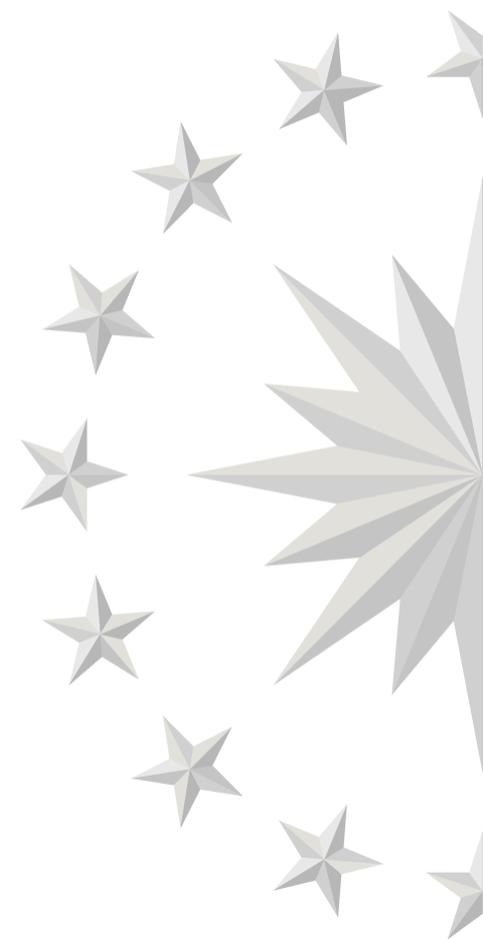




WHY INVEST IN THE TURKISH AUTOMOTIVE INDUSTRY?



AGENDA

1 Executive Summary

2 Turkish Automotive Industry Outlook

3 Suppliers and Engineering in the Industry

4 Growth Drivers in Turkey

5 Success Stories



TURKEY - A STRONG PRODUCTION AND ENGINEERING HUB FOR THE GLOBAL AUTOMOTIVE VALUE CHAIN

TURKISH AUTOMOTIVE INDUSTRY



- High level of integration with the global automotive industry
- 15th largest automotive producer in the World, with an 85% average export rate
- Vehicles of Turkish origin hold a leading position among the vehicles coming from outside of the 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, where 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 competitive advantages
- Because of their profitable business in the country, companies in Turkey continue to invest in the country's future



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1

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Turkish Automotive Industry Outlook

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Suppliers and Engineering in the Industry

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Growth Drivers in Turkey

5

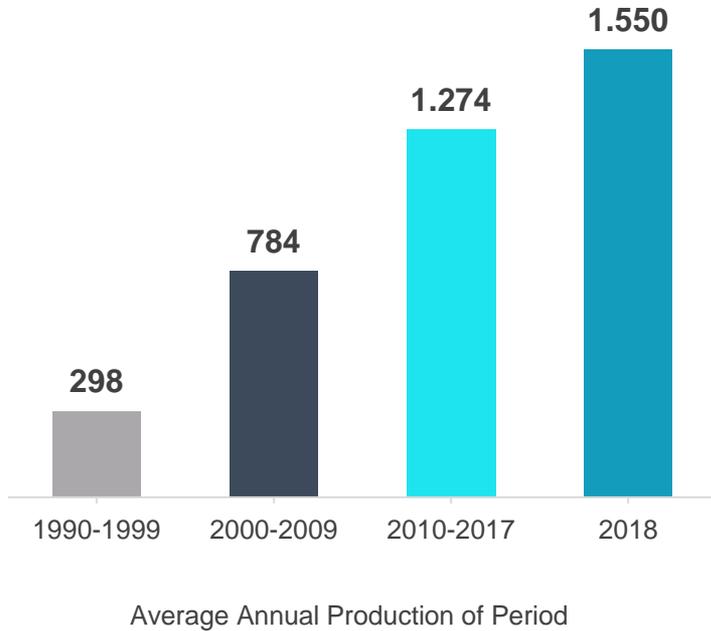
Success Stories



TURKEY HAS BECOME AN IMPORTANT PART OF THE GLOBAL VALUE CHAIN OF INTERNATIONAL OEMS OVER THE LAST 25 YEARS

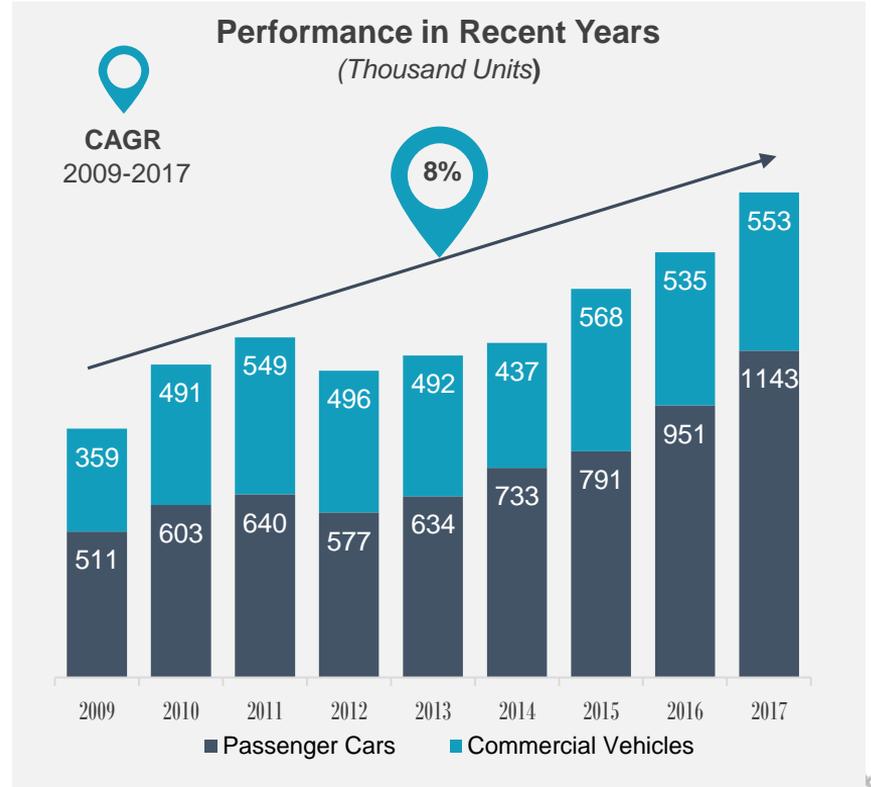
Development of Vehicle Production

(Thousand Units)

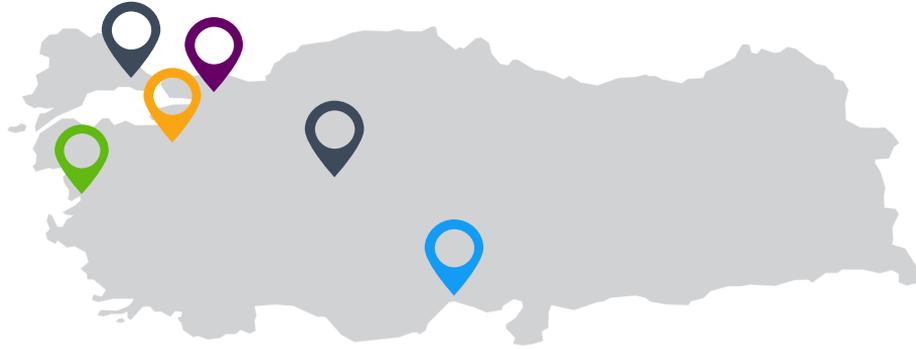


Performance in Recent Years

(Thousand Units)



THE ENGAGEMENT OF 15 OEMS IS NOT LIMITED TO PRODUCTION. THEY ALSO BENEFIT FROM THE ENGINEERING SKILLS OF TURKEY



Izmit & Sakarya



Bursa



Ankara & Aksaray



Izmir



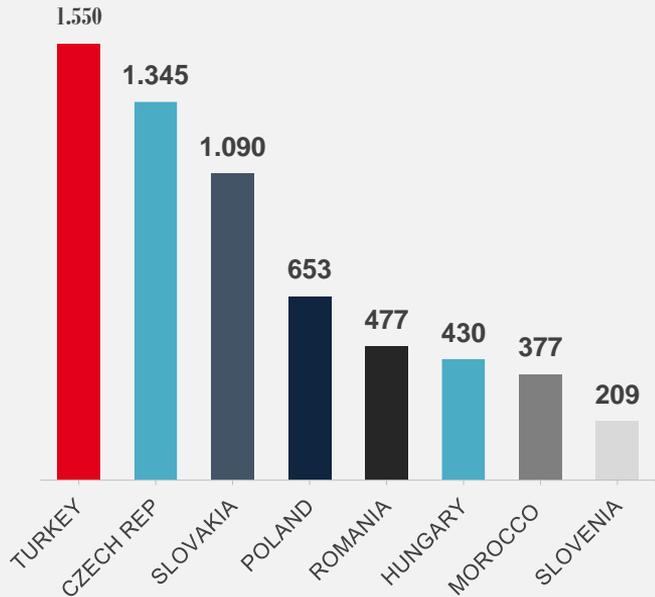
Adana



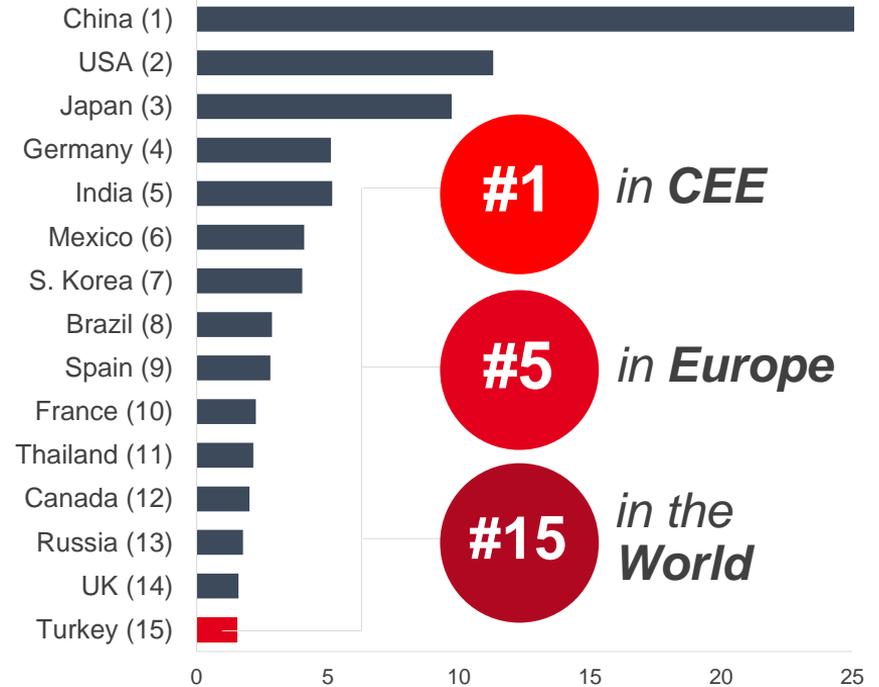
- **9 R&D centers** support not only the local operations, but also the operations in other plants of parent companies.
- **Ford Otosan's R&D department** is one of Ford's 3 largest global R&D centers.
- **Fiat's R&D center in Bursa** is the company's only center outside of Italy serving the European market.
- **For Courier, Ford's light commercial vehicle**, the Yeniköy plant is the sole production center in the world.
- **Toyota's C-HR** and **Corolla Hybrid models** are produced in Turkey for World markets
- **Daimler R&D** is the center of competence for some parts and it carries global responsibility.
- **With more than 50 thousand employees**, automotive OEMs are one of the major employers in the manufacturing industry.

TURKEY, THE LEADER OF CEE IN VEHICLE PRODUCTION, CONTINUES TO CLIMB THE RANKS IN WORLD AUTO PRODUCTION

Automotive Production in 2018
(Thousand Units)

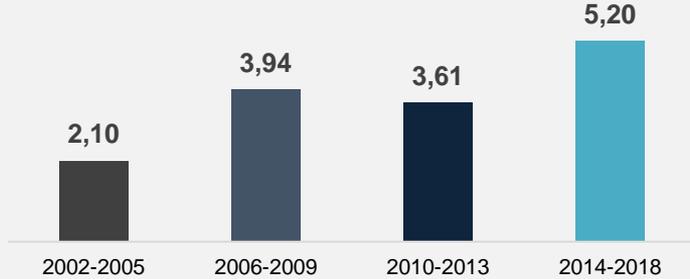


World Auto Production in 2018
(Million Units)

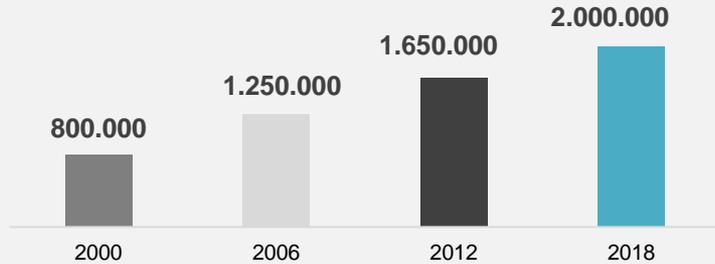


ALMOST \$15 BILLION INVESTED BETWEEN 2002-2018;
OEMS HONED THEIR R&D SKILLS AND MANUFACTURING CAPABILITIES

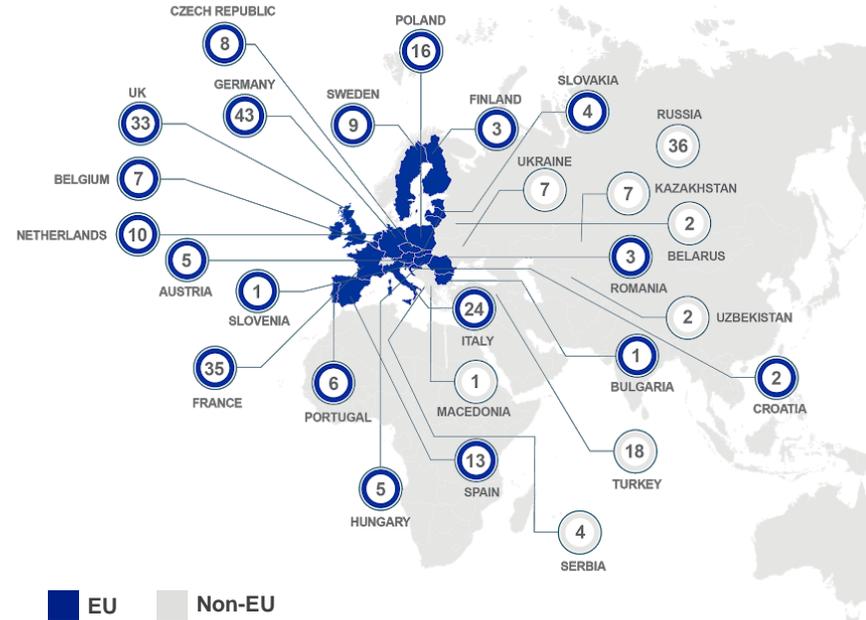
OEM Investment Stock - Billion USD



Development of Production Capacity

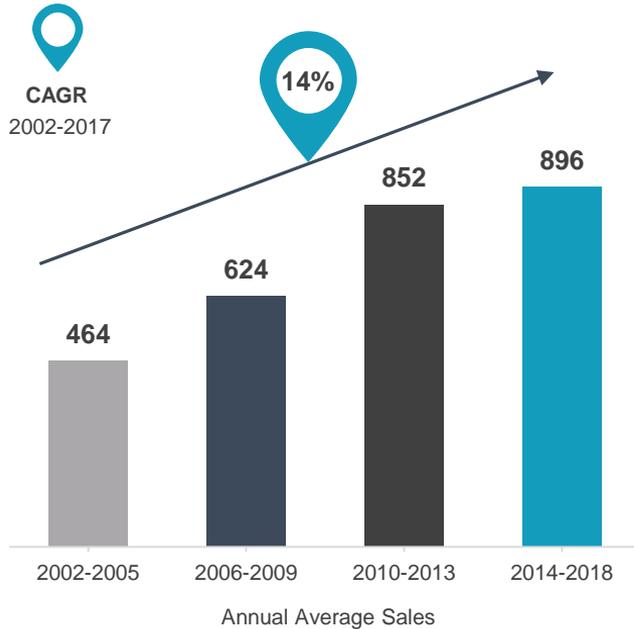


Automotive Plants in Europe

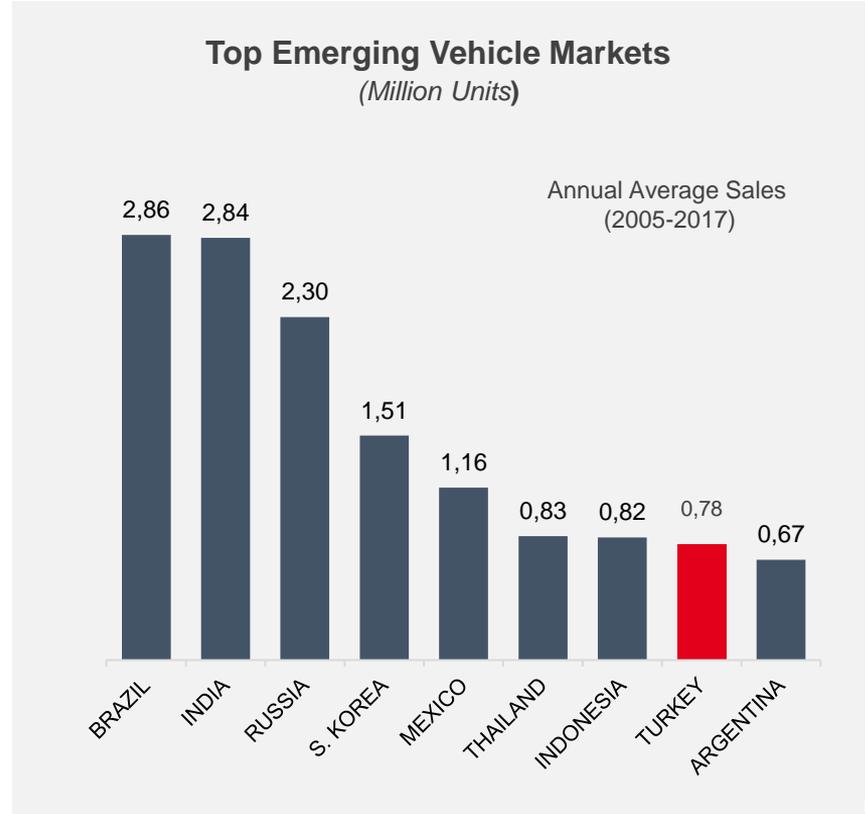


THE INCREASE IN THE PURCHASING POWER OF TURKISH PEOPLE HAS PAVED THE WAY FOR RECORD SALES

Change in Vehicle Sales
(Thousand Units)

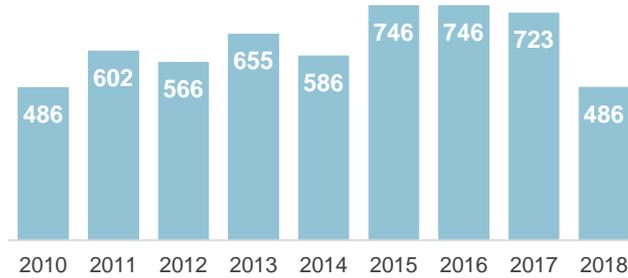


Top Emerging Vehicle Markets
(Million Units)

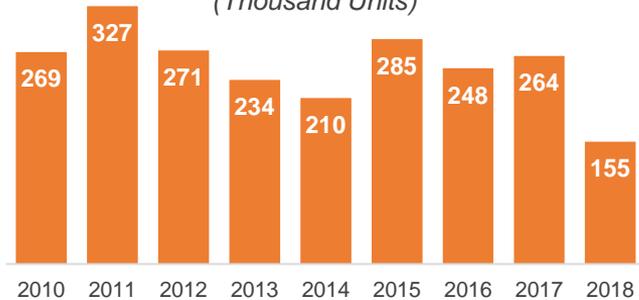


PASSENGER CAR SALES OUTNUMBER COMMERCIAL VEHICLES NEARLY 3 TO 1. SMALL ENGINE CARS DOMINATE THE MARKET

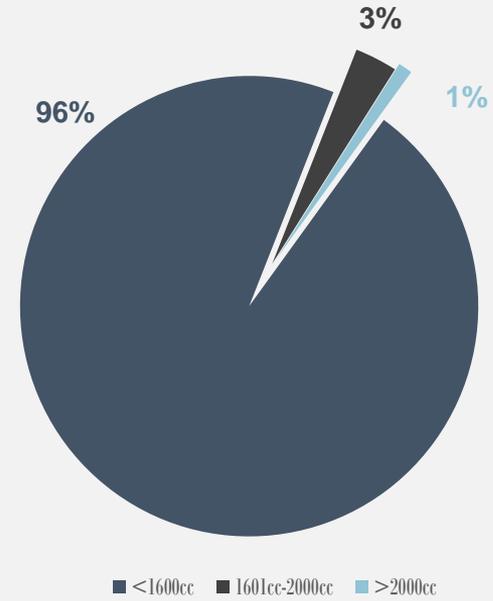
Passenger Car Sales
(Thousand Units)



Commercial Vehicle Sales
(Thousand Units)



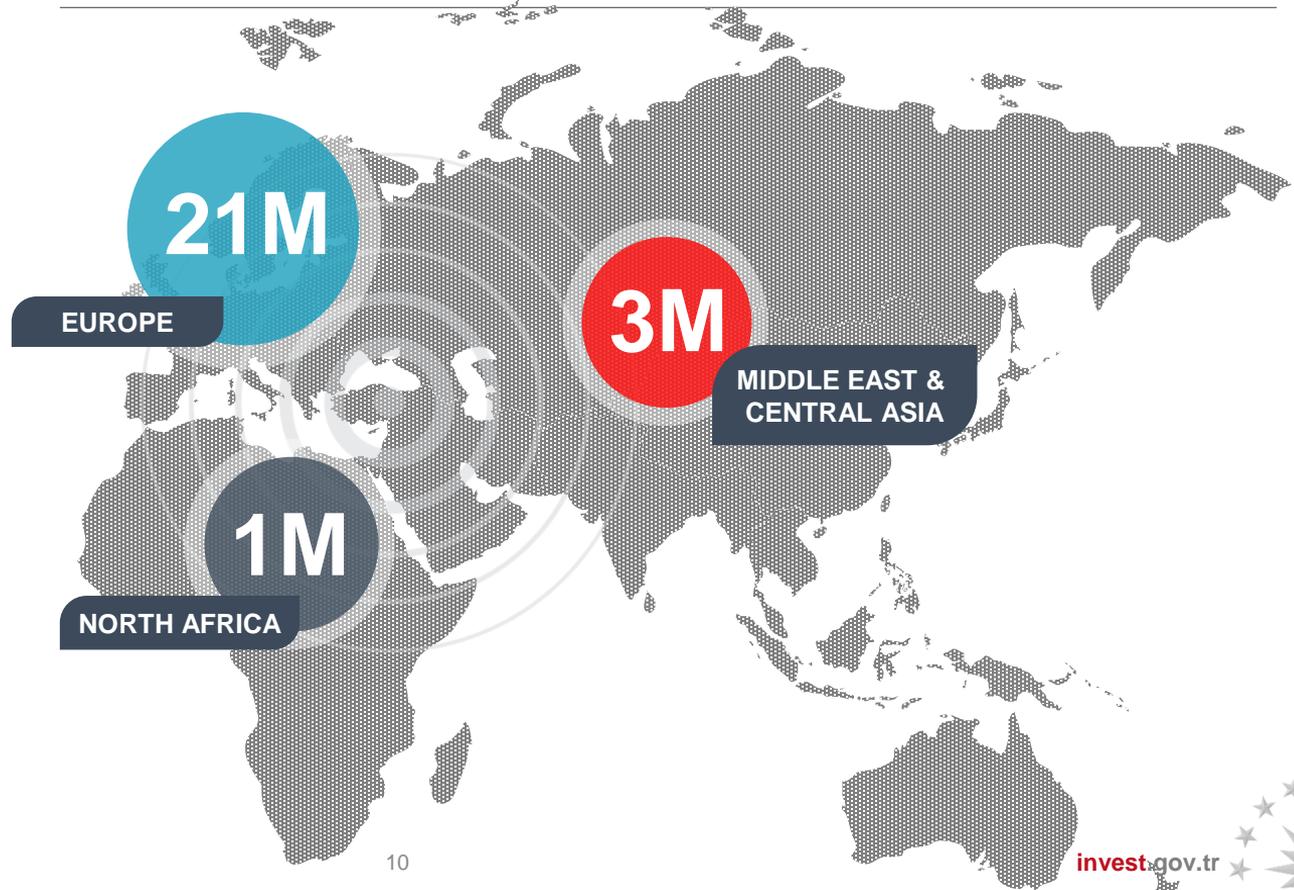
Sales by Engine Size
(2018)



THE MARKETS AROUND TURKEY
-FROM WESTERN EUROPE TO CENTRAL ASIA- HAVE COMBINED
ANNUAL SALES VOLUME OF OVER 25 MILLION VEHICLES

A Market of
25 Million Vehicles:
from **Western Europe** to
Central Asia

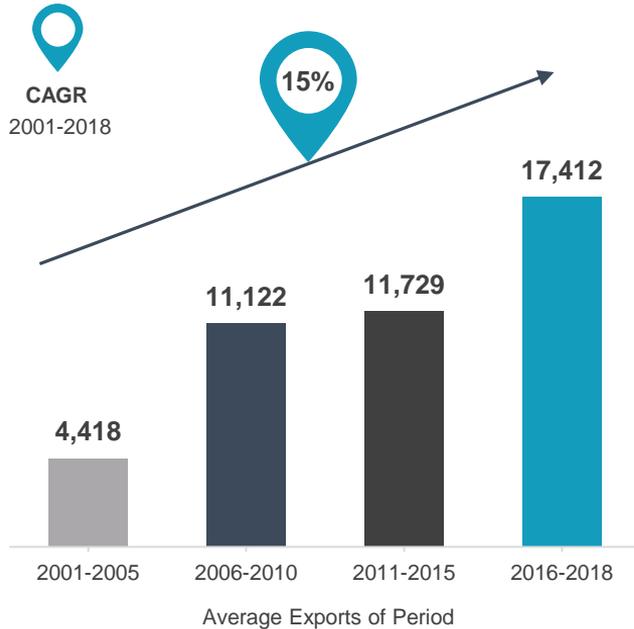
(2017)



TURKEY IS THE LARGEST EXPORT BASE OF GLOBAL OEMS OUTSIDE OF THE EU, WITH AN AVERAGE EXPORT RATE OF 85%

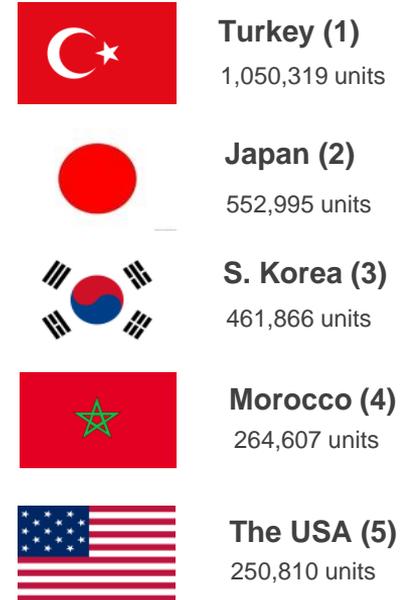
Development of Vehicle Exports

(Million USD)



Deliveries to the EU Market

(2017)



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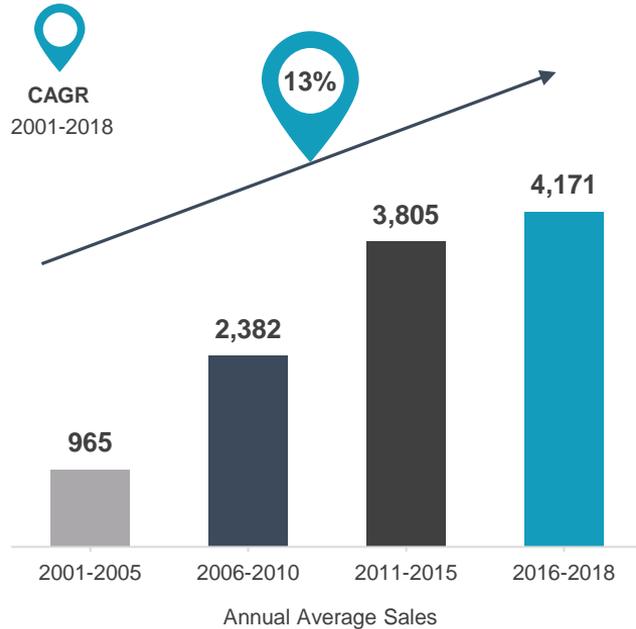


400+ TIER 1 SUPPLIERS WORKING DIRECTLY WITH OEMS
CONTRIBUTE GREATLY TO THE HIGH LOCALIZATION
RATES OF THE CARS MANUFACTURED IN THE COUNTRY

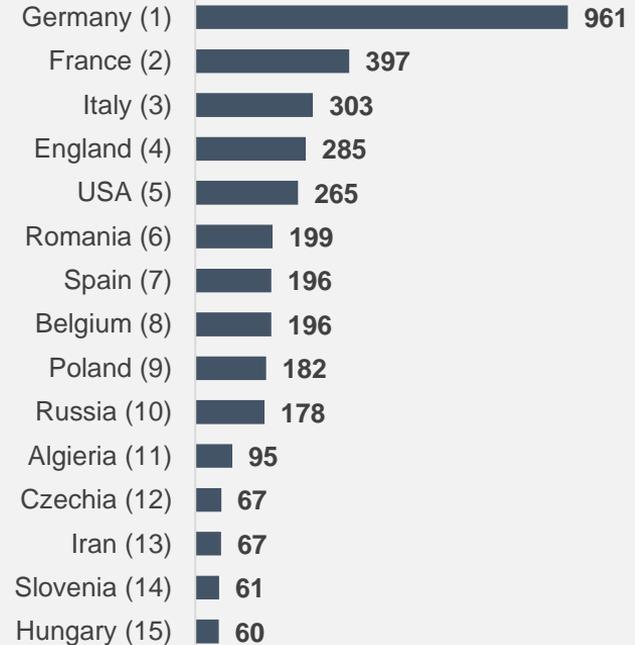


IN LINE WITH GLOBAL DEVELOPMENTS, COMPONENT EXPORTS HAVE INCREASED BY 13% CAGR OVER THE PAST 16 YEARS, REACHING DIVERSIFIED MARKETS ALL AROUND THE WORLD

Development of Component Exports (Million USD)

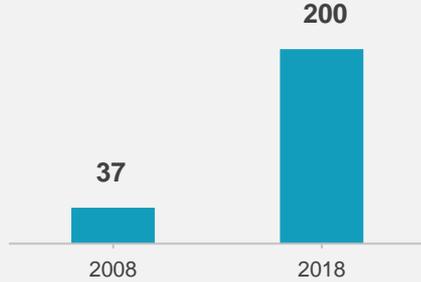


Top 15 Export Markets (2018) (Million USD)



THERE ARE MORE THAN 250 GLOBAL SUPPLIERS USING TURKEY AS A PRODUCTION BASE. 28 OF THEM ARE AMONG THE 50 LARGEST GLOBAL SUPPLIERS

Employment (x1000)



*Employment data includes all the firms in motor vehicle industry



 İZMİT & SAKARYA



 BURSA



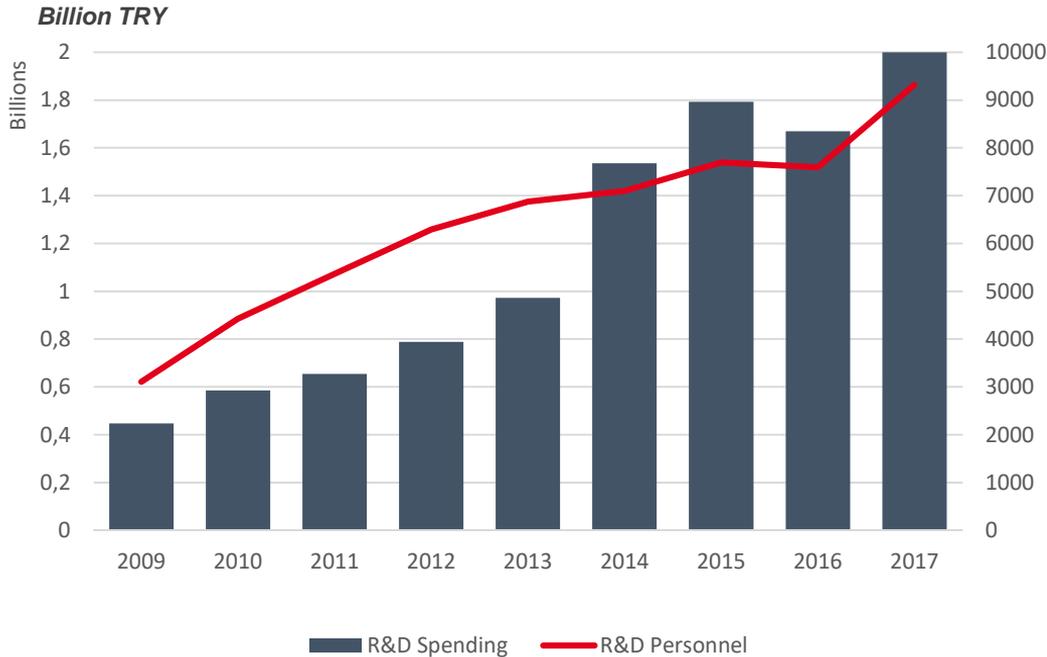
 İZMİR



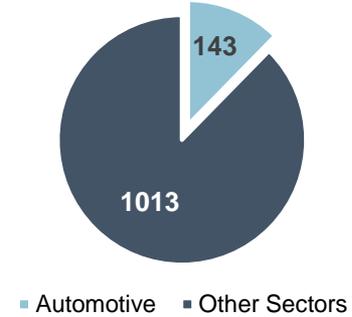
Rank	Major Suppliers	Products	2017 Revenue (Million \$)
1		Brake systems, boosters, power limiters & regulators, repair kits, brake shoes, wheel brake cylinders, drum & disk brakes	1,051
2		Tires, batteries, coverings	572
3		Electrical and electronics components	432
4		Wheels	420
5		Tires	400
6		Steering wheels, seat belts, air bags	375
7		Tires	366
8		Wheels	324
9		Cables, electrical/electronic architecture systems and components, fuel pumps, fuel injectors, nozzles, valves	300
10		Molds, chassis systems, lock technologies	292



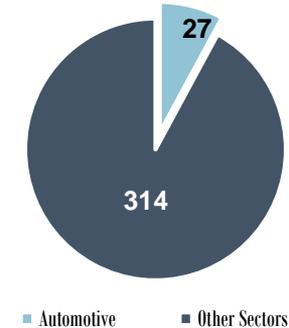
R&D Spending and Employment in the Automotive Industry



R&D Centers (2018)



Design Centers (2018)



TURKEY IS A KEY LOCATION FOR AUTOMOTIVE R&D AND ENGINEERING

Company	Description	Operations in Turkey
<p>AVL</p> 	<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 250+ engineers Aims to become a 'global engineering hub' One of the two exporting affiliates of AVL started to work on Hybrid and autonomous car technologies. (Electric car for 2019, autonomous car for 2020) Is supported by Tubitak for its works on electric and autonomous car projects
<p>FEV GmbH</p> 	<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 the Turkey office The main focus is design and R&D consulting of powertrain and ICE for the automotive sector Works on design, simulation, software development, and engine/Vehicle calibration with 50+ engineers
<p>Idiada</p>  <p>IDIADA</p>	<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 certification services in automotive 	<ul style="list-style-type: none"> Expanded into Turkey in 2000 There are 4 full-time engineers in the Turkey office Focus is on testing of R&D consulting for automotive
<p>Ricardo</p> 	<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, transmissions, 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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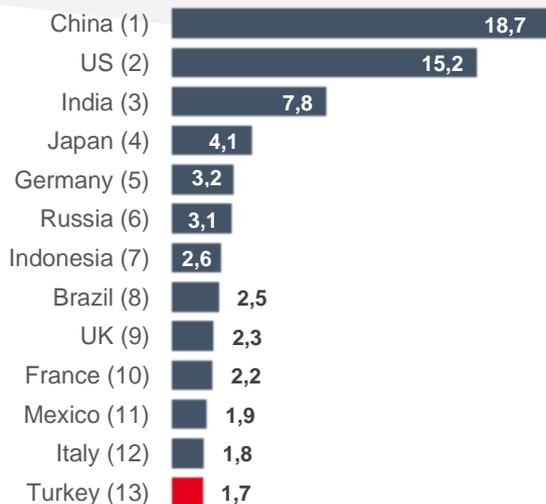
5 Success Stories



**13TH LARGEST ECONOMY
IN THE WORLD**



2018 GDP (USD Trillion, PPP)



Actual
AVERAGE ANNUAL
GDP GROWTH (%),
2003-2018

5.6

TURKEY

4.0

POLAND

3.9

ROMANIA

2.8

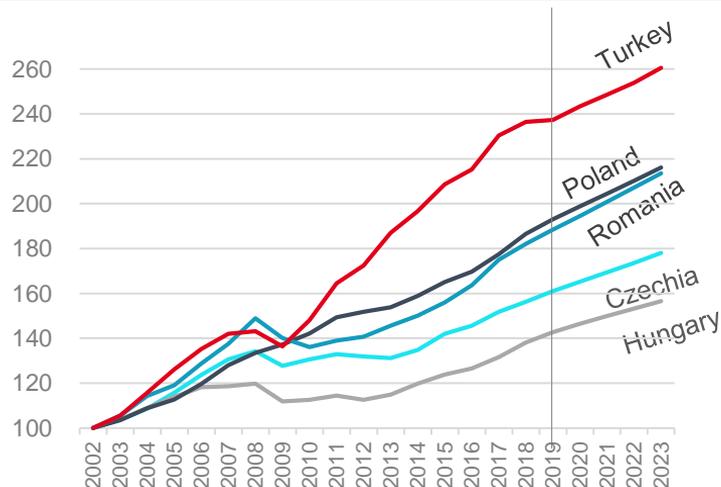
CZECHIA

2.1

HUNGARY

REAL GDP GROWTH

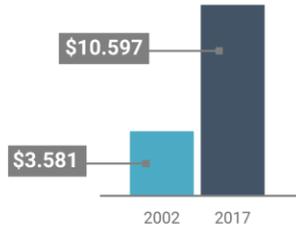
(INDEX: 2002=100)



TURKEY'S ECONOMIC GROWTH HAS PAVED THE WAY FOR THE EMERGENCE OF A SIZEABLE MIDDLE-CLASS...

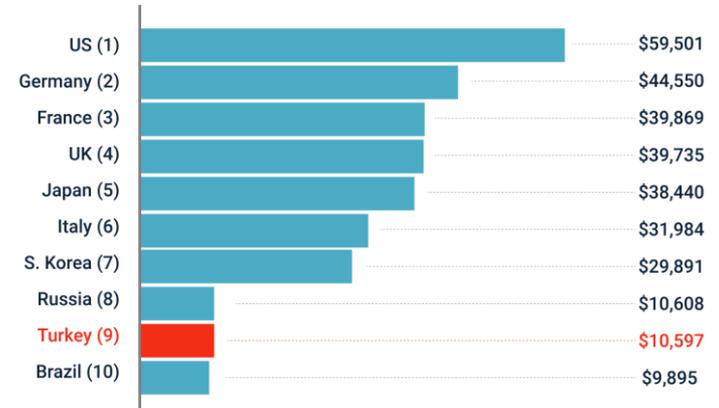
TRIPLING INCOME PER CAPITA

(GDP PER CAPITA, CURRENT PRICES)



Among countries with population over 50 million, only 9 countries have GDP per capita over USD 10,000

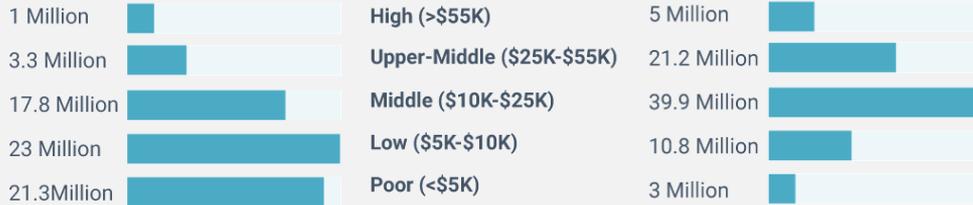
GDP PER CAPITA IN COUNTRIES WITH POPULATION OVER 50 MILLION



2002

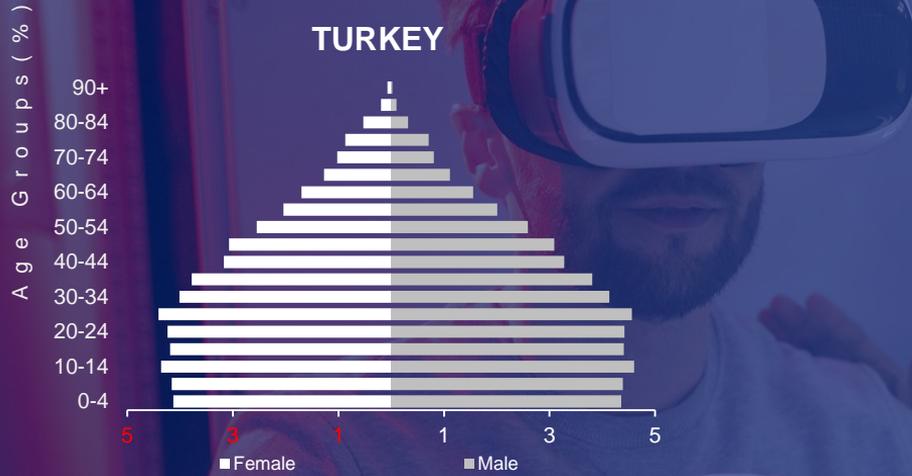
INCOME GROUPS

2016

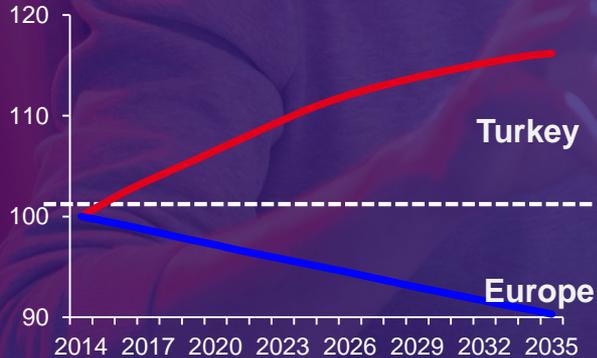


FAVORABLE DEMOGRAPHICS

...HALF OF POPULATION UNDER AGE 30



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

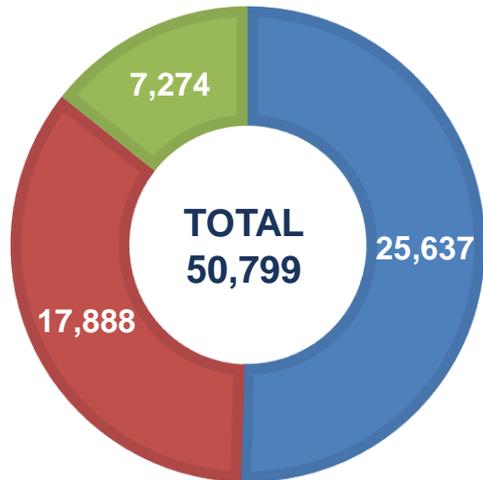


Total Dependency Ratio (% (Age 0-14 & 64)/Age 15-64)



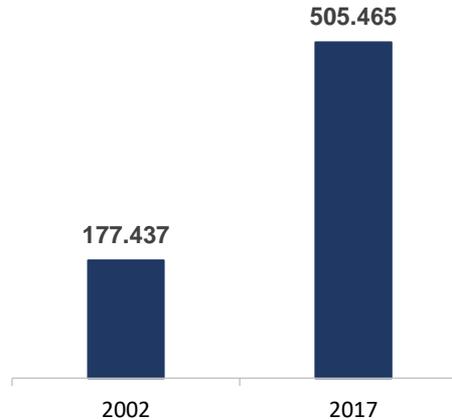
TURKEY'S EDUCATION SYSTEM HAS BEEN UPGRADED TO SUPPORT A SKILLED LABOR POOL

ANNUAL NUMBER OF UNIVERSITY GRADS IN AUTOMOTIVE RELATED FIELDS (2017)

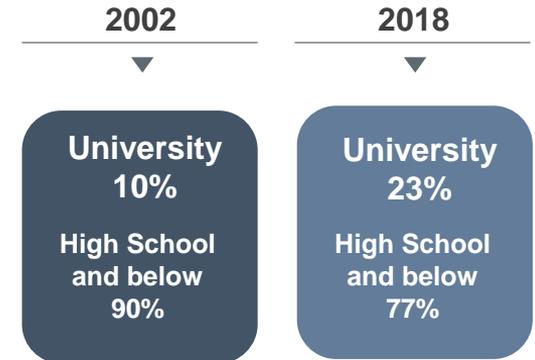


- Electronics & Automation
- Mechanical Engineering
- Motor Vehicles, Ships, etc.

NUMBER OF GRADS FROM VOCATIONAL & TECHNICAL HIGH SCHOOLS



LABOR FORCE BY EDUCATION LEVEL

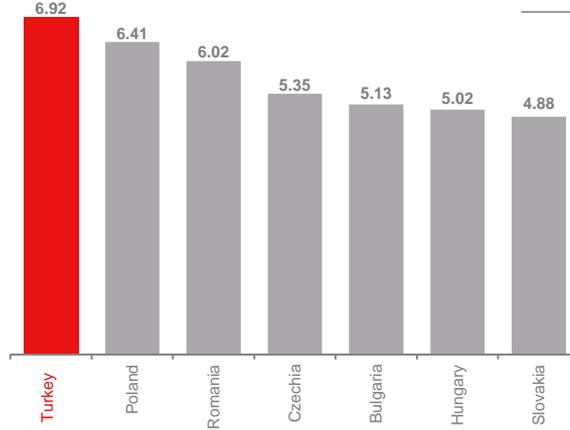


SKILLED & COST-COMPETITIVE LABOR FORCE



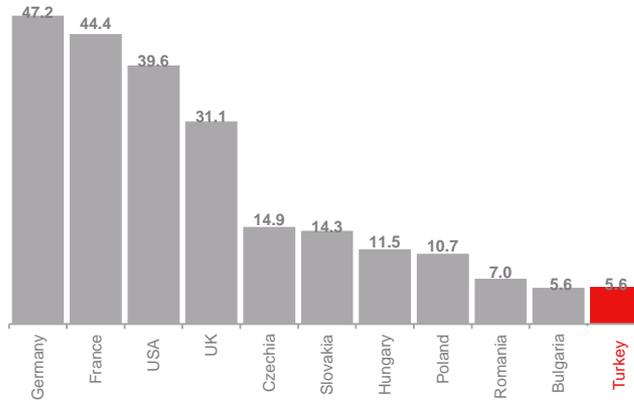
AVAILABILITY OF QUALIFIED ENGINEERS, 2018

(10=Available; 0=Unavailable)



LABOR COST PER HOUR IN MANUFACTURING

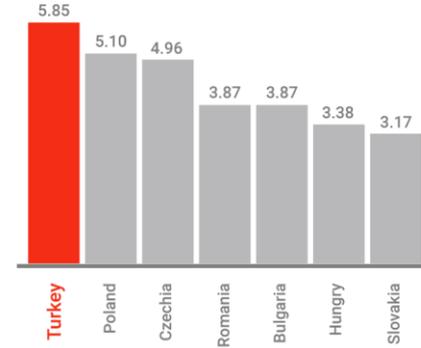
(USD), 2018



REQUIRED SKILLS ARE READILY AVAILABLE IN TURKEY ALONG WITH A COMPETITIVE COST ADVANTAGE...

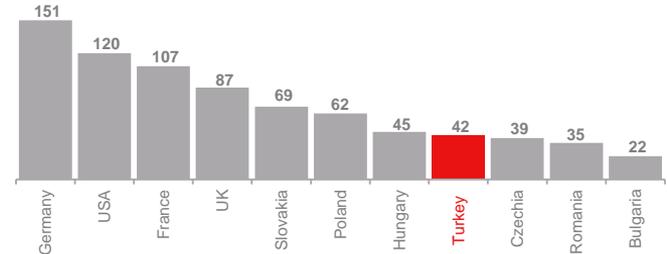
AVAILABILITY OF COMPETENT SENIOR MANAGERS, 2017

(10=Available; 0=Unavailable)



REMUNERATION OF MANAGEMENT/ENGINEER

Total base salary plus bonuses and long-term incentives USD K, 2017



İhsaniye Automotive Vocational High School

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

**Kocaeli
University**

Ford

**Koç
Foundation**

**İhsaniye Automotive
Vocational High-
School**

**Local
Municipality**

AUTOMOTIVE INVESTMENTS IN MANUFACTURING AND R&D CAN BENEFIT FROM VARIOUS LUCRATIVE INCENTIVES...

Investment parameters



Investment Support Schemes



General Scheme



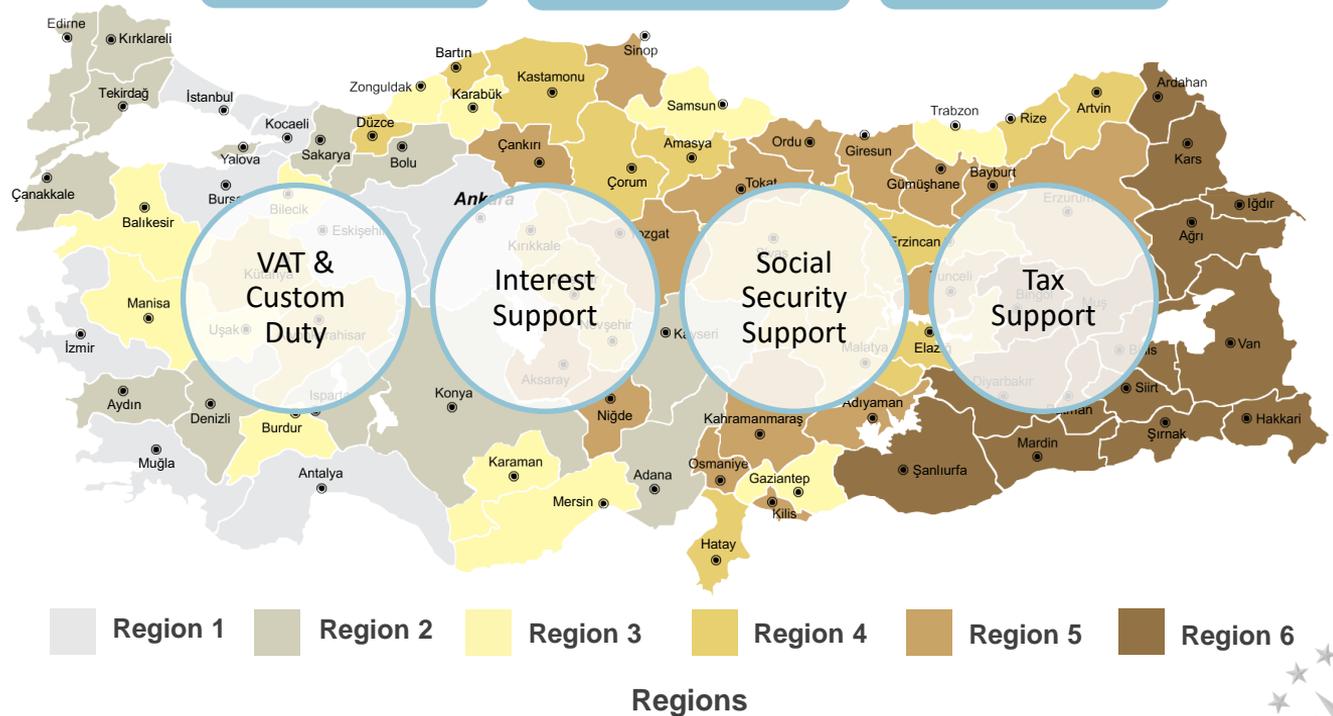
Regional



Priority



Strategic



Tax Supports

VAT Exemptions

Custom Duty Exemptions

Tax Deduction or Exemptions

VAT Refund

Employment Supports

Social Security Premium Support (Employer's Share)

Income Tax Withholding Support

Qualified Personnel Employment Support

Financial Supports

Energy Support

Interest or Grant Support

Capital Contribution Support

Land Supports

Infrastructure Support

Land Allocation

Other Supports

Exemptions from Permissions, Allocations, Licenses and Registrations

Purchasing Guarantee



Support measures granted to the company:

- ✓ VAT Exemption
- ✓ Customs Duty Exemption
- ✓ VAT Refund
- ✓ Corporate Income Tax Reduction (tax reduction rate: 100%, rate of contribution: 80%, rate of support that can be used during investment period: 100% of the rate of contribution)
- ✓ Social Security Premium Employers' Share Support (10 years)
- ✓ Income Tax Withholding Support (10 years)
- ✓ Qualified Personnel Support (maximum 42,000,000 TL)
- ✓ Energy Support
(50% of its consumption for 10 years (from the date when the company starts activity and up to 40,000,000 TL))



RENAULT

Production of Engine, Battery, and Aluminum Engine Block for Hybrid Car

Location: Bursa

Starting date: 16/3/2018

Investment duration: 4 years

Type of investment: Product differentiation

Fixed investment amount: ~133,000,000 USD

Employment: 110

Qualified personnel: 63



Support measures granted to the company:

- ✓ VAT Exemption
- ✓ Customs Duty Exemption
- ✓ Corporate Income Tax Reduction (tax reduction rate: 100%, rate of contribution: 95%, rate of support that can be used during investment period: 100% of the rate of contribution)
- ✓ Income Tax Withholding Support (10 years)
- ✓ Social Security Premium Employers' Share Support (10 years)
- ✓ Qualified Personnel Support (maximum 20,000,000 TL)
- ✓ Energy Support (50% of its consumption for 10 years (from the date when the company starts activity and up to 100,000,000 TL)



Production of new generation high-pressure gasoline injector

Location: Bursa

Starting date: 28/5/2018

Investment duration: 5 years

Type of investment: Product diversification

Fixed investment amount: ~270,000,000 USD

Employment: 314

Qualified personnel: 14

Support measures granted to the company:

- ✓ VAT Exemption
- ✓ Customs Duty Exemption
- ✓ VAT Refund
- ✓ Corporate Income Tax Reduction (tax reduction rate: 100%, rate of contribution: 72%, rate of support that can be used during investment period: 100% of the rate of contribution)
- ✓ Income Tax Withholding Support (10 years)
- ✓ Social Security Premium Employers' Share Support (10 years)
- ✓ Qualified Personnel Support (maximum 69,000,000 TL)
- ✓ Interest Rate Support and/or Dividend Support (10 years from the date when the loan has been used and up to 141,000,000 TL)
- ✓ Energy Support (50% of its consumption for 10 years (from the date when the company starts activity and up to 12,000,000 TL)

BMC

Production of diesel engine, transmission and sub-systems

Location: Sakarya
(including R&D investments in Istanbul and Ankara)

Starting date: 1/6/2017

Investment duration: 8 years

Type of investment: Greenfield

Fixed investment amount: ~ 166,000,000 USD

Employment: 600

Qualified personnel: 24





R&D Law

Minimizing the cost of in-house R&D operations of companies

- Deduction of R&D spending from tax
- Tax support to minimize the cost of personnel



Technoparks

Easing innovation by providing the right ecosystem

- Minimizing the cost of doing R&D
- Best platform for public private collaboration
- Ready and cost effective infrastructure



Project Base Support

R&D projects do enjoy a support rate of 60%+

- Overhead expenses
- Travel expenses
- Expenses for equipment and tools, software, publications
- Supplies and consumables
- Purchase of consulting services

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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 USD 4.8 billion in 2017 to 83 countries
- One of the 3 largest R&D centers of Ford Global



- The facility was established in 1968
- Has the capacity of 450,000 vehicles per year
- Employs more than 9000 workers
- Only factory in the country that manufactures both passenger and light commercial vehicles
- R&D center in Bursa is the only center of Fiat outside Italy serving the European market

TURKEY AS AN INTERNATIONAL CENTER OF EXCELLENCE FOR AUTOMOTIVE GIANTS



- Invested over USD 2 billion since entrance into Turkey
- Over 5,500 staff and annual production capacity of 280,000 units
- More than 90% of production destined for exports to around 150 countries
- Started production of first 2 hybrid vehicles in Turkey, C-HR and Corolla Hybrid, with an investment exceeding EUR 630 million in total



- Operational in Turkey since 1992
- Production of Civic model started in 1997
- Izmit factory, 50,000 annual production capacity with over 1500 employees
- Invested almost USD 500 million since the beginning
- Exports 'Civic' to 46 countries throughout the World





- One of the biggest factories of Renault with annual production capacity of 375,000 cars and 750,000 engines
- Total exports in last 15 years exceed USD 30 billion
- Flagship company in passenger car production for years
- 6300+ employees, almost 1500 of which are white-collar



- 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

TURKEY AS AN INTERNATIONAL CENTER OF EXCELLENCE FOR AUTOMOTIVE GIANTS



- 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.





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PRESIDENCY OF THE REPUBLIC OF TURKEY
INVESTMENT OFFICE

