



REPUBLIC OF TURKEY
PRIME MINISTRY
INVESTMENT
SUPPORT & PROMOTION
AGENCY

WHY INVEST IN TURKISH AUTOMOTIVE INDUSTRY?

- **Executive Summary**
- Turkish Automotive Industry Outlook
- Suppliers and Engineering in the Industry
- Growth Drivers in Turkey
- Success Stories

Turkish automotive industry

- High level of integration into global automotive industry
- 14th major automotive producer in the World with 75% average export rate
- Vehicles with Turkish origin has the leading position among the vehicles coming outside of EU
- Production, export, and engineering hub of global brands for international markets

Suppliers and engineering in the industry

- Quality products with high export rates
- Hundreds of Tier 1 companies working directly with OEMs
- Center of excellence in automotive engineering and R&D in which the new technologies are developed

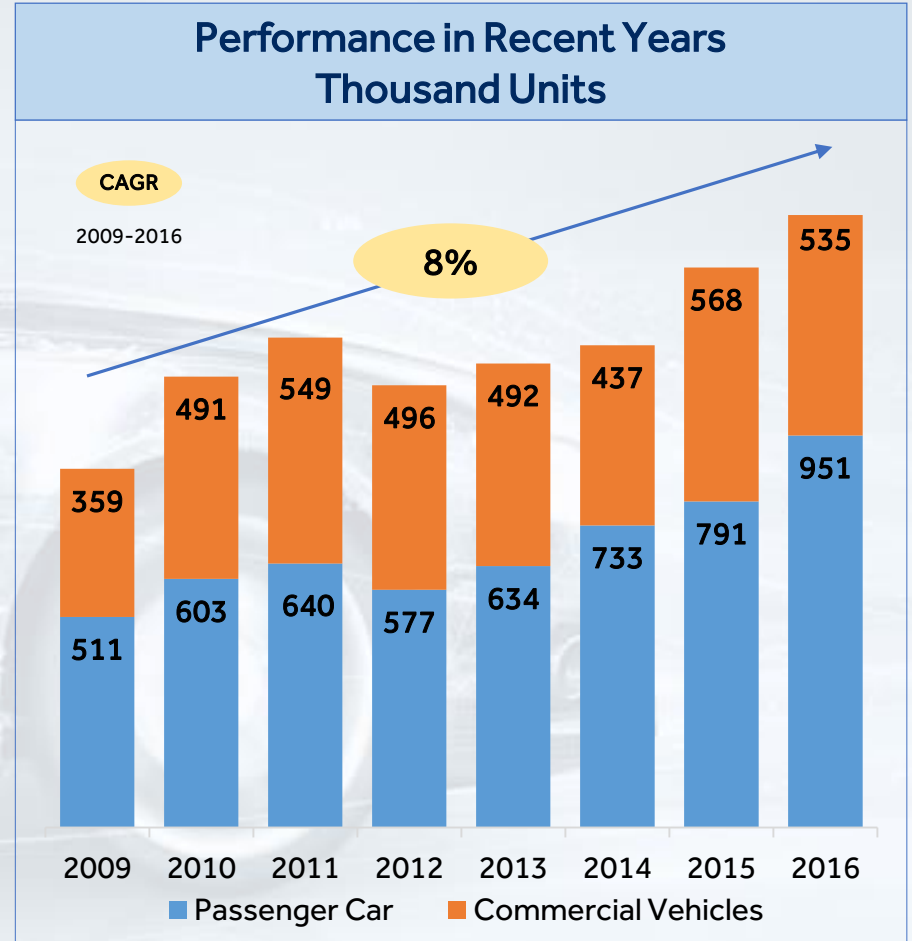
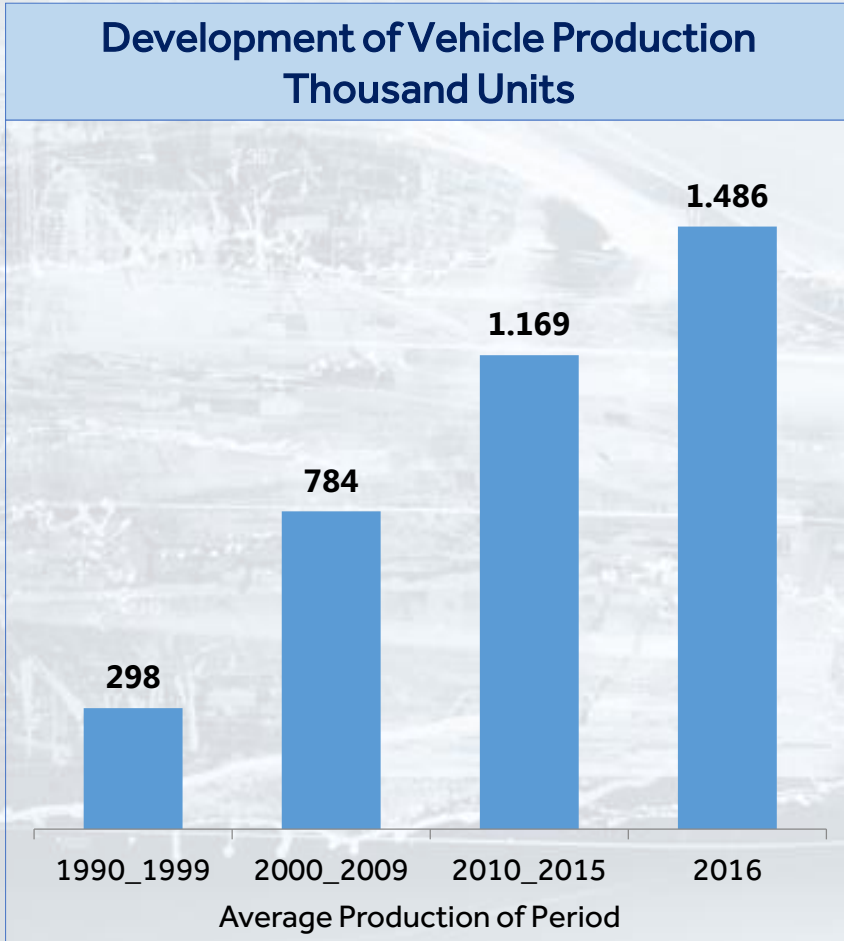
Growth drivers in Turkey

- Strong macroeconomic growth with increasing income per capita and a burgeoning middle-class
- Favorable demographics with a dynamic, young, and skilled labor force supporting the industry
- Cost-competitive labor and energy prices
- Strong government support through incentives

Strong international presence

- Giants of global automotive value chain benefit from Turkey's location, cost, and competence advantages
- Because of their profitable business in the country, companies in Turkey continue to invest in the country's future

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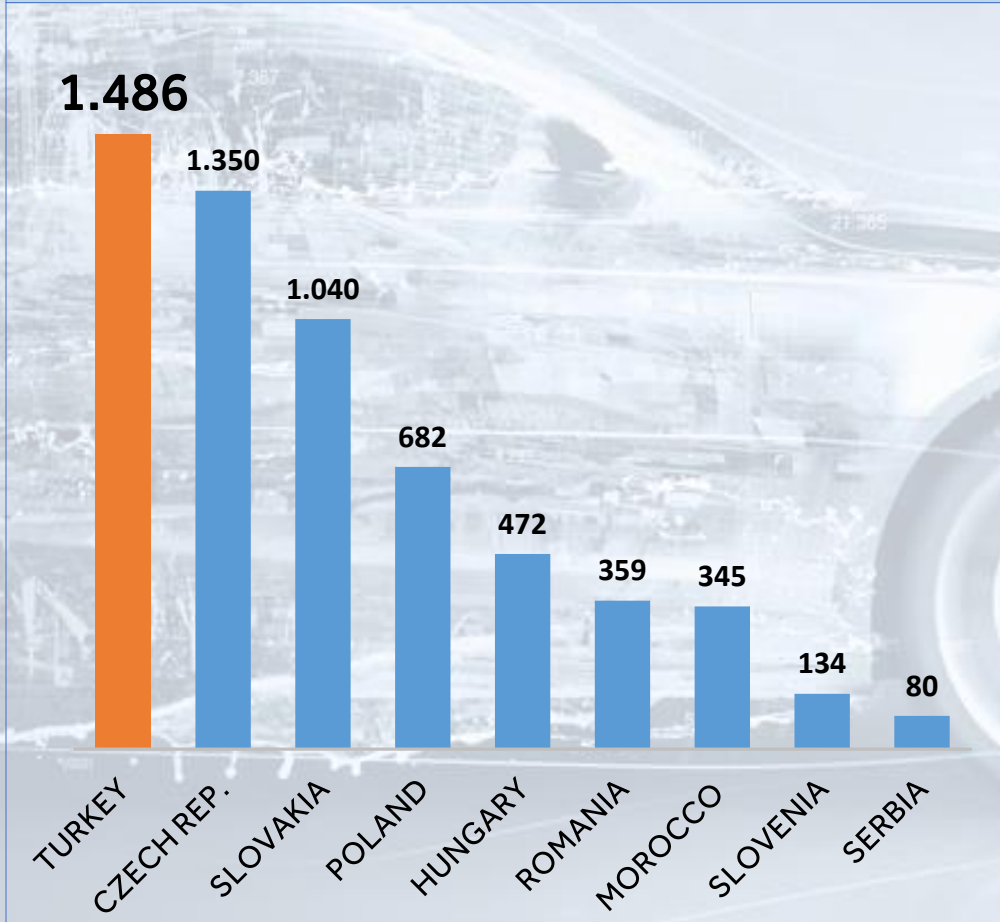


Source: Automotive Manufacturers Association, Automotive World Production Databook

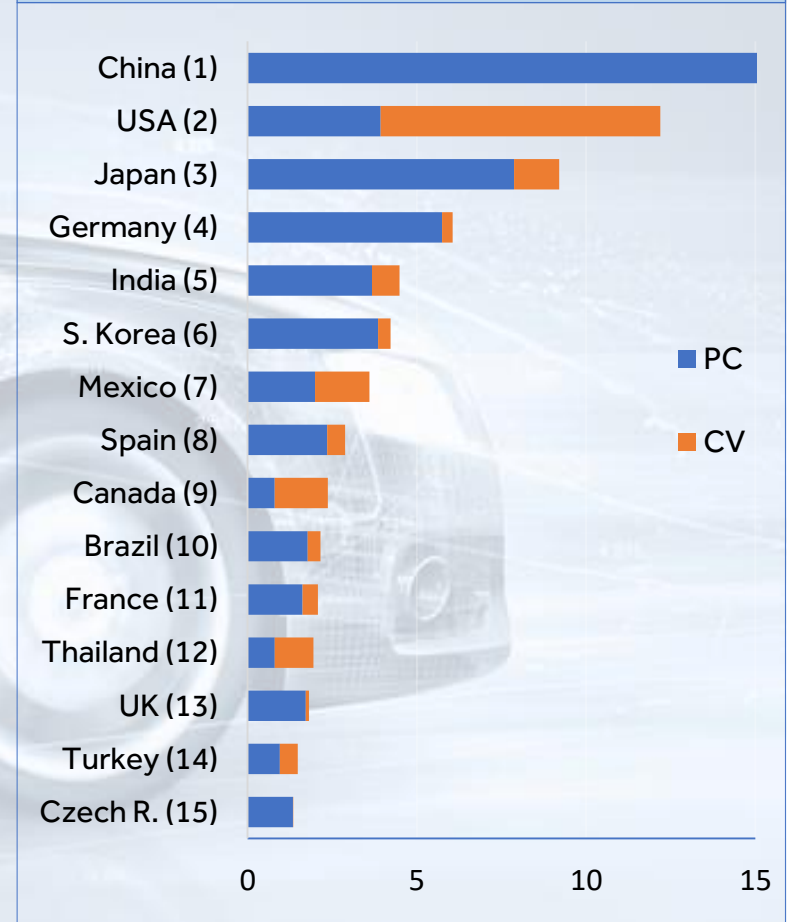


- 9 R&D centres are supporting not only the local operations but also the operations in other plants of mother companies.
- Ford Otosan's R&D department is one of Ford's 3 largest global R&D centres.
- R&D centre in Bursa is the only centre of Fiat outside of Italy serving the European market.
- For Courier, Ford's new light commercial vehicle, the Yeniköy plant is the single production center in the world.
- Toyota C-HR Hybrid is produced in Turkey for World markets
- Daimler R&D is the centre of competence for some parts and carrying global responsibility.
- With more than 40 thousand employee, automotive OEMs is one of the major employers in manufacturing industry.

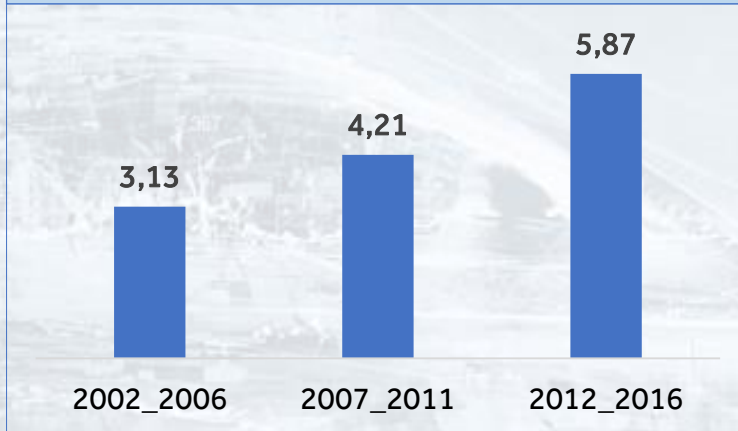
Automotive Production in 2016
Thousand Units



World Auto Production in 2016
Million Units



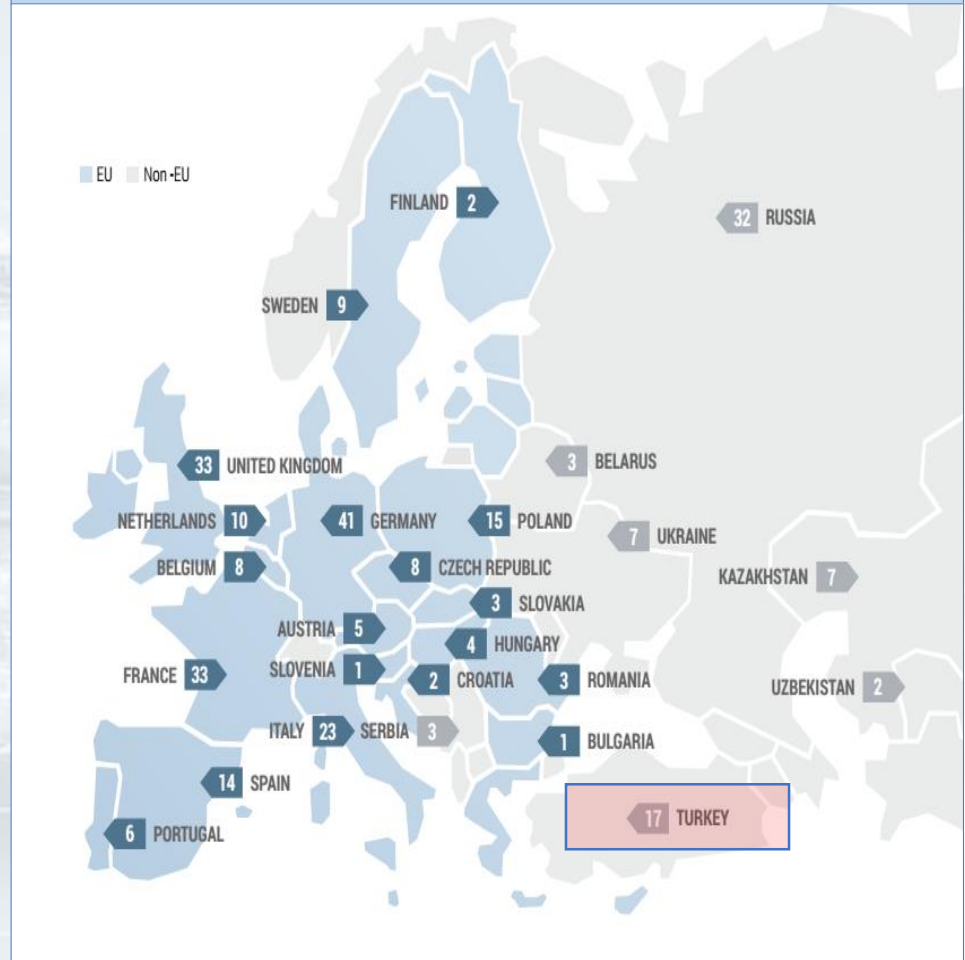
OEM Investments - Billion \$



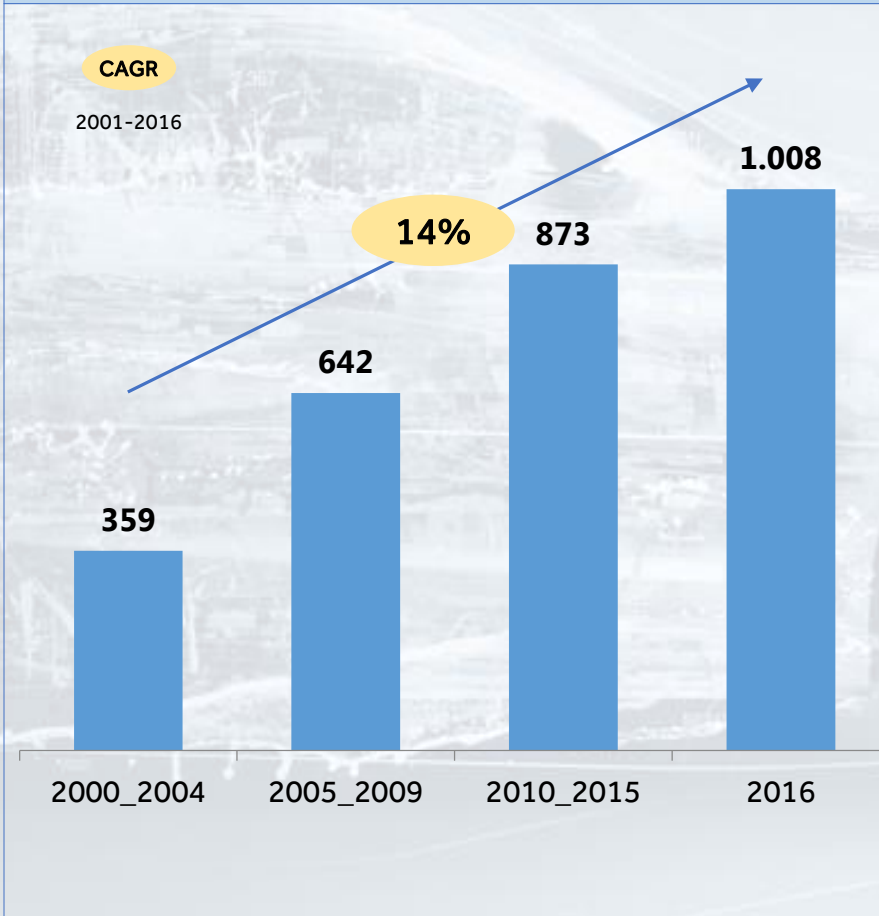
Development of Production Capacity



Automotive Plants in Europe



Change in Vehicle Sales Thousand Units

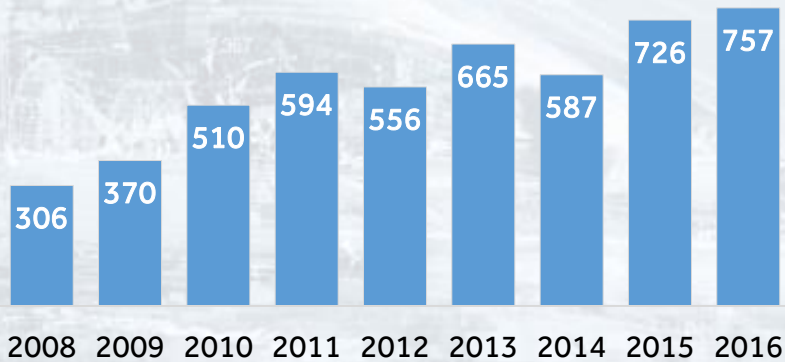


Top Emerging Vehicle Markets Million Units

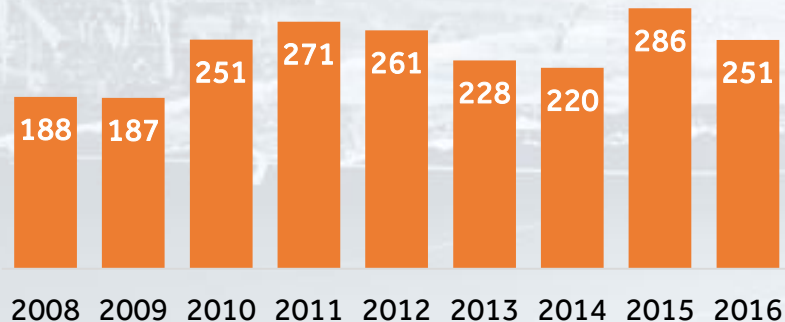


Source: Automotive Distributors Association of Turkey, OICA

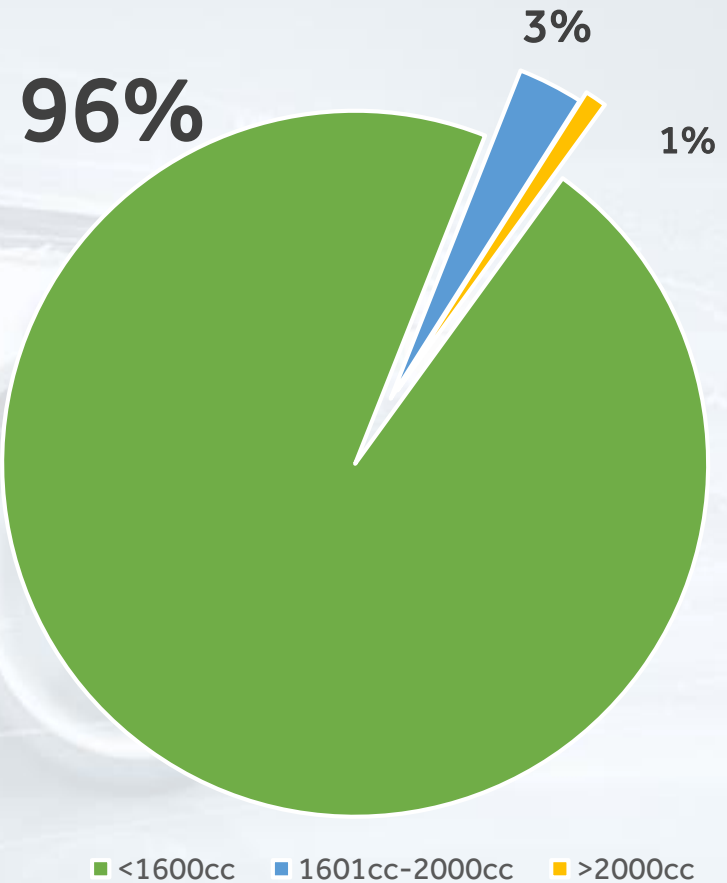
**Passenger Car Sales
Thousand Units**



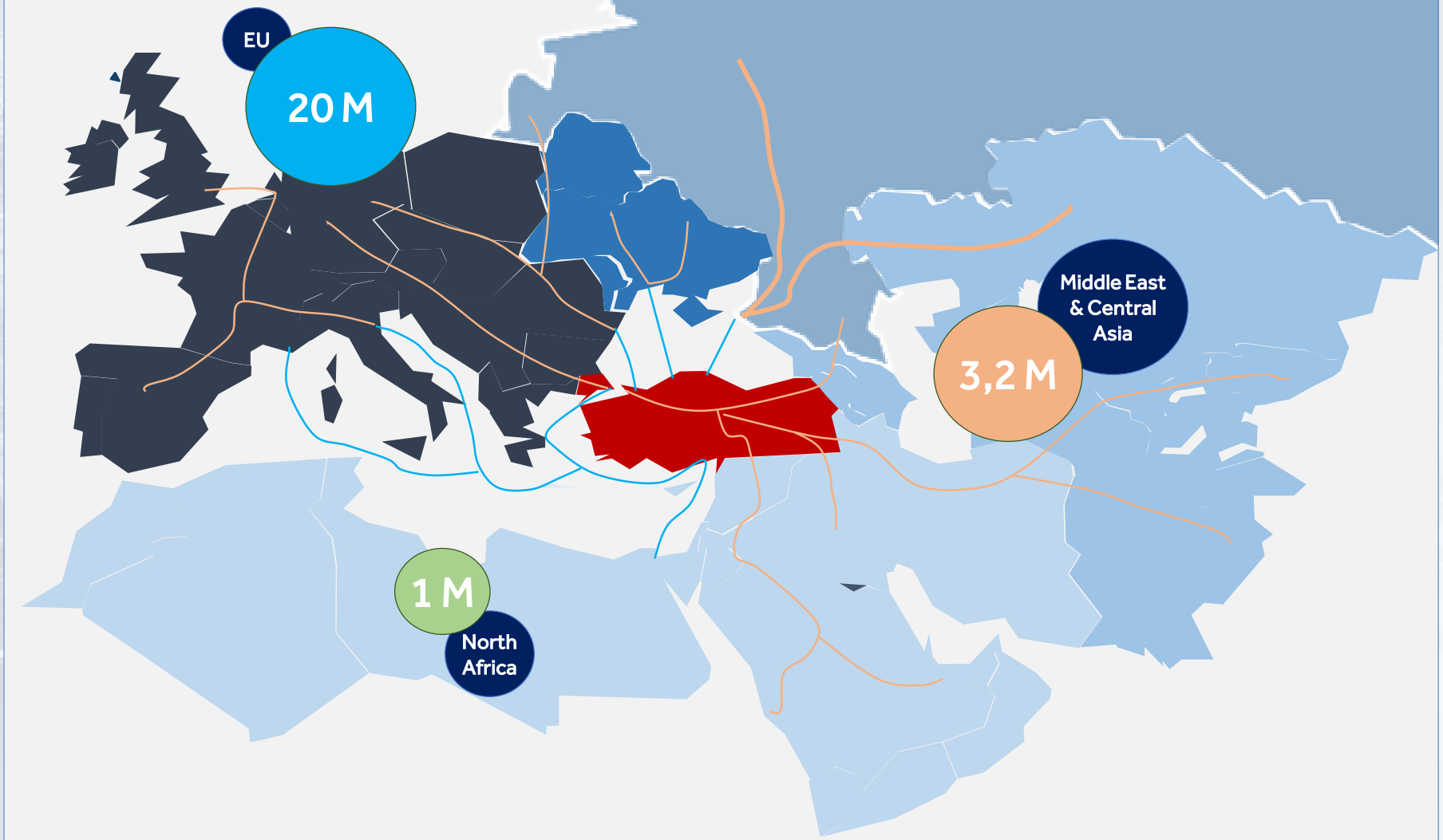
**Commercial Vehicle Sales
Thousand Units**



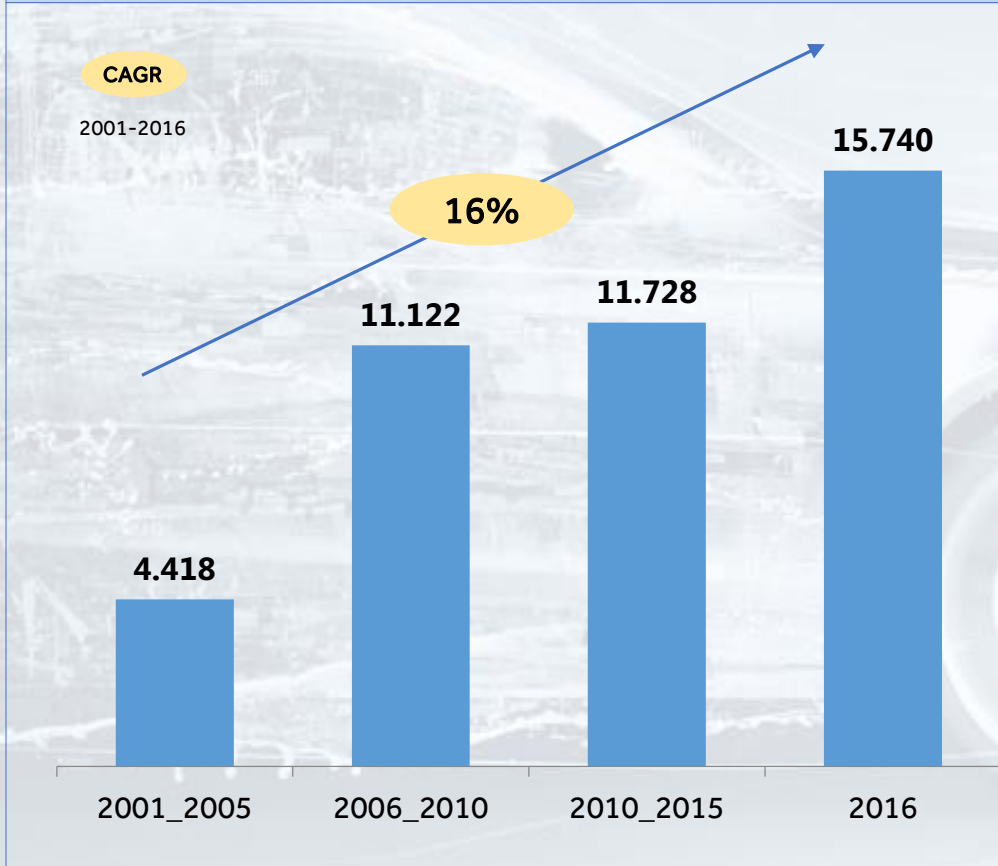
Sales by Engine Size (2016)



Market of 24 Million Vehicles: from Western Europe to Central Asia



Development of Vehicle Exports Million \$



Source: Automotive Manufacturers Association of Turkey, ACEA

Deliveries to the EU Market



Turkey
644.372 units



Japan
575.223 units



S. Korea
401.868 units



USA
254.489 units



Morocco
196.737 units

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400+ Tier 1 suppliers working directly with OEMs contribute much on the high localization rates of the cars manufactured in the country

of suppliers in the city

##

İSTANBUL

97

BURSA

105

İZMİR & SAKARYA

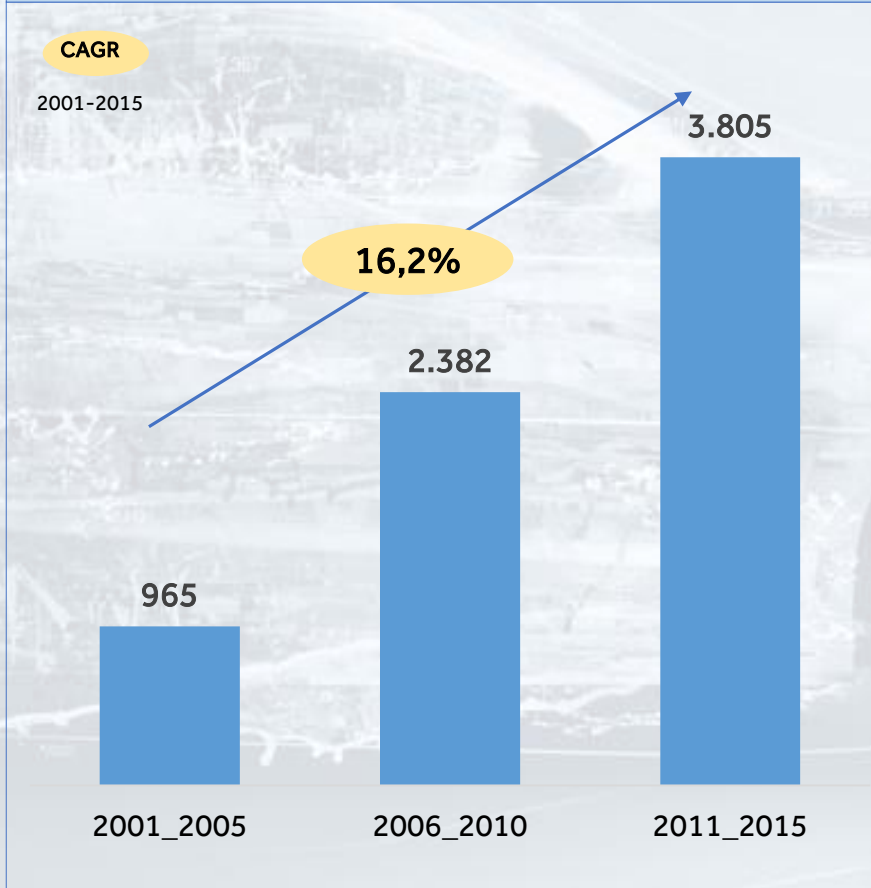
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İZMİR & MANİSA

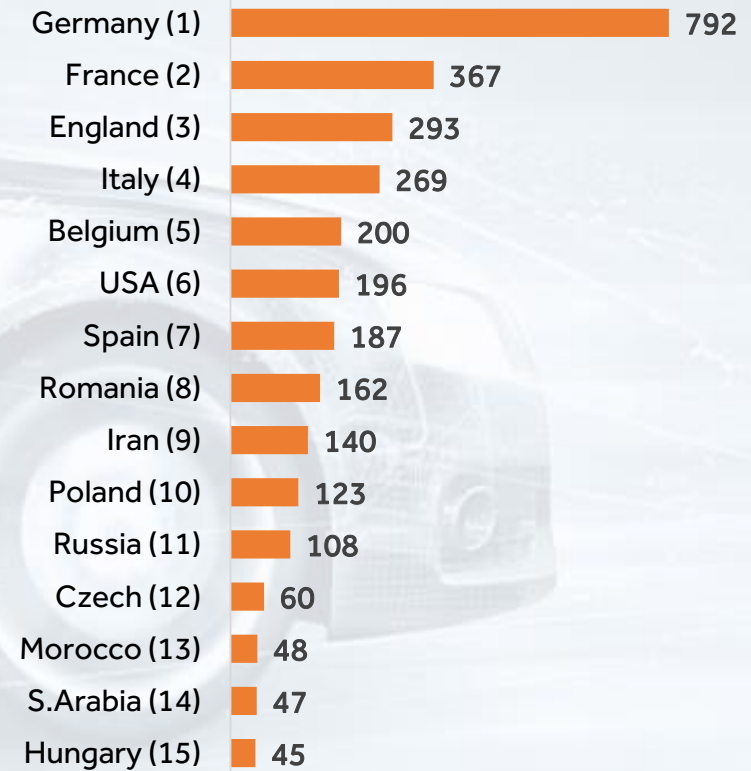
36

- Engine
- Body&Structural
- Interior
- Transmission
- Axles, Driveshaft's
- Climate Control & Engine Cooling
- Suspension
- Electric Components
- Braking
- Steering
- Wheels&Tires
- Fuel System
- Audi&Telematics
- Plastic Components
- Exhaust
- Body Glass
- Die-casting Parts
- Forging Components
- Raw Material
- Small/General Parts

Development of Component Exports Million \$



Top 15 Export Markets (2016) Million \$



Source: Turkish Statistical Institute (TurkStat)




There are more than 250 global suppliers using Turkey as a production base. 28 of them are among the largest 50 global suppliers



Major Suppliers

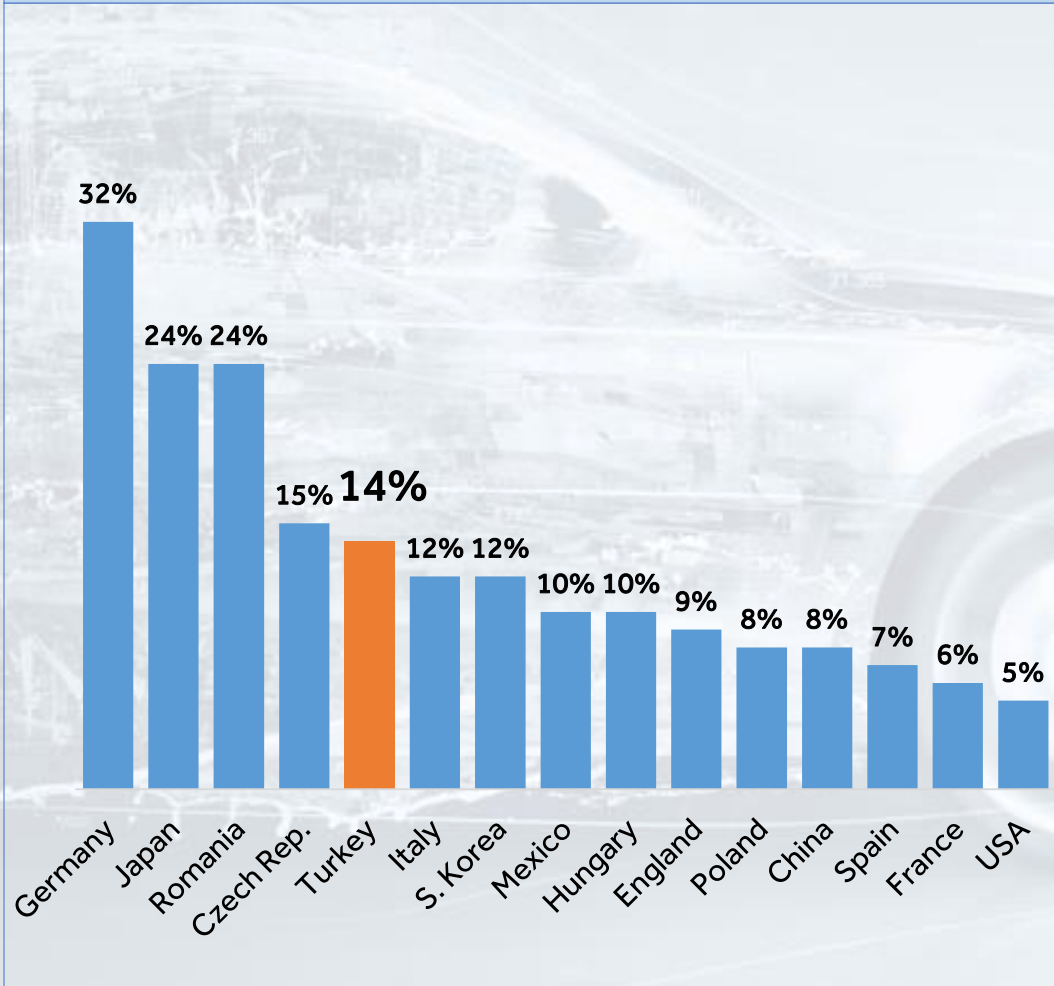
10 automotive suppliers with USD 200 Million+ revenue in 2016...



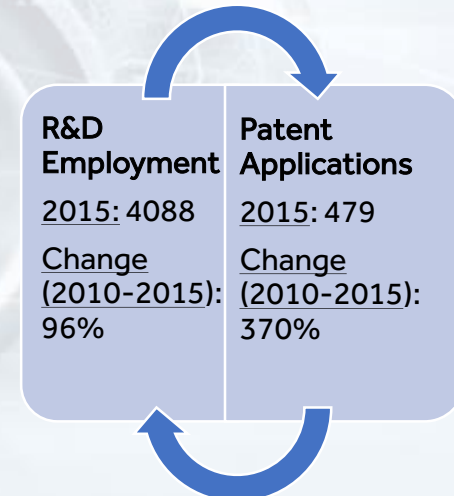
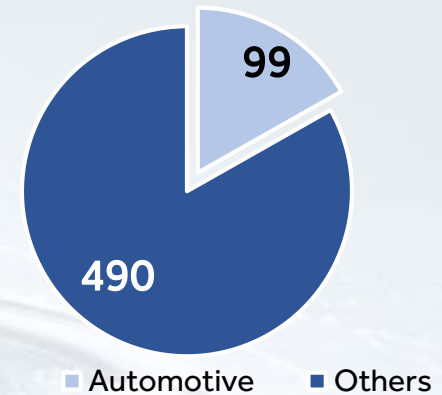
Rank	Major Suppliers	Products	2016 Revenue (Million \$)
1	 BOSCH	Brake systems, boosters, power limiters & regulators, repair kits, brake shoes, wheel brake cylinders, drum & disk brakes	901
2	 BRISA <small>BRIDGESTONE GLASSA</small>	Tyres, battery, covering	458
3	 CMS [®]	Wheels	336
4	 YAZAKI	Electrical and electronics components	330
5	 MAXION INCI <small>Çelik & Alüminyum</small>	Wheels	309
6	 GOODYEAR	Tyres	308,9
7	 DELPHI	Cables, electrical/electronic architecture systems and components, fuel pumps, fuel injectors, nozzles, valves	298
8	 Autoliv	Steering wheels, seat belt, air bags	286
9	 BEYÇELİK GESTAMP <small>KALIP ve OTO YAĞ SANAYİ PAZARLAMA ve TİCARET A.Ş.</small>	Mold, chassis systems, lock technologies, security traverse	238
10	 HEMA OTOMOTİV SİSTEMLERİ A.Ş.	Drivetrain components, engine components	224





Source: Istanbul Chamber of Industry: *Top 500 Industrial Enterprises Study*

Share of Automotive in R&D Spendings (Selected Countries)



R&D Centers (2016)



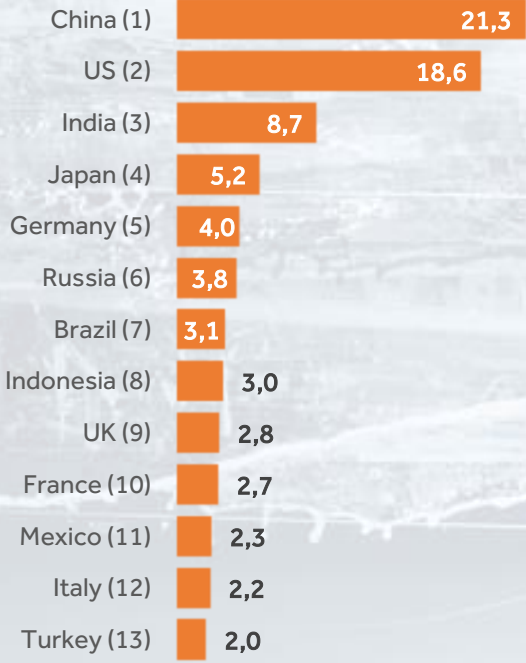
Company	Description	Operations in Turkey
	<ul style="list-style-type: none"> ❖ Established by Hans List in 1948 in Austria. ❖ Employs 9000+ engineers in its 40+ affiliates. ❖ The world's largest independent company for the development of powertrain systems with internal combustion engines as well as instrumentation and test systems. 	<ul style="list-style-type: none"> ❖ Has an office in Istanbul with 140+ engineers ❖ Aims at becoming a 'global engineering hub' ❖ One of the two exporting affiliates of AVL ❖ Planning to establish 3rd R&D center and to employ more than 200 engineers by 2018 ❖ started to work on Hybrid and autonomous car technologies. (Electric car for 2018, autonomous car for 2020) ❖ is supported by Tubitak for its works on electric and autonomous car projects
	<ul style="list-style-type: none"> ❖ Established in 1978 in Aachen, Germany ❖ Employs 4000+ researchers and developers ❖ Focusing on powertrain components engineering (mainly engine design, turbo-charger and transmission) 	<ul style="list-style-type: none"> ❖ Expanded into Turkey in 2011 with 10 engineers working in Turkey office ❖ The main focus is design and R&D consulting of powertrain and ICE for automotive sector ❖ Works on design, simulation, software development, and engine/Vehicle calibration with 50+ engineers
	<ul style="list-style-type: none"> ❖ Established in 1973 with its headquarters in Santa Oliva, Spain ❖ Employs 2100+ employees ❖ Present in 25 countries focusing on design, testing, engineering and homologation services in automotive 	<ul style="list-style-type: none"> ❖ Expanded into Turkey in 2000 ❖ There are 4 full-time engineers in Turkey office ❖ Focus is on testing of R&D consulting for automotive
	<ul style="list-style-type: none"> ❖ Established in 1927 with its headquarters in Shoreham-by-Sea, England ❖ Employs ~3000 engineers ❖ Operating in 15 countries with focus on engines, transmission and intelligent transportation systems 	<ul style="list-style-type: none"> ❖ Works together with Anova (a Turkish engineering house) for powertrain development and R&D consulting in Turkey

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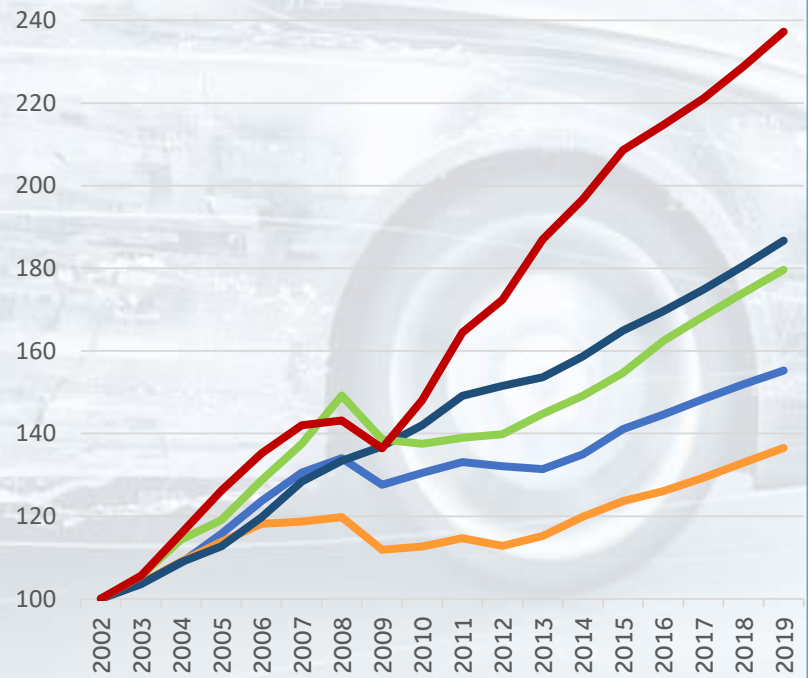


13th largest economy in the world

2016 GDP (\$Trillion, PPP)



Real GDP Growth (Index: 2002=100)



Actual

Forecast

Average Annual GDP Growth 2003-2016 %

Average Annual GDP Growth 2017-2019 %

Turkey

5.6

3.4

Poland

3.7

3.3

Romania

3.5

3.4

Czechia

2.6

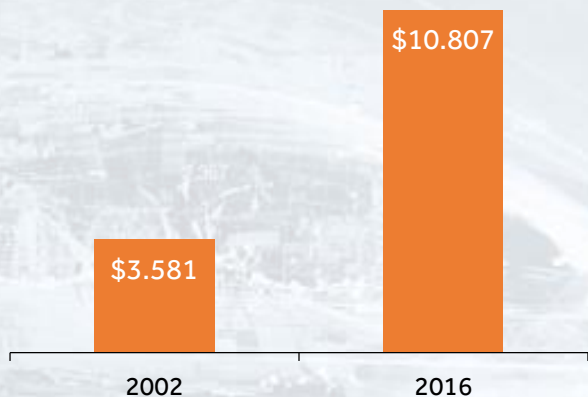
2.7

Hungary

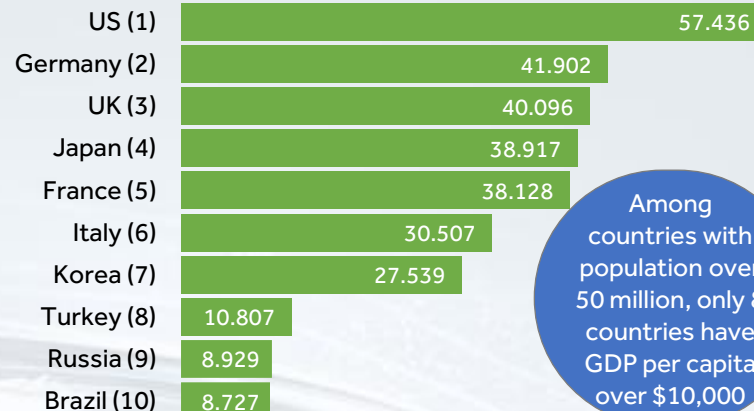
1.8

2.4

Tripling Income per capita
(GDP per capita, current prices)

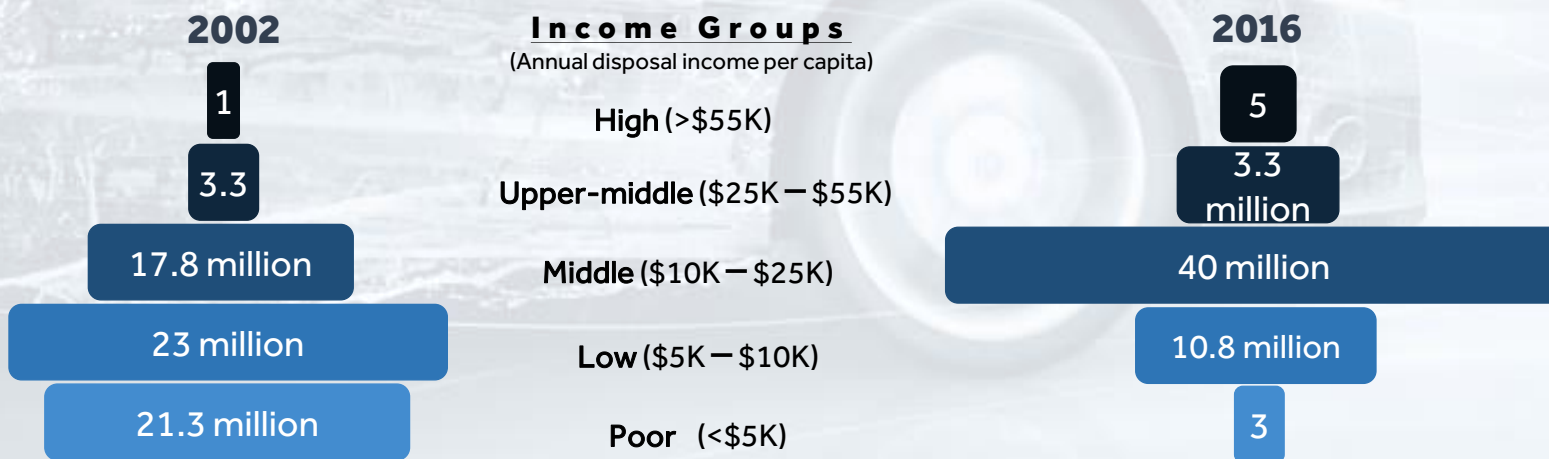


GDP per capita in countries with population over 50 million

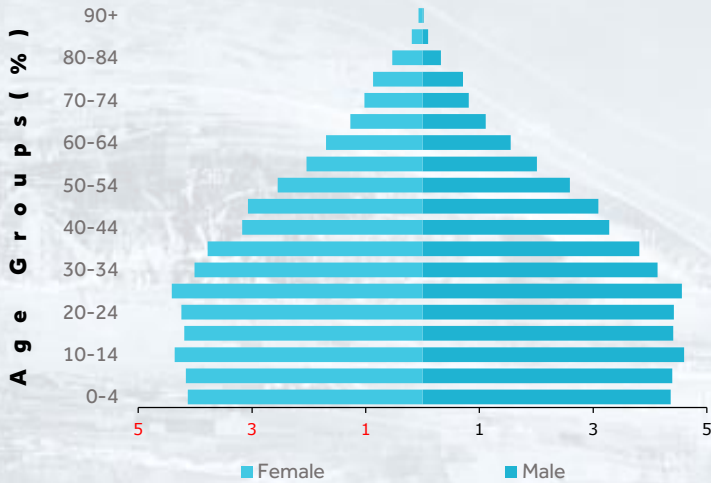


Among countries with population over 50 million, only 8 countries have GDP per capita over \$10,000

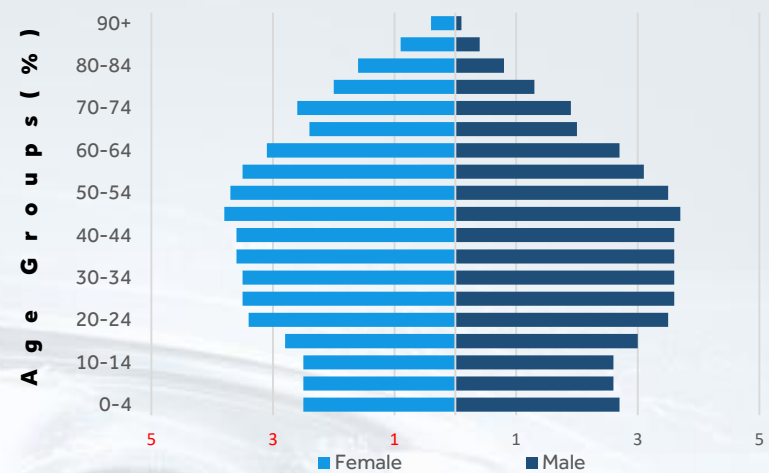
The Rise of Turkish Middle Class



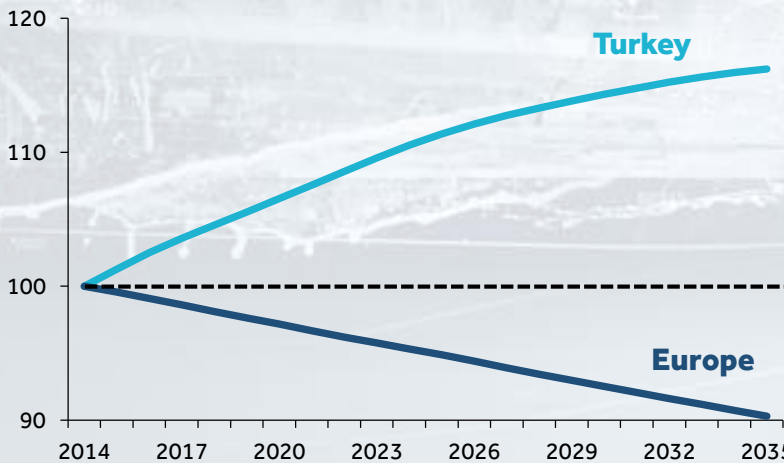
Turkey's Population Pyramid



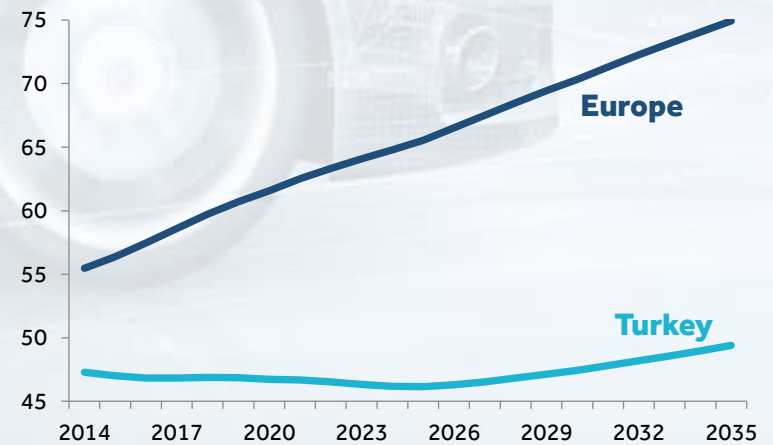
Europe's Population Pyramid

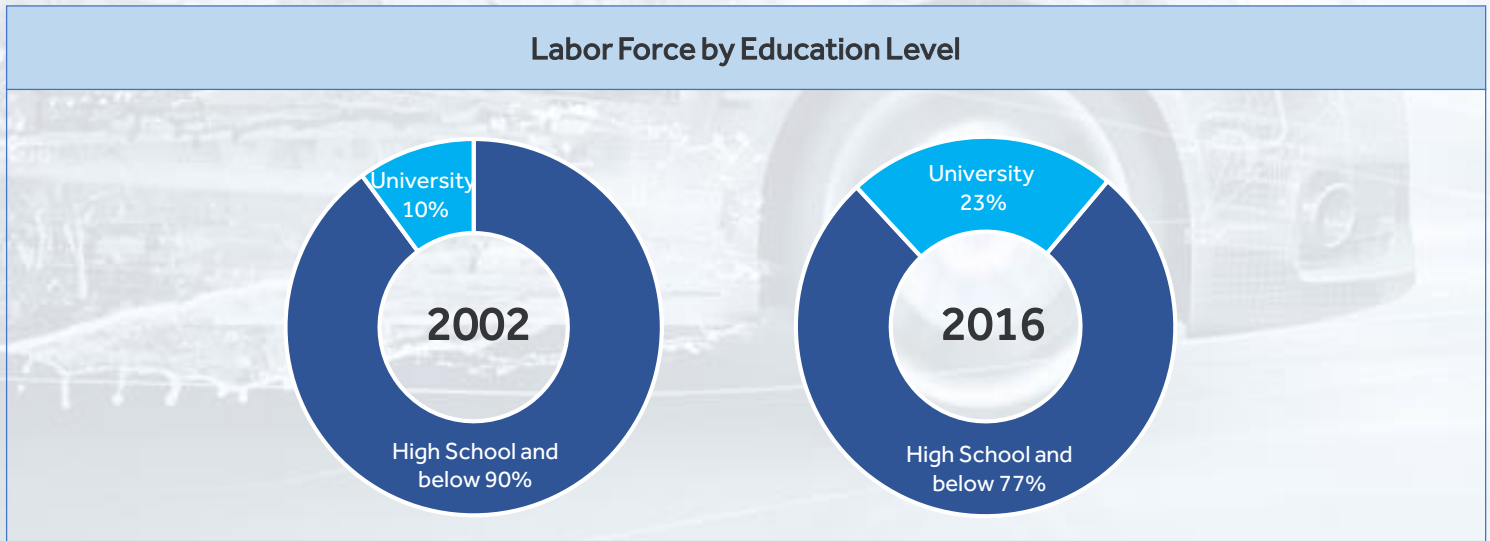
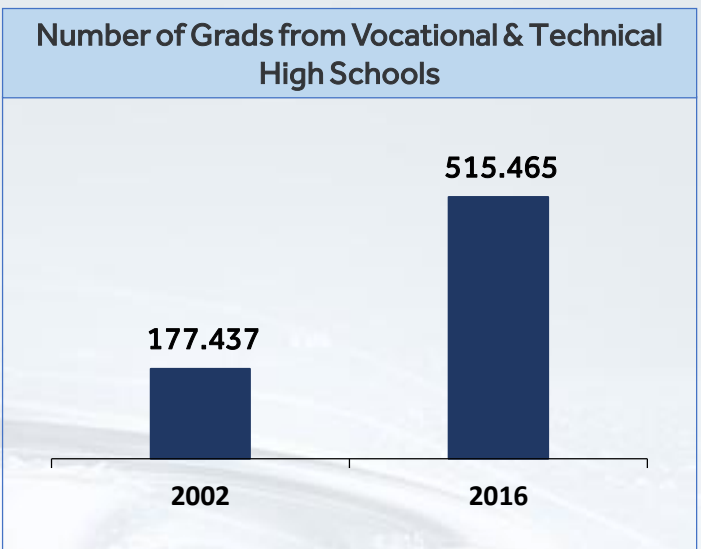
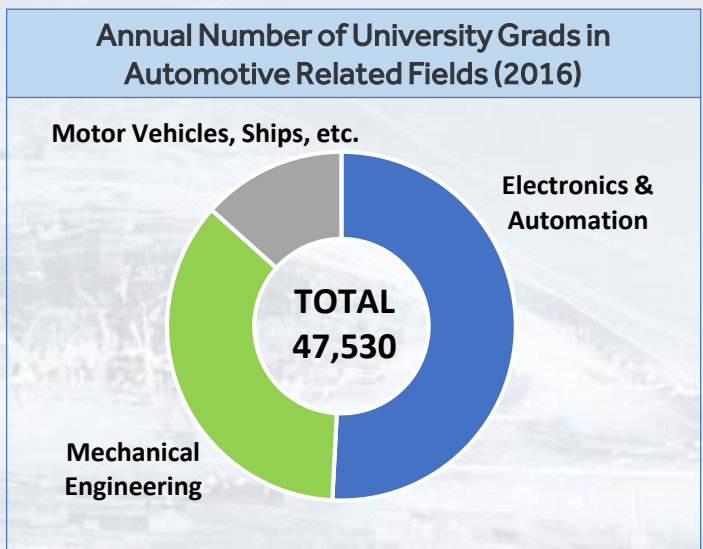


Working Age Population (15-64) Index: 2014=100

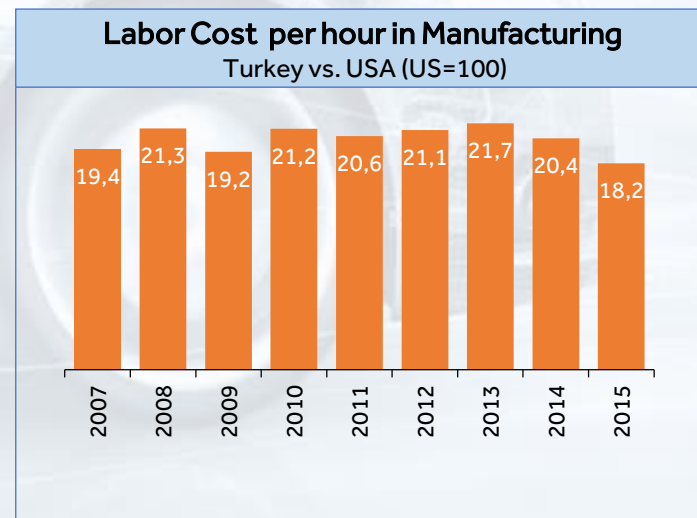
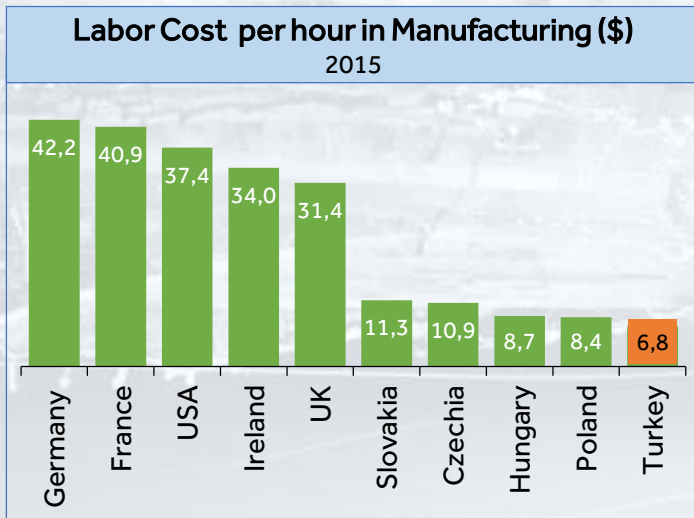
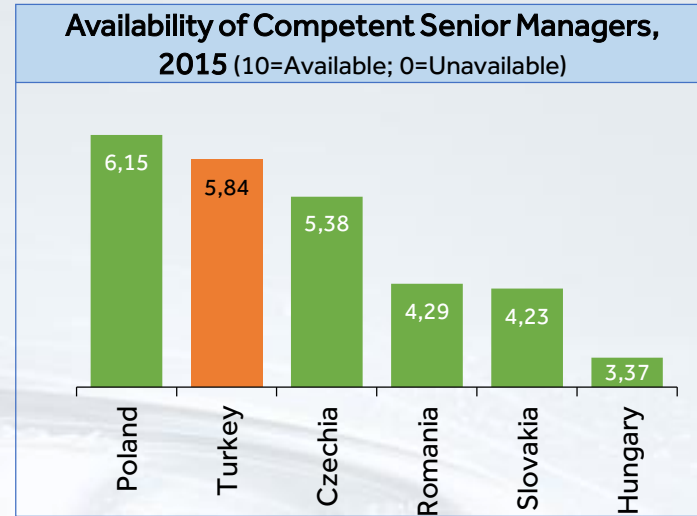
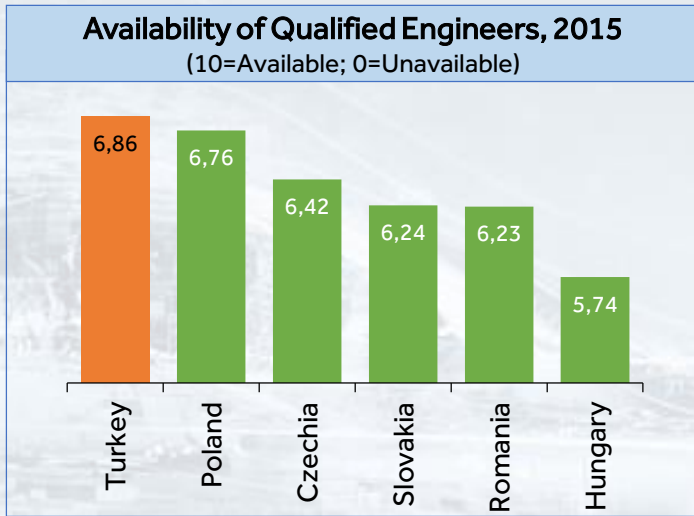


Total Dependency Ratio (%) (Age 0-14 & Age 65+) / Age 15-64





Source: Higher Education Council of Turkey, Turkish Statistical Institute



Source: IMD World Competitiveness Yearbook Executive Opinion Survey based on an index from 0 to 10; Eurostat, OECD, BLS, Turkstat

**İhsaniye Automotive
Vocational High School**

In 2014, a 2-year automotive vocational high school under Kocaeli University was established as a result of strong cooperation of the university, OEM, a foundation, and local municipality. Now, the high-school provides the company and whole industry with qualified employees having strong capabilities. There are many examples of that kind of collaboration in Turkish automotive industry. Qualified employees, qualified products...

Ford

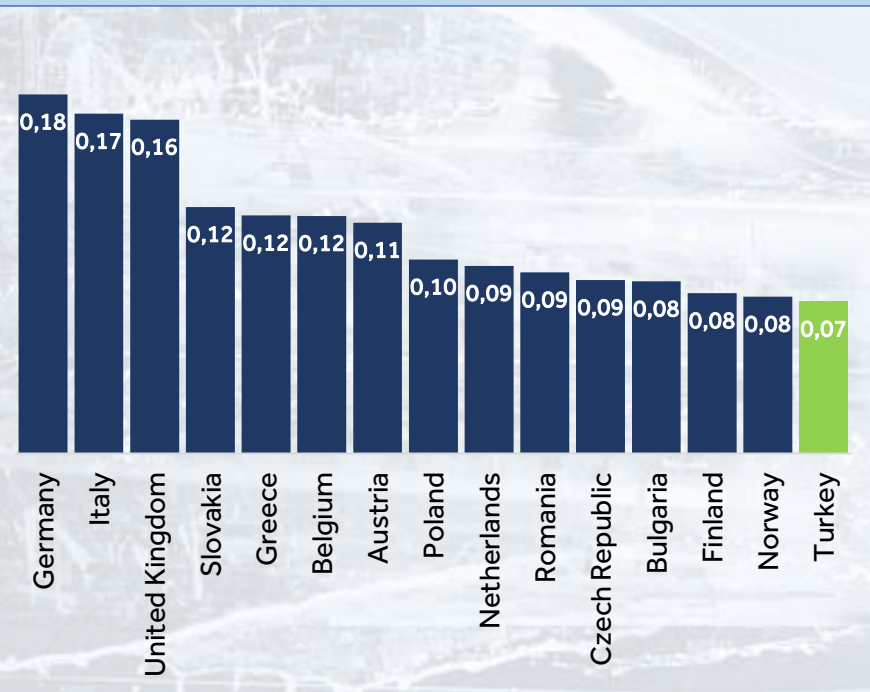
**Kocaeli
University**

**İhsaniye
Automotive
Vocational
High-School**

**Koç
Foundation**

**Local
Municipality**

Electricity prices, USD/kWh, 2015

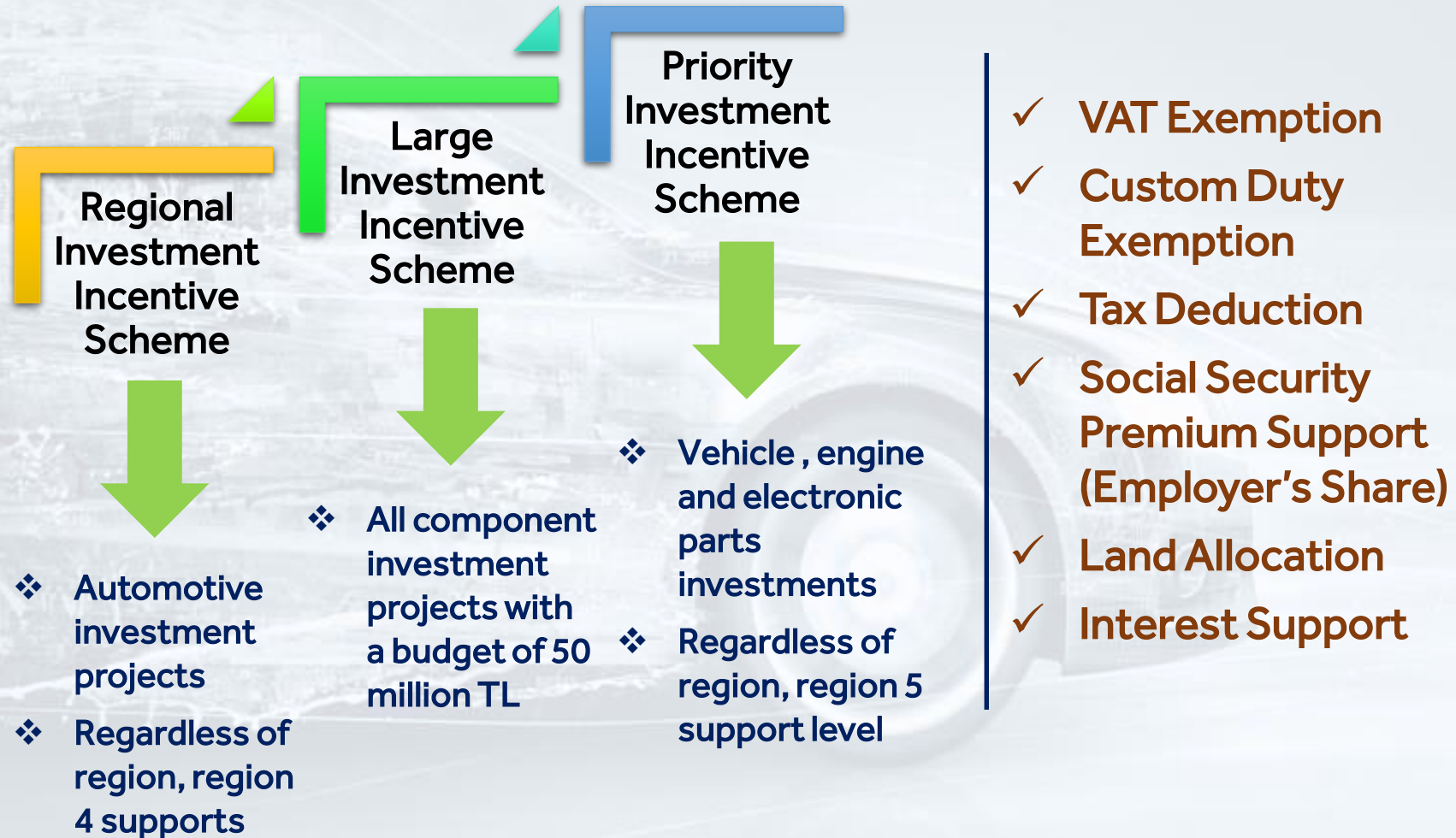


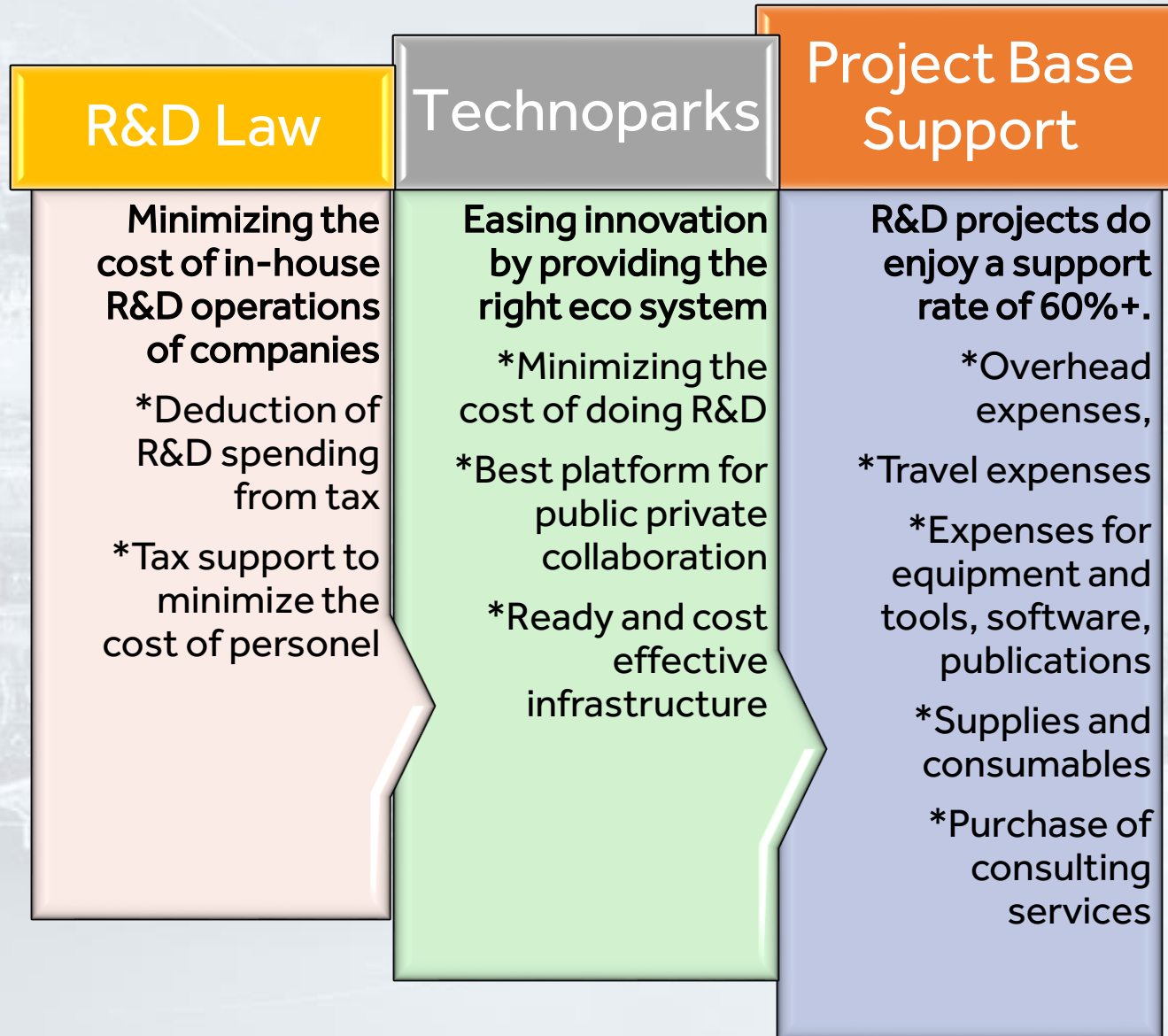
Natural Gas prices, USD/Gigajoules (gross calorific value), 2015



1 Peer countries include Romania, Slovenia, Hungary, Czech Republic, Poland

Source: Eurostat, All taxes and levies included





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- Foundation of first factory was laid in 1959
- Has total capacity of production of 415.000 cars per year
- Commercial vehicle manufacturing hub of Ford Europe
- Has Turkey's largest R&D center located in a single campus in Istanbul
- Exports worth \$ 3.8 billion in 2016 toward 83 countries
- One of the 3 largest R&D center of Ford Global



- The facility was established in 1968
- Has the capacity of 450.000 vehicles per year
- Employs more than 7000 employees
- Only factory in the country which manufactures both passenger and light commercial vehicles
- R&D center in Bursa is the only center of Fiat outside Italy serving the European market



TOYOTA

- Invested almost \$2 billion since the entry to the country
- Over 3500 staff, 280.000 annual production capacity
- Almost 85% of the production exported to more than 50 countries
- Started the production of first hybrid vehicle in Turkey, C-HR, with an investment worth EUR 350 million



- Operational in Turkey since 1992
- Production of Civic model started in 1997
- Izmit factory, 50.000 annual production capacity with over 1000 employees
- Invested almost \$ 500 million since the beginning
- Exports 'Civic' to 46 countries throughout the World



RENAULT

- One of the biggest factory of Renault with annual production capacity of 360.000 cars and 750.000 engines
- Total exports in last 15 years exceed \$ 30 billion
- Flagship company in passenger car production for years
- 6300+ employees, almost 1500 of which is white-collar



HYUNDAI

- Stepped into Turkish market in 1990
- Started to manufacture in 1997 in Izmit factory
- Has production capacity of 245.000 vehicles annually
- 3000+ employees
- Positioned as the manufacturing hub for European markets



- Operational since 1967
- First production in 1968, first export in 1970
- Has two facilities: Bus factory in Istanbul, Truck factory in Aksaray
- Almost EUR 1 billion total investment with 6000 employees



- The German giant began operations in Turkey in 1966
- MAN's first factory outside Germany
- Largest integrated bus company of MAN Global
- Has 2000 annual bus production capacity, 2000+ employees
- Production base of premium Neoplan bus brand
- Exports to 41 countries including European ones.





INVEST IN TURKEY

INVESTMENT SUPPORT & PROMOTION AGENCY OF TURKEY

Attached to the Prime Ministry

Private sector approach with public sector capabilities

Acting as your solution partner;

OUR SERVICES

ISPAT assists investors before, during and after their entry in Turkey, providing them with professional consulting services including but are not limited to:

- ✓ General and customized business information
 - ✓ Sectoral analysis and reports
- ✓ Site selection support to find appropriate location/land for your investment
- ✓ Arrangements of meetings with governmental bodies and other stakeholders
 - ✓ Matchmaking with local partners and establishing business linkages
 - ✓ Facilitating your investment at all stages
 - ✓ Aftercare Services
 - ✓ Project Launch Services
 - ✓ Facilitating your visit to Turkey



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