatian faculties, such engineering services are being sold abroad to OEM and Tier One operators with high quality cost ratios. This is an expanding sub-sector. Similarly, new and innovative auto related engineering services (e.g. navigation, fleet management, traffic control, energy systems) have the same characteristics in terms of demand and profitability. They offer even greater opportunities in that they are often ground breaking in nature. This lowers the competitive advantaged enjoyed by the more traditional sector players, making this area of activity ripe for new and emerging market entrants.

Services in the mechanical engineering and shipbuilding sub-sectors, the private sector is facing serious problems in finding employees with the right competences.

Incentives for education and training:

The eligible costs for the purpose of training may include trainers' personnel costs, for the hours during which the trainers participate in the training; trainers' and trainees' operating costs directly relating to the training project such as travel expenses, materials and supplies directly related to the project, depreciation of tools and equipment, to the extent that they are used exclusively for the training project. Accommodation costs are excluded.; costs of advisory services linked to the training project; trainees' personnel costs and general indirect costs (administrative costs, rent, overheads) for the hours during which the trainees participate in the training. Incentives will not be awarded for the training conducted to ensure compliance with the mandatory training prescribed by national norms.

The aid intensity shall not exceed 50 % of the eligible costs. It may be increased, up to a maximum aid intensity of 70 % of the eligible costs, as follows:

(a) by 10 percentage points if the training is given to workers with disabilities or disadvantaged workers;

(b) by 10 percentage points if the aid is granted to medium-sized enterprises and by 20 percentage points if the aid is granted to small enterprises.

Universities and R&D Institutions in Turkey

Automotive industry in Turkey is one of the manufacturing sectors that employs mostly higher education graduates. Approximately 8% of the employers have engineering degrees. In the last years many universities opened new programmes specifically devoted to Automotive Engineering:

University	Bachelor	Masters	Doctorate
Afyon Kocatepe University	+		
Atılım University	+	+	
Boğaziçi University		+	
Cumhuriyet University	+		
Çukurova University	+	+	
Fırat University	+	+	
Gazi University	+	+	+
Hacettepe University	+		
Işık University	+		
İstanbul Teknik University		+	
Karabük University	+		
Kocaeli University	+	+	+
Mersin University	+		
Okan University	+	+	
Pamukkale University	+	+	
Sakarya University		+	+
Süleyman Demirel University	+		
Uludağ University	+	+	+
Yakın Doğu University	+		

Okan University, one of the most eminent and distinguished foundation universities in Turkey, is home to a diverse undergraduate and graduate student body of 14,000. Currently, Okan University has students from 43 different countries. It offers more than 138 undergraduate and graduate programs. The University comprises six faculties, two applied sciences schools and three graduate schools. The university also offers a variety of two year associate degree programs that correspond to the in-demand vocational opportunities.

The new global business era of borderless business relations demands a new set of engineering competencies. Okan University Automotive Engineering Undergraduate Program, having revised its programs accordingly, offers a rich selection of concentration areas in order to meet the unique career needs of our students. The world-class faculty members from diverse backgrounds provide a balance of theory and practice in the execution of the curriculum.

The Engineering Faculty of Atılım University has a unique position among Turkish universities, with its new and popular engineering fields such as mechatronics, manufacturing, software, informatics systems, energy systems and automotive engineering in addition to the existing conventional engineering departments. Altogether there are fourteen departments in the faculty. Having been established in 1997, the faculty, with its relatively large number of departments, a strong and dynamic academic cadre, and modern educational and research facilities, has secured a reputable position in a very short time and now is competing with the famous public universities in Turkey

Department of Mechanical Engineering at Hacettepe University offers an undergraduate program in Automotive Engineering and Master of Science and PhD programs in Mechanical Engineering. The research focus of the department lies in the areas of automotive engineering, solid mechanics and design, mechanisms and machine theory, materials, control, mechatronics, sensors and thermal-fluids engineering and energy.

Uludag University Automotive Engineering Department was established in 2010 and was started to give education on master of science degree in 2011. The Automotive Engineering Department is a pioneer department for Turkey, as being one of the first of its kind in Turkey. The Department offers two programs to qualified students for further education and research at advanced level, leading to the degree of MSc in Automotive Engineering. The Graduate Programs are MSc with thesis and non-thesis programs in Automotive Engineering. Non-thesis program is a MSc without thesis program with the support of Politecnico di Torino (PdT) Italy.

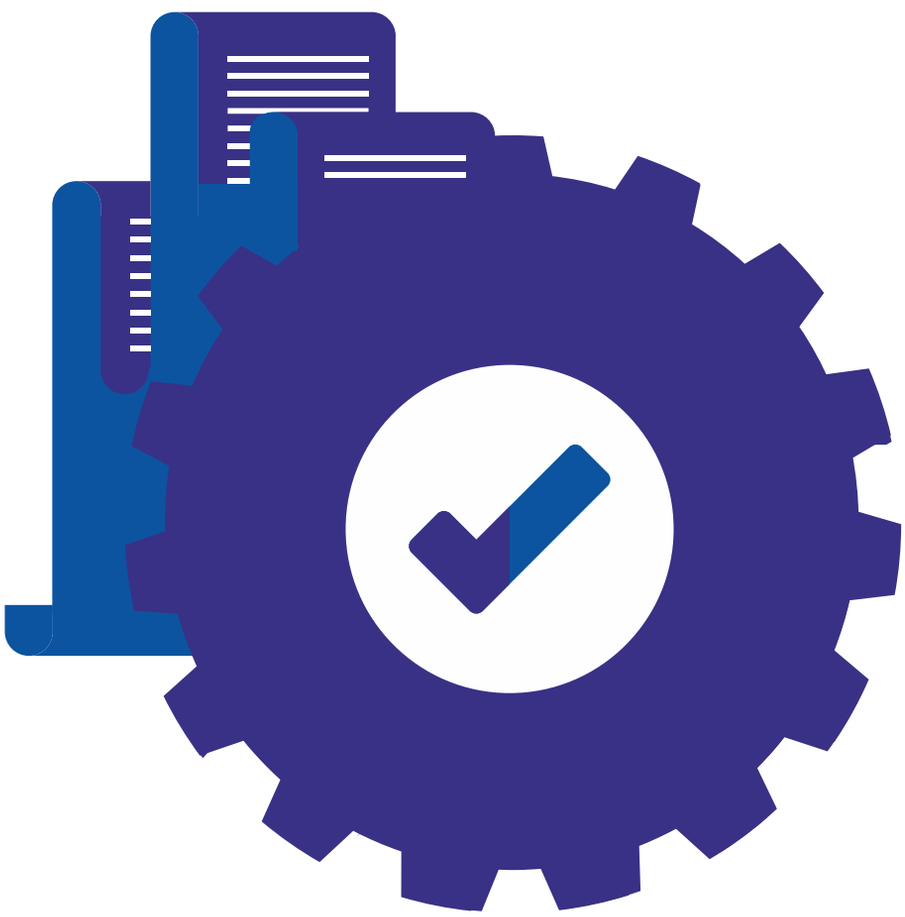
Croatia vs Turkey

The automotive sector is all about constantly improving efficiencies and therefore manufacturing technology changes are very common. Therefore, the education system needs to be flexible if it wants to deliver employable workers as output.

For Croatia, further skills upgrading is essential if the sector wishes to maintain and expand its competitiveness in the production of components of high technological sophistication. There are obvious gaps in the areas of vocational education training. Current levels of third level university degree output will not be sufficient to support aggressive expansion in the automotive sector in Croatia through the attraction of foreign direct investment.

When we compare Turkey and Croatia, it can easily be seen that Turkey is more developed when we compared the education level for automotive industry.

6. Conclusions



Concluding Remarks

The Croatian automotive industry has a strong basis and potential for future development of higher value added niche segments such as automotive components industry, design and R&D.

Although the Croatian Automotive industry has a long tradition, it has been disrupted in last 25 years due to the war in Croatia and the global crises that has taken its toll on the global automotive industry and its value-chains. Nevertheless, some companies managed to remain or become part of global value-chains of the increasingly globalized automotive industry, mostly by producing and exporting auto components (leather, plastic, metal, glass etc..) for Original Equipment Manufacturers and producers abroad. Others found niches in such areas as specialized vehicles (for demining, firefighting, agriculture, forestry) for example.

The country's economy is continuing to recover well from its 2008-2014 recession, bolstered by rising exports and strong tourist numbers. This increase in economic activity is likely to boost demand from small and medium-sized businesses for new vehicles, as they seek to replace ageing fleets, which is why we believe that the outlook for commercial vehicle sales is somewhat brighter than that for passenger cars over the near term.

With inflation currently low, we believe that the National Bank of Croatia (HNB) will be able to maintain low interest rates (currently at 2.5%). This low interest rate environment should also mean that car loan rates remain affordable, which will aid those local consumers reliant on auto financing to buy a new vehicle, lending further support to the market. Lastly, a buoyant tourism market should also ensure strong demand for new PCs from car rental firms, and new minibuses and buses from leisure/hotel companies.

Obstacles for carmakers operating in Croatia to overcome include an ageing population, emigration and the fact that unemployment remains high (despite recent falls). This underpins our belief that PC sales will not expand as rapidly as CV sales over the forecast period, although PCs will continue to account for the majority of all new vehicles sold in Croatia.

Further skills upgrading is essential if the sector wishes to maintain and expand its competitiveness in the production of components of high technological sophistication. There are obvious gaps in the areas of vocational education training. Current levels of third level university degree output will not be sufficient to support aggressive expansion in the automotive sector in Croatia through the attraction of foreign direct investment.

Automotive component parts producers compete on the open market and face tough competition at regional and global levels and are greatly impacted by global developments. Contracts are granted based on merit –quality certificatations obtained and previous performance, but often in a very competitive way (e.g. auctions) which leaves little opportunity to climb up the value-chain. Even though these companies have traditionally been the biggest part of the automotive sector in Croatia, they face a slow but steady decrease in the number of employees in recent years, as other countries in South East Europe have been able to offer lower prices at that lower level of the value-chain (mass-production). These companies are usually well represented through different (activity or region specific) business clusters.

Competitiveness in the automotive sector is very sensitive to on-going financial uncertainty across the EU. If Croatian automotive companies wish to remain competitive, then access to capital is very important. This is always true of high-tech and medium high-tech manufacturing activities. On the one hand capital is difficult to access in Croatia due to the collateral requirements of the commercial banking sector. Another major issue, following on from availability is the high cost of capital.

Turkey's automotive industry offers companies a dynamic domestic market and reach to a qualified yet relatively inexpensive labor force versus European countries. The automotive market grows and the production of vehicles increases steadily. The Turkish government supports the automotive industry in various

ways and gives a special attention to R&D efforts.

TUBITAK Marmara Research Center coordinates several automotive projects including range extended electric vehicle. The current manufacturers in the Turkish automotive sector continue to increase their investments. However, it will be necessary to aim for new strategic investments to move into the next level and increase the added value in production. The positive developments in Turkish logistics sector also presents ample opportunities to Turkish automobile manufacturers.

On the other hand, import dependency of the industry and increasing energy prices are the main threats against Turkey. Also, taxes on new vehicle sales is a slowing factor for development of vehicle parc.

Turkey's growing current account deficit creates a significant macroconomic risk for investors. Political risks such as terrorist attacks in major cities and Turkey's proximity to the civil war in Syria also add to macroeconomic instability.

Even though bilateral political relations have gained considerable boost in recent years, economic and trade relations between the two countries are still far from reflecting the existing potential. Bilateral trade, which experienced a decline in the years immediately following the 2008 Financial Crisis, has shown signs of recovery and reached 387 million US Dollars in 2015.

Meanwhile in 2012, Turkish businessmen were named among the top three foreign investors in Croatia. As of 2015, 60 Turkish companies are operating in Croatia with approximately 430 million US Dollars worth of investment, mainly in tourism, hotel and marina management.

The two countries also continue their joint efforts to bring to light the cultural and historical links.

Nevertheless Croatia does not offer a stable market nor the necessary human resources to attract investors in the automotive industry.

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Notes

XSIGHTS
RESEARCH AND CONSULTANCY

İstanbul Office
Divanyolu Caddesi, Hoca Rüstem Sk,
Kader Han, Kat: 3-4,
Sultanahmet, İstanbul / Turkey

P : +90 212 213 60 02
M : info@xsights.co.uk
W : www.xsights.co.uk

London Office:
First Floor, 736 High Road,
North Finchley,
London N12 9QD.

P : +44 203 868 01 68
M : info@xsights.co.uk
W : www.xsights.co.uk