

Global Value Chains Diversification

Challenges & Opportunities

Turkey's Value Proposition for German
Companies

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PRESIDENCY OF THE REPUBLIC OF TURKEY
INVESTMENT OFFICE

1 GLOBAL VALUE CHAINS AND RECENT DEVELOPMENTS

2 TURKEY'S PARTICIPATION IN GVCs

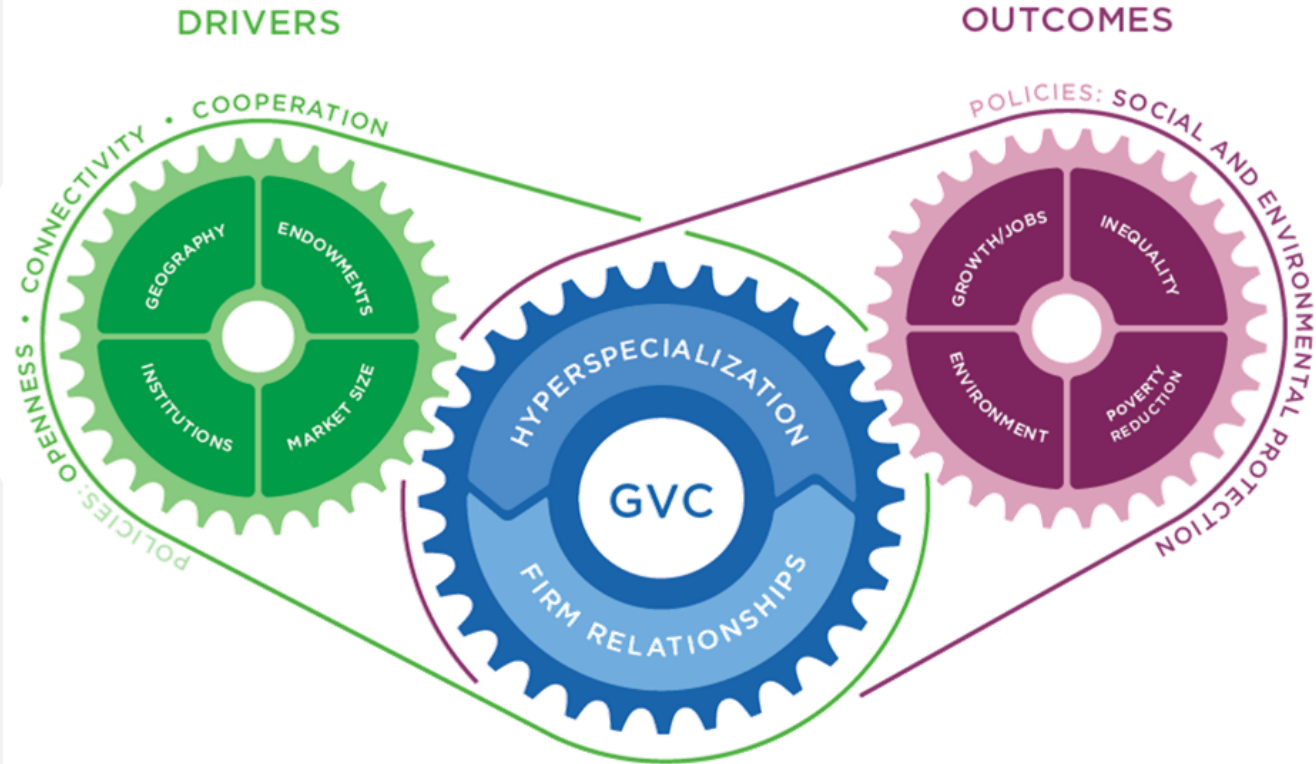
3 TURKEY'S VALUE PROPOSITION



GLOBAL VALUE CHAINS (GVCs)

GVCs participation is an integral part of sustainable economic development for many countries

- Companies used to make things primarily in one country. That has all changed. Today, a single finished product often results from manufacturing and assembly in multiple countries, with each step in the process adding value to the end product.
- Through GVCs, countries trade more than products; they trade know-how, and make things together. Imports of goods and services matter as much as exports to successful GVCs.
- GVCs integrate the know-how of lead firms and suppliers of key components along stages of production and in multiple offshore locations. The international, inter-firm flow of know-how is the key distinguishing feature of GVCs.



GLOBAL VALUE CHAINS



HOW GVCs WORK

International production is organized within GVCs where the different stages of the production process are located across different countries

Forward participation in GVCs:

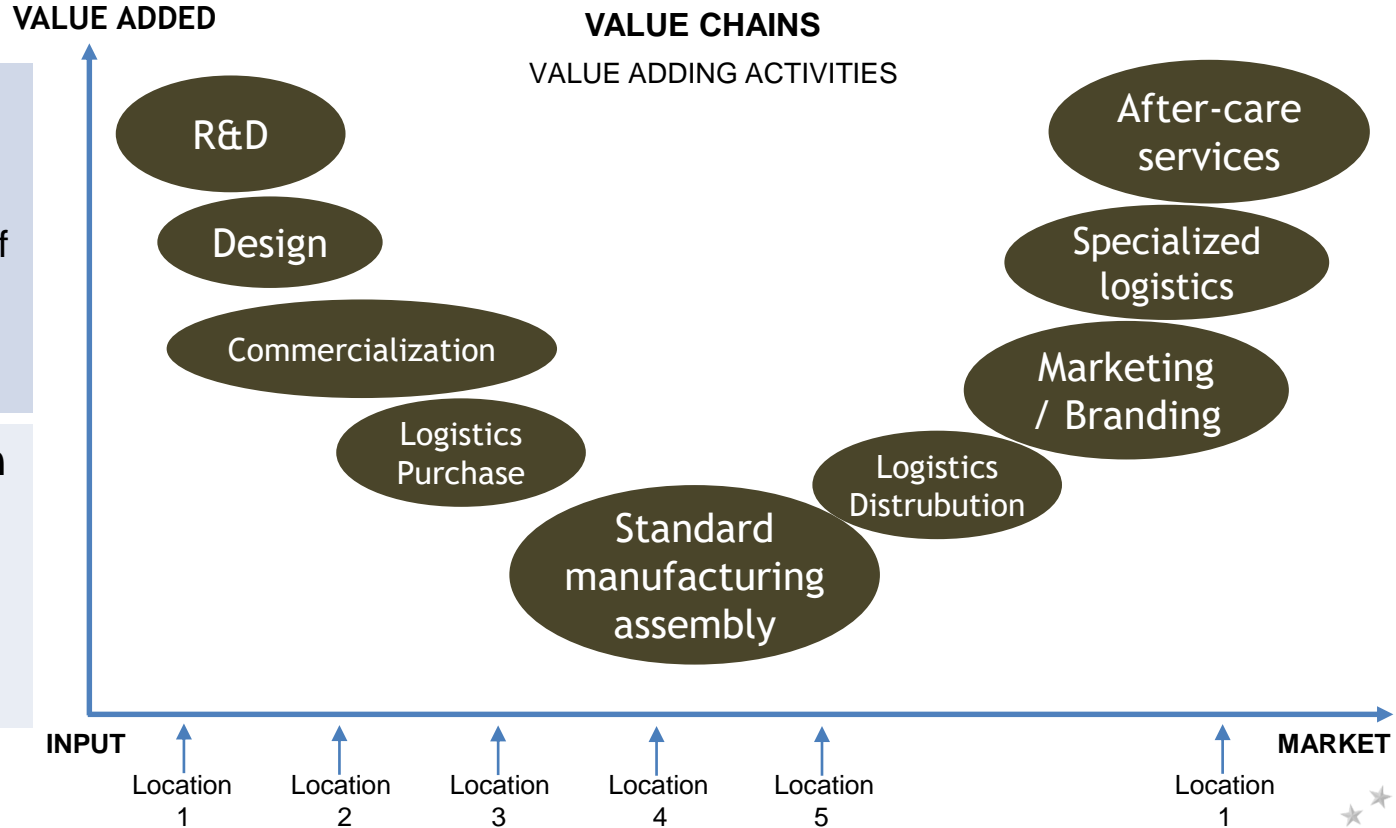
Domestic value added in foreign exports as a share of gross exports

(Export to Export)

Backward participation in GVCs:

Foreign value-added share of gross exports

(Import to Export)



nutella

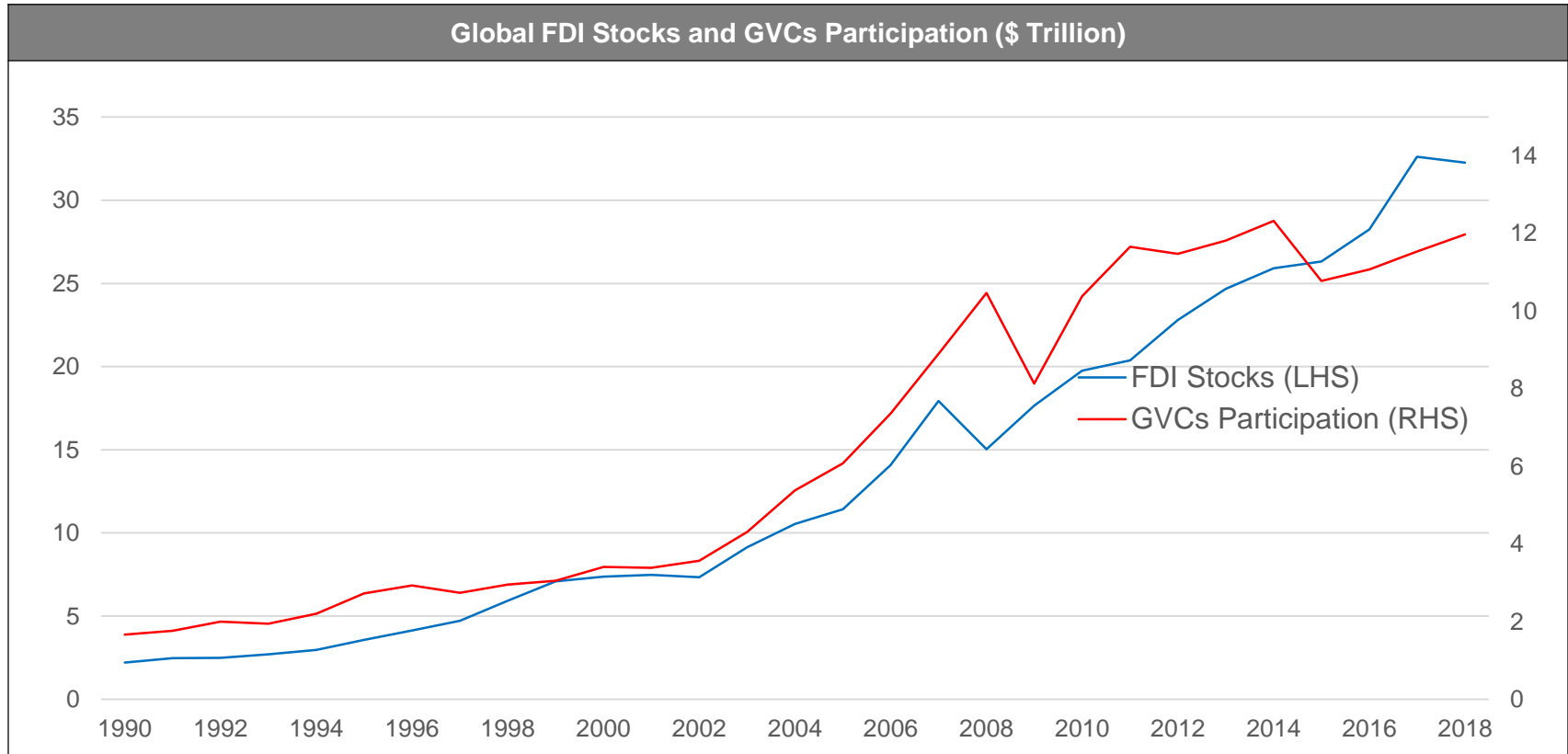
The Nutella® Global Value Chain



About 365K tons of Nutella® are produced each year. Nutella® is representative of agri-food value chains. The food processing company Ferrero International SA is headquartered in Luxembourg and currently has ten factories producing Nutella® : five are located in the European Union, one in Russia, one in Turkey, one in North America, one in South America and one in Australia. Some inputs are mainly locally supplied, for example the packaging or some of the ingredients like skimmed milk. There are however ingredients that are globally supplied: hazelnuts come mainly from Turkey, palm oil from Malaysia, Papua New Guinea and Brazil, cocoa mainly from Ivory Coast, Ghana, Nigeria and Ecuador, sugar mainly from Europe and the vanilla flavour from the United States and Europe. Nutella® is then sold around the world through sales offices (that are more numerous than the few represented in the map.)

FDI & GVCs PARTICIPATION

Foreign direct investment (FDI) and GVCs participation are closely linked



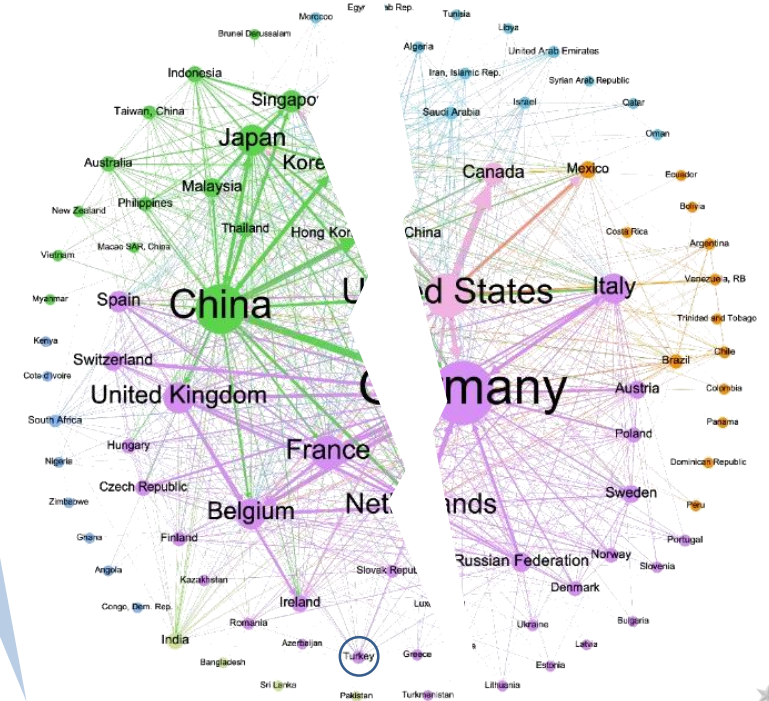
CHALLENGES

Covid-19 has obviously created significant challenges for GVCs, however, the transformation within GVCs had started before Covid-19 and will continue post-Covid-19

Rising costs, especially labor cost (in China)

Protectionist trade policies;
Trade wars

Supply chain disruptions caused by Covid-19



CHALLENGES

Protracted disruption of global supply chains is among world's most challenging fallout from the pandemic, dominating companies' risks perceptions according to a recent WEF report

TOP TEN

Most likely fallout for the world



Economic Societal Tech Geopolitical Environmental



5th most worrisome risk for companies

9th greatest concern for the world



The recent developments have started the transformation of GVCs, with dislocation and reorientation movements within GVCs, which will eventually create opportunities as well

A cautious transformation from just-in-time to just-in-case (or both)

Smart and technology-driven supply chain management

Localization & regionalization of production; proximity to sources and destinations markets

Diversification: reducing dependency on a single location to secure supply chain

As the recent developments further creates challenges for GVCs, certain countries and location may benefit from this transformation

Countries with, *inter alia*, the following capabilities are set to benefit from the disruptive transformation of GVCs

Strong and diverse manufacturing capabilities

Developed and tech-supported logistics infrastructure

Proximity to source and destination markets

Qualified and cost-competitive labor force

Liberal investment climate

International trade networks; free trade agreements

Central and Eastern Europe

South-East Europe

South-East Asia

South America



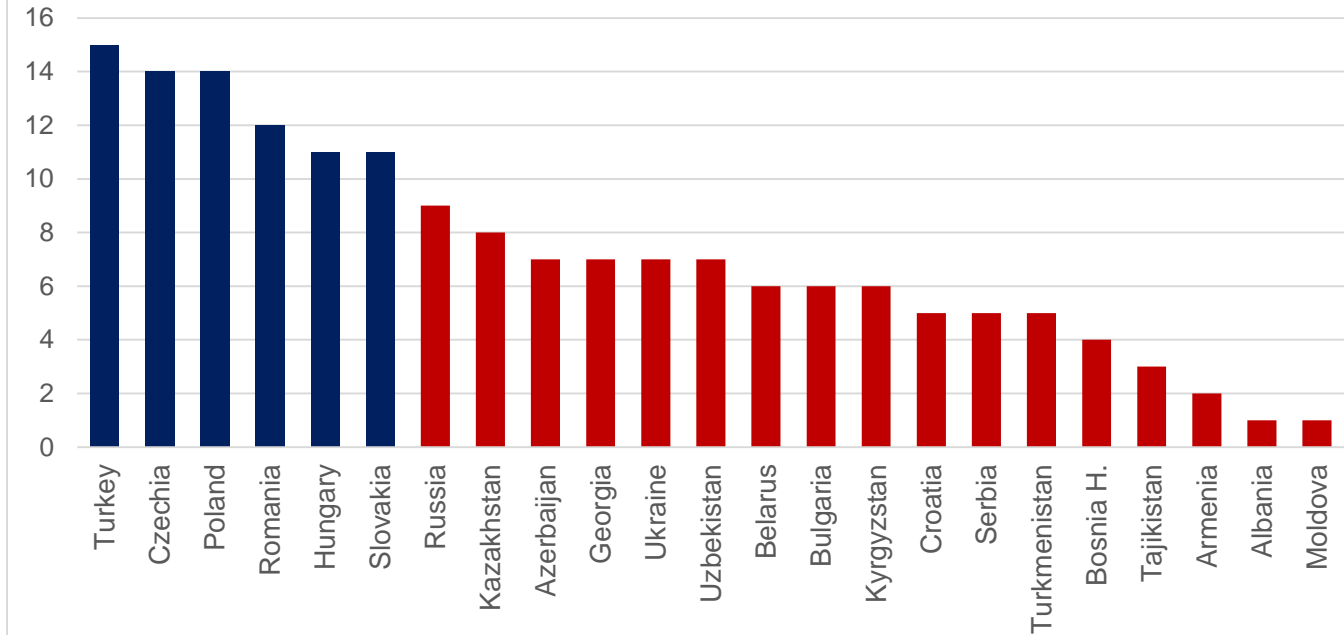
OPPORTUNITIES

According to Fitch ranking, Turkey is the emerging European economy that stands to gain the most from a shift of supply chains of mid-range manufacturing.

Who Will Benefit From Global Mid-Range Manufacturing Diversification

The score takes into account factors such as average wages, size & growth of the active population, extent & quality of transport infrastructure, access to basic utilities, preferential trade agreements, access to raw inputs, and current size of the mid-range manufacturing sector in each country among other factors to create a framework to identify countries with potential to benefit from supply chain diversification.

Emerging Europe Attractiveness Score (a higher score is better)



Source: ILO, UN, World Bank, Trade Map, Fitch Solutions

Source: Fitch Solutions "Emerging Europe To Benefit From Shifts In Mid-Level Manufacturing Supply Chains" July 13, 2020

Faced with disrupting challenges, countries and companies have already started to diversify their investment policies and strategies as well as suppliers preferences

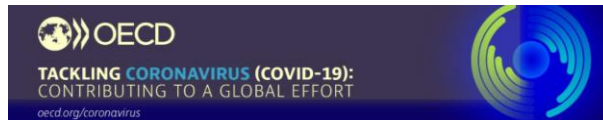
Bloomberg

Japan to Fund Firms to Shift Production Out of China

April 8, 2020

Japan has earmarked \$2.2 billion of its record economic stimulus package to help its manufacturers shift production out of China as the coronavirus disrupts supply chains between the major trading partners.

The extra budget, compiled to try to offset the devastating effects of the pandemic, includes 220 billion yen (\$2 billion) for companies shifting production back to Japan and 23.5 billion yen for those seeking to move production to other countries, according to details of the plan posted online.



Foreign direct investment flows in the time of COVID-19

May 4, 2020

Disruptions due to the coronavirus pandemic may lead some MNEs to rethink the geographic and sectoral spread of their activities and shorten their supply chains

Other MNEs may wish to diversify their supplier networks to increase resilience to location-specific shocks leading to divestments from some locations but expansions in others

DAILY SABAH

Walmart shifts orders to Turkish firms amid supply disruptions with China

May 14, 2020

The world's largest retailer, Walmart, has shifted some of its orders such as plastic and other kinds of packaging materials to Turkish firms following disruptions in supplies from China amid the pandemic, along with the trade disagreements between China and the U.S.

Dozens of companies from plastic to packaging and food have already started selling to the retail giant, which operates with 55 different brands in 27 countries and has a \$520 billion turnover and a cash flow exceeding \$25 billion.



1 GLOBAL VALUE CHAINS AND RECENT DEVELOPMENTS

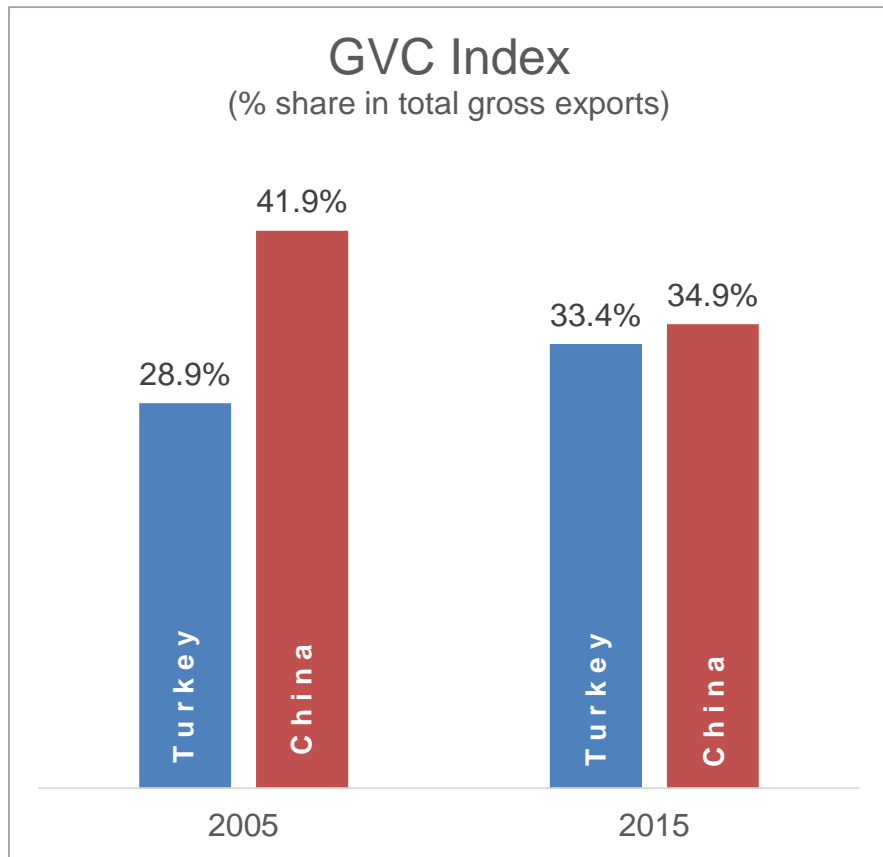
2 TURKEY'S PARTICIPATION IN GVCs

3 TURKEY'S VALUE PROPOSITION



TURKEY'S PARTICIPATION IN GVCs

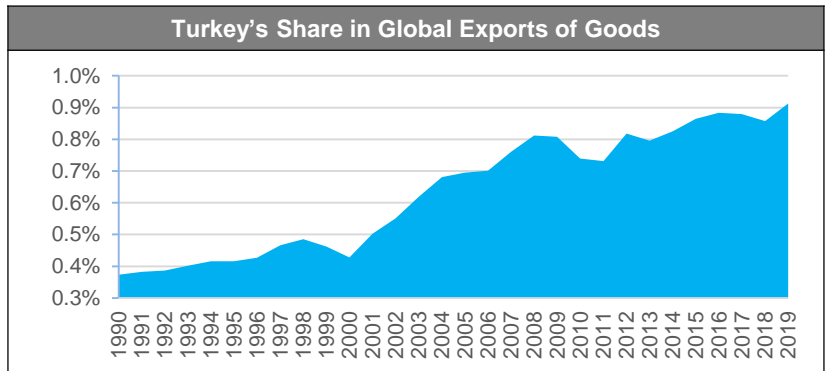
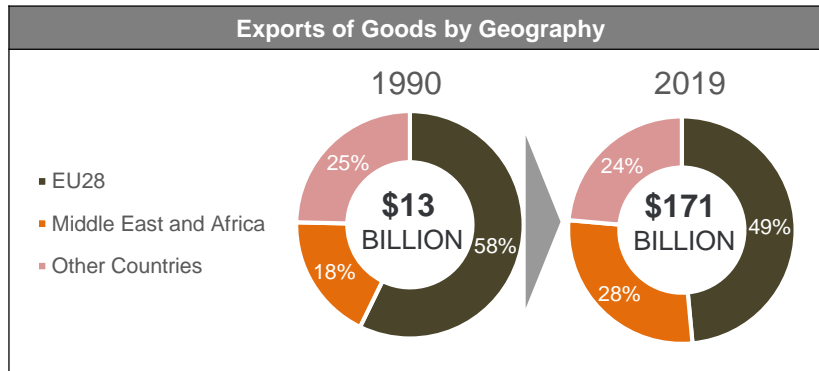
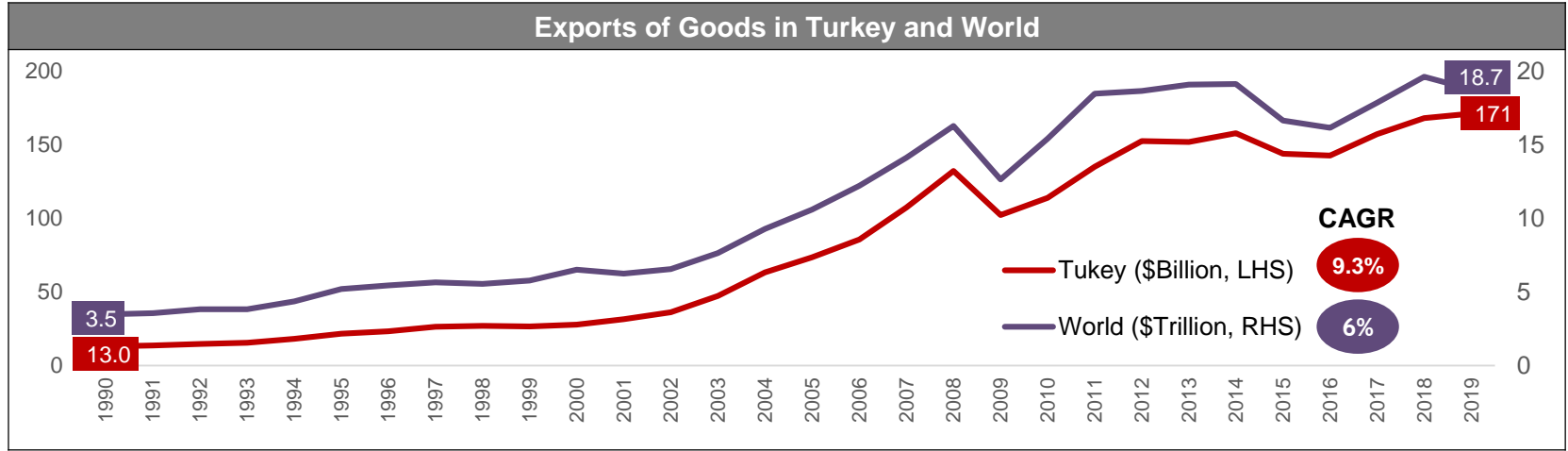
Turkey's participation in GVCs has steadily increased over the past decade



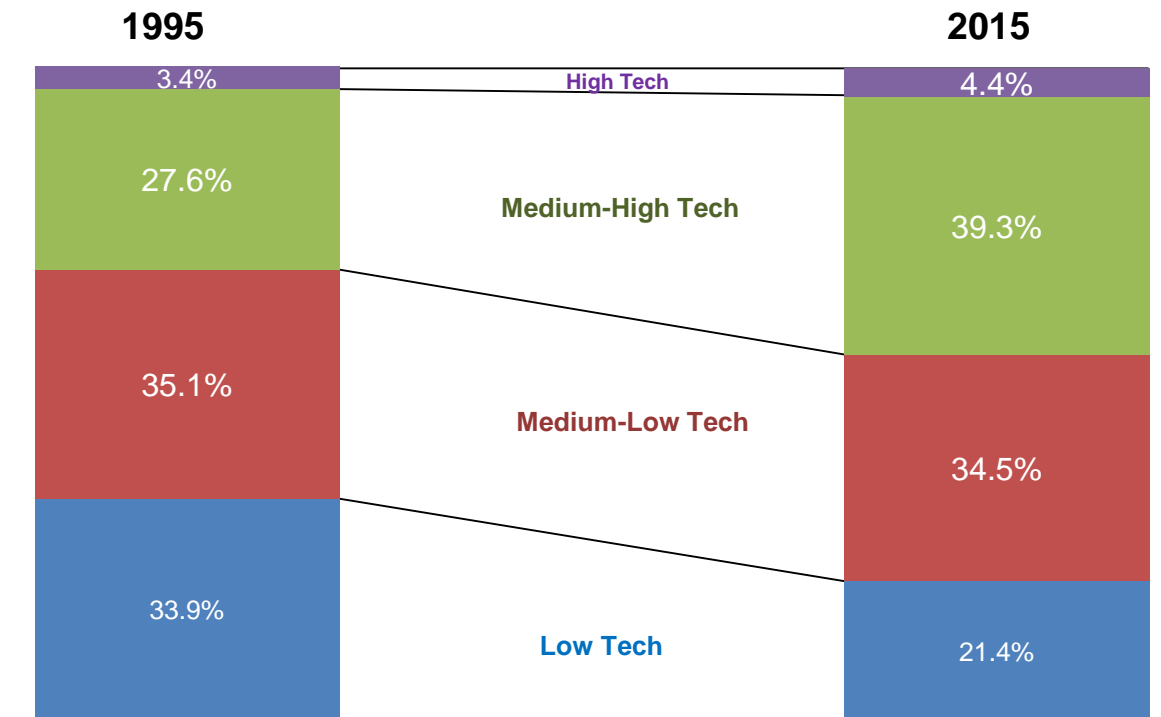
	2005		2015	
	Turkey	China	Turkey	China
Total GVC participation	28.9%	41.9%	33.4%	34.9%
<i>Forward participation</i>	13.5%	15.6%	15.6%	17.5%
<i>Backward participation</i>	15.4%	26.3%	26.3%	17.3%

BOOMING & DIVERSIFYING EXPORTS

Turkey's participation in GVC has significantly increased its exports



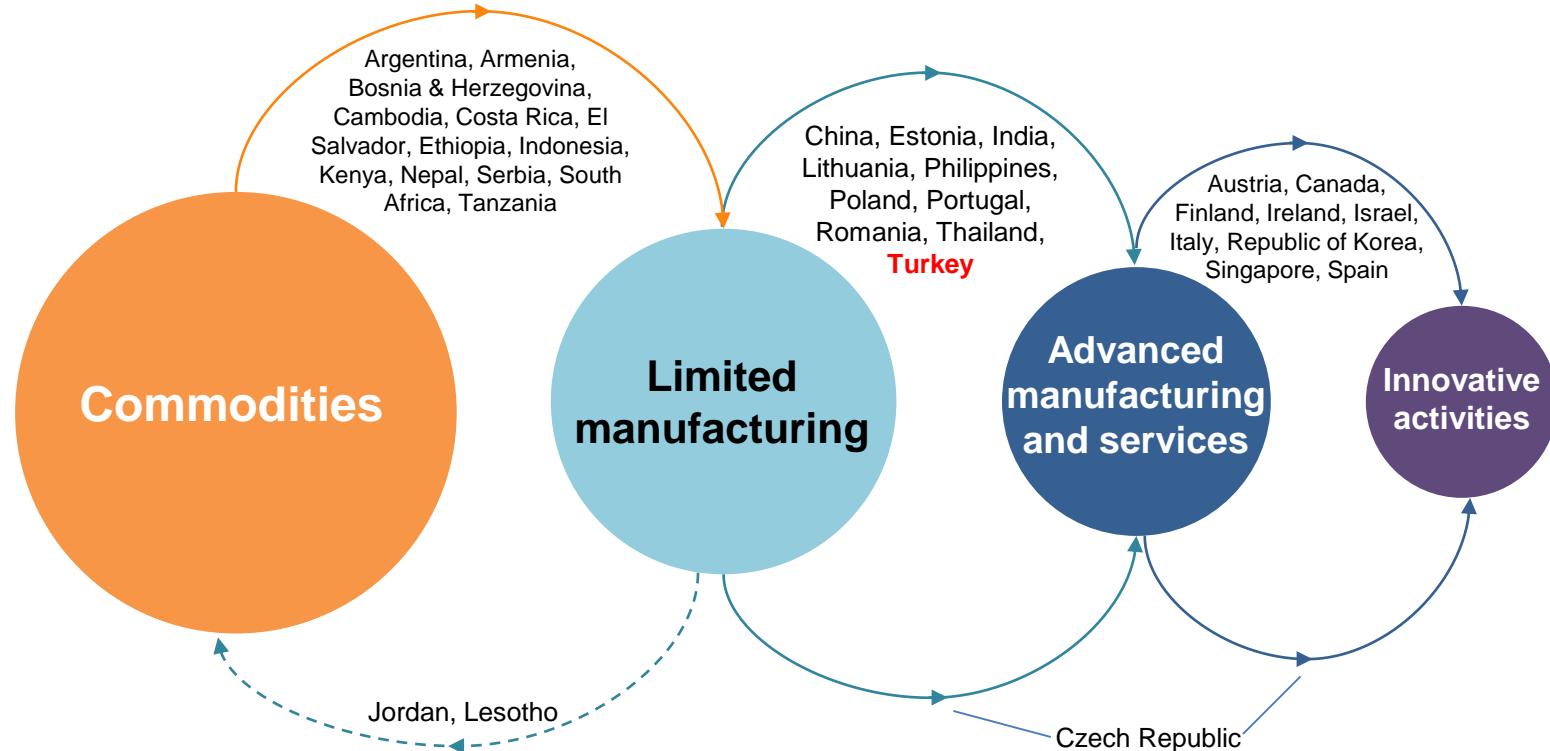
Classification of Turkish Manufacturing Exports by Technology Intensity



TURKEY'S PARTICIPATION IN GVCs

Turkey has managed to successfully move up the value chain, thus transitioned from limited manufacturing to advanced manufacturing GVCs

Country Transitions Between Different Types of GVC Participation 1990 → 2015



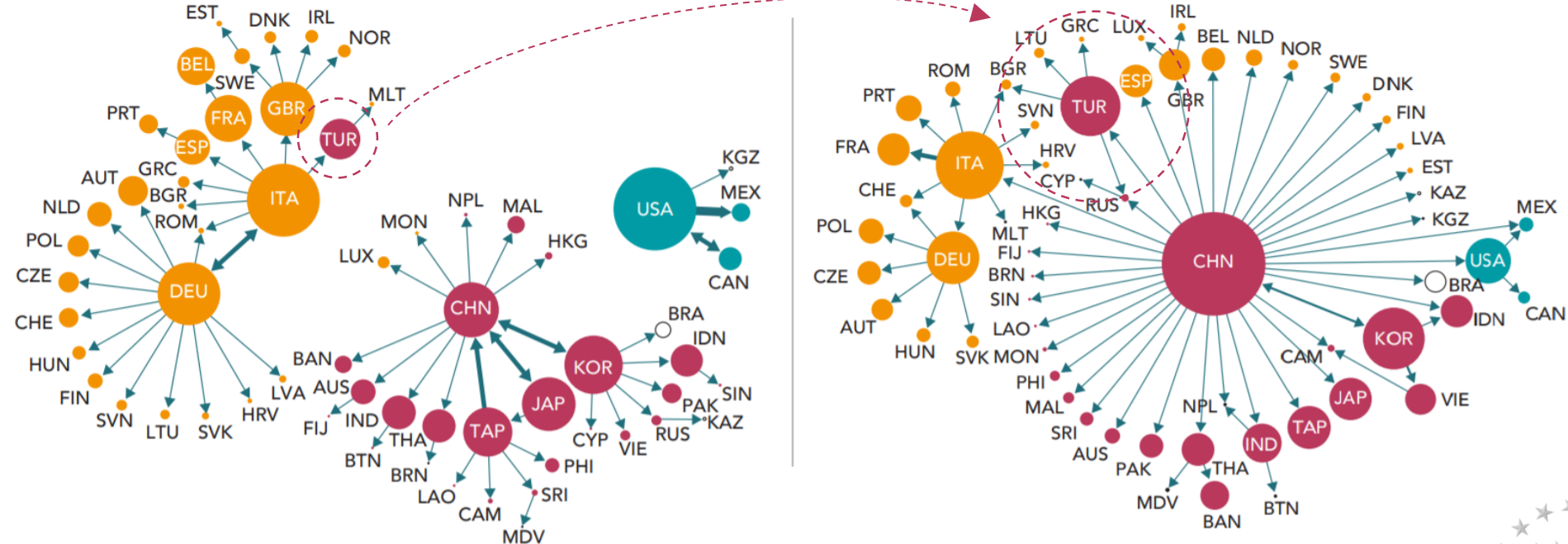
TURKEY'S PARTICIPATION IN GVCs

As GVCs have become more complex, Turkey's participation in GVCs, as a supply hub, has become more visible in certain sectors

Supply hubs of trade in value-added in various networks for the textile sector (Complex GVC trade networks)

2000

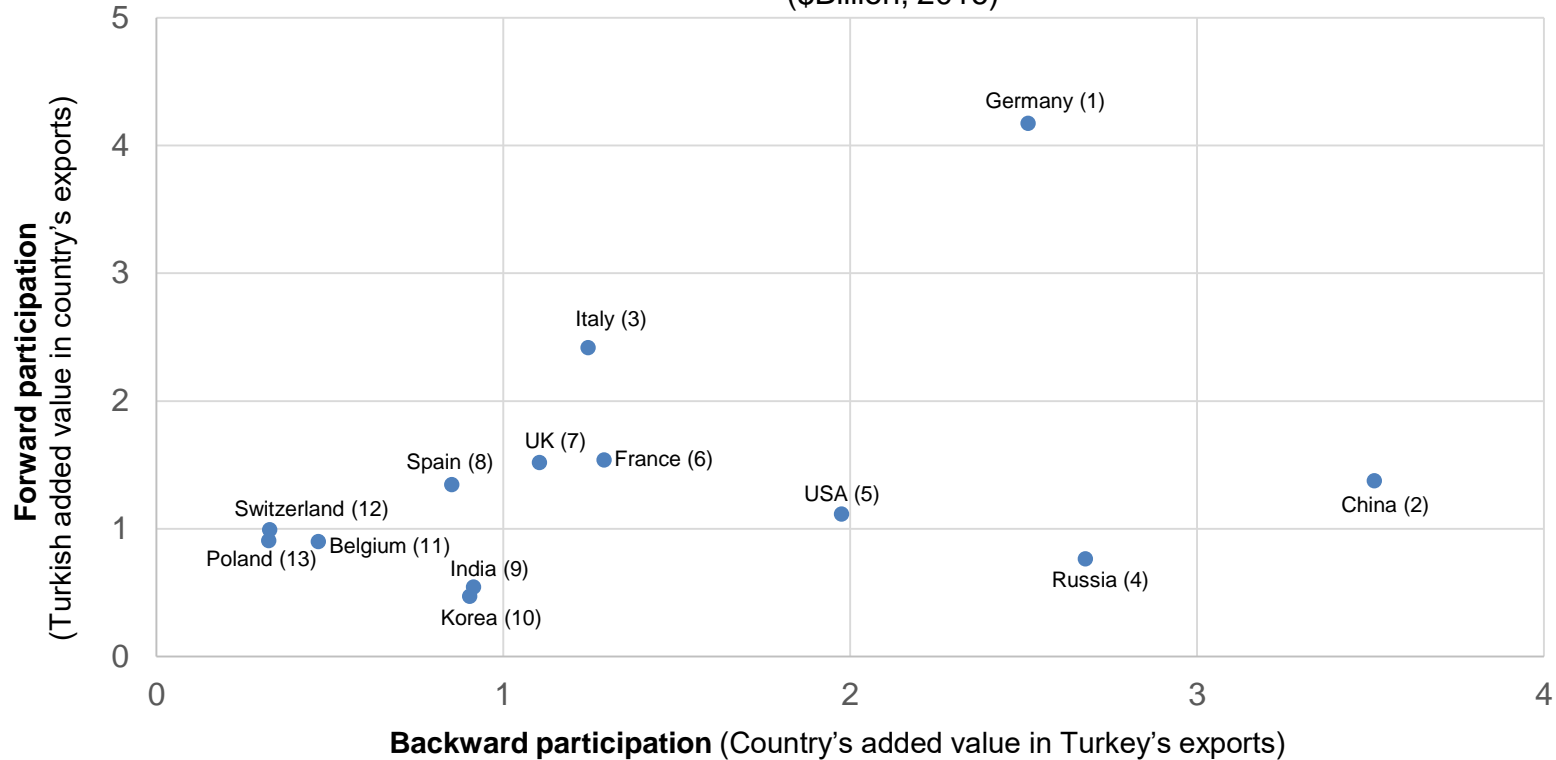
2017



TURKEY'S PARTICIPATION IN GVCs

Combining both forward and backward linkages, Germany is Turkey's main GVC partner, followed by China and Italy

Turkey's Main GVC Partners (\$Billion, 2016)



SHOWCASE

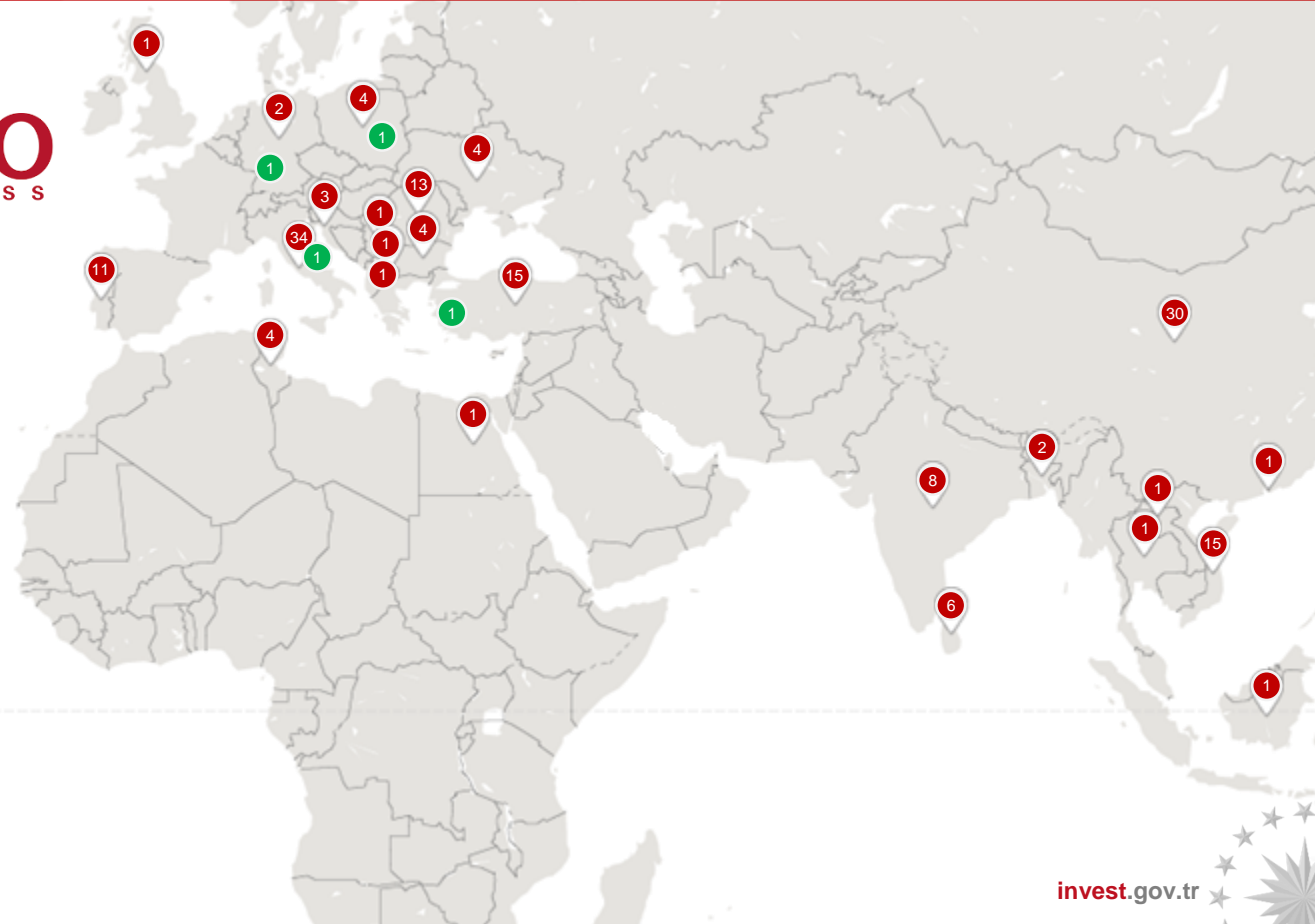
Turkey is a linchpin in Hugo Boss' global value chain. Turkey accounts for the largest part of the group's global sourcing & production volume at 23%. Its own production site in Izmir accounts for 12% of the global sourcing & production volume

BOSSHUGO
HUGO BOSS HUGO BOSS

of suppliers (167)

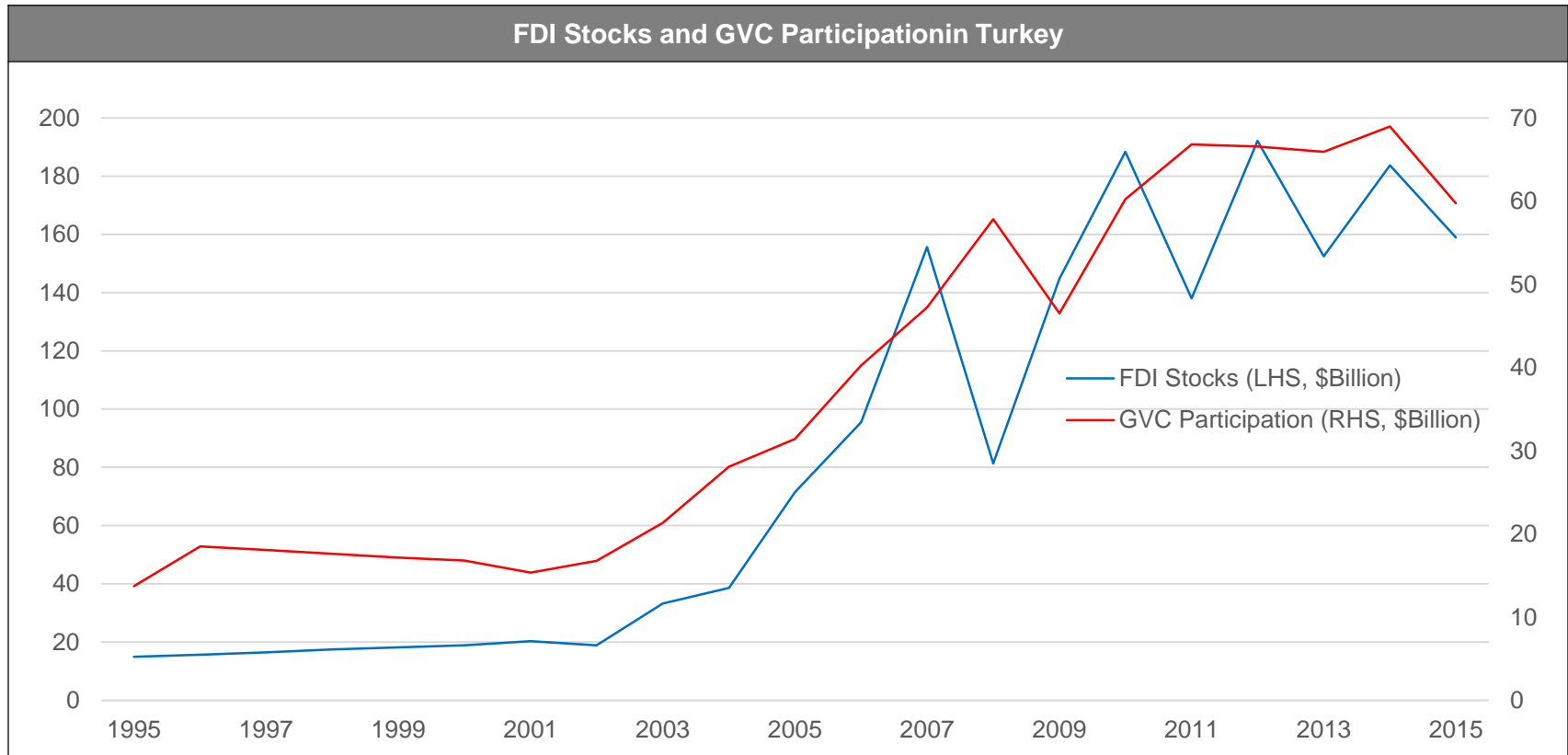
of own production facilities (4)

- Germany (Metzingen)
- Italy (Morrovalle)
- Poland (Radom)
- Turkey (Izmir)



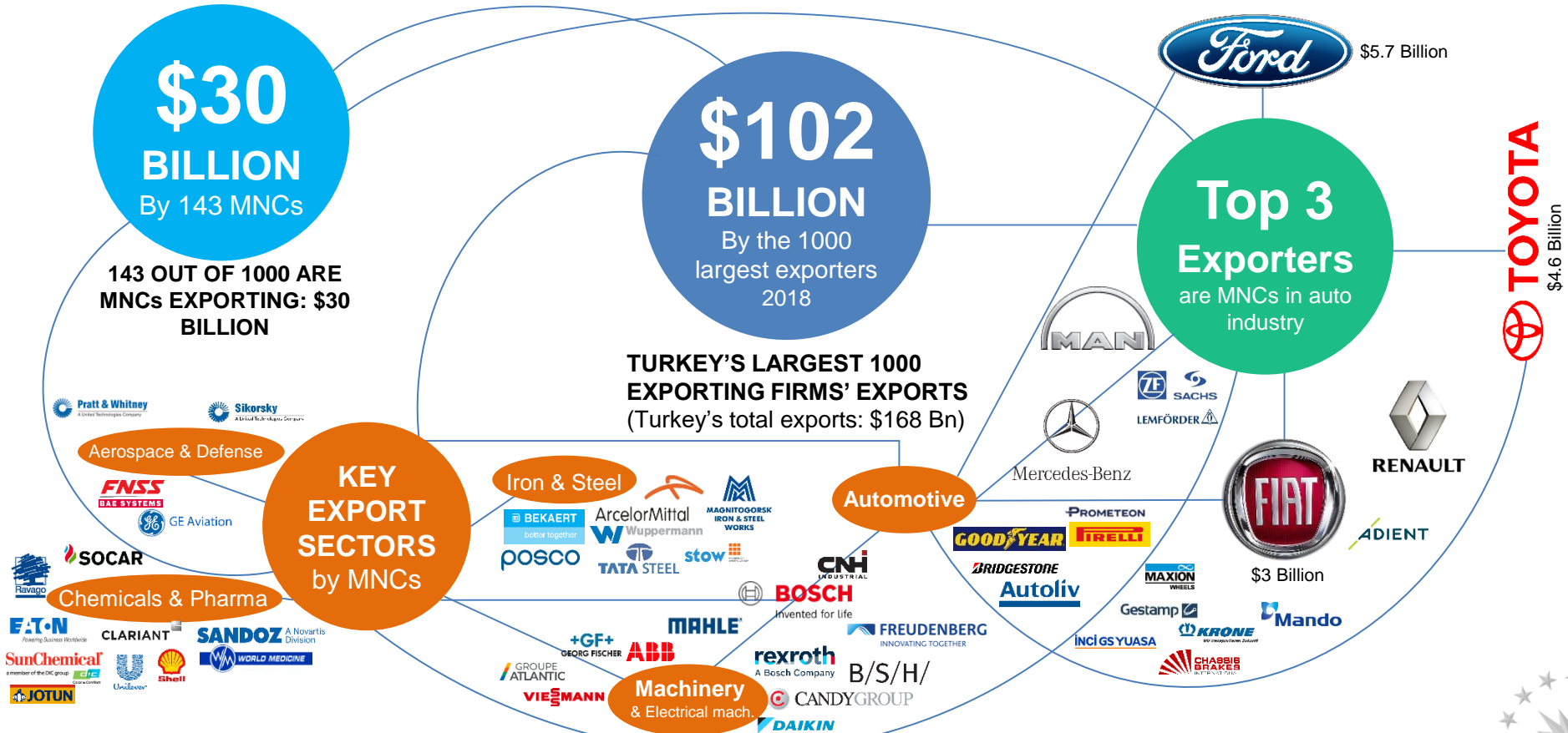
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FDI & GVCs PARTICIPATION

Multinational corporations (MNCs) have further deepened Turkey's participation in international production networks



SHOWCASE

Turkish companies have developed strong manufacturing and design capabilities together with their foreign partners and significantly contribute to the global value chains



Airbus A400M Program

A400M is the first program that enabled TAI to gain capability and responsibility of a whole life cycled aerospace product starting from concept design studies to after sale logistics support activities. TAI's workshare in A400M Program includes design and manufacture of structural components as Forward Center Fuselage with Emergency Exit Door, Section 17 Upper Shell with Rear Hatch Door, Paratrooper Doors, Tailcone, Ailerons and Spoilers. TAI has also manufacturing responsibility of all fuselage harnesses. TAI has first level design and procurement responsibility on lighting system (except cockpit) and water and waste system.

Global Supply Chain of A400M



1-Ratier-Figeac, 2-AM Seville, 3-AF Saint Eloi, 4-AUK Filton, 5-DENEL, 6-AF Nantes, 7-AD Stade, 8-AM Seville, 9-AD Stade, 10-TAI, 11-SOCATA, 12-TAI, 13-AD Bremen, 14-AD Bremen, 15-TAI, 16-AF Saint Nazaire, 17-Messier-Dowty, 18-PAG, 19-SOGERMA, 20-SOCATA, 21-Messier-Dowty, 22-SONACA, 23-AD Stade, 24-AUK Filton, 25-SONACA, 26-Aerolia, 27-TAI

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TURKEY'S VALUE PROPOSITION

Turkey offers a favorable environment for international companies to plug in global value chain



**Strategic
Location**



**Free Trade
Network**



**Robust
Logistics
Infrastructure**



**Diversified/
Specialized
Manufacturing**



**Strong Industry
Clusters**



**Skilled
Workforce with
Cost Advantage**



**Lucrative
Incentives**



**Liberal
Investment
Climate**



STRATEGIC LOCATION

Turkey's unique strategic location has already become a magnet attracting international companies as a manufacturing, export, and management hub in the region

ABOUT HALF OF GLOBAL TRADE IS ALREADY TAKING PLACE IN THE SURROUNDING MARKETS

PROXIMITY TO MAJOR MARKETS
1.5 billion people and \$24T GDP, around half of global trade in Europe, MENA and Central Asia at 4 hour flight-distance

CONNECTIVITY
Turkish Airlines connects you to 255 destinations in 122 countries

MANUFACTURING & EXPORT HUB FOR MULTINATIONALS

AS WELL AS MANAGEMENT HUB FOR MULTINATIONALS

16
TIME
ZONES

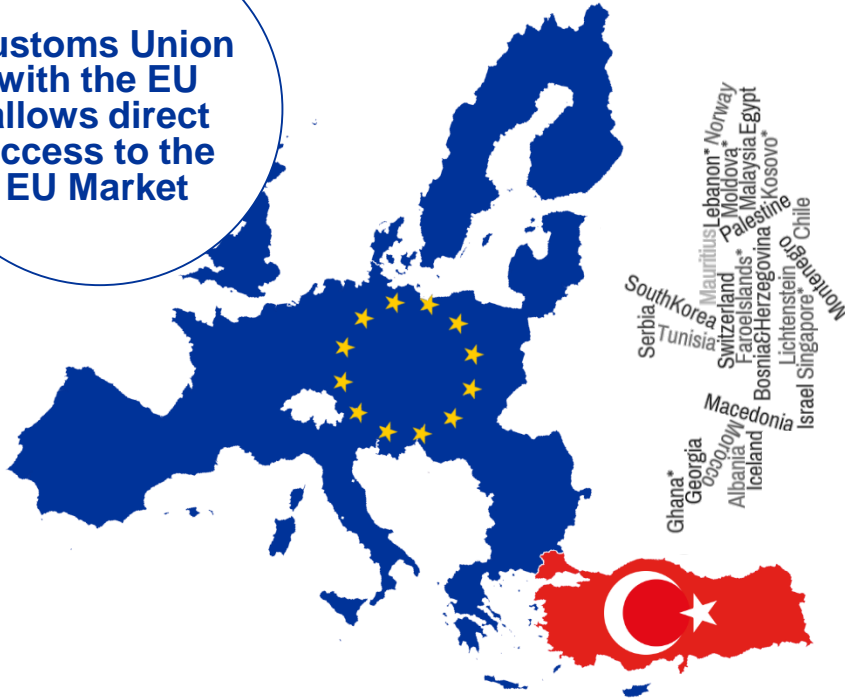
-  **TOYOTA** Exporting 85% of its production
-  **Ford** Exporting 77% of its production
-  **Nestlé** Production base for MENA
-  **BOSS** HUGO BOSS Its largest production facility worldwide

-  **B/S/H/** 89 countries
-  **GE Healthcare** 80 countries
-  **KNAUF** 80 countries
-  **Novo Nordisk** 77 countries
-  **thyssenkrupp** 72 countries
-  **intel** 67 countries
-  **POWERCHINA** 63 countries
-  **Verifone** 60 countries
-  **gsk** 30 countries
-  **Hitachi Healthcare** 25 countries

FREE TRADE NETWORK

Turkey has established an extensive network of free trade agreements with a couple of dozens of countries

Customs Union with the EU allows direct access to the EU Market



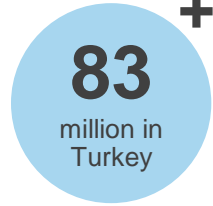
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in 27 countries with Free Trade Agreements



+



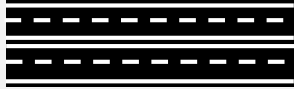
ROBUST LOGISTICS INFRASTRUCTURE

Logistics is key to participation in GVCs, Turkey has heavily invested in transport infrastructure over the 16 years, establishing domestic and international transport links

2002

2018

DUAL
CARRIAGEWAY



6,101 km



26,655 km

HIGH SPEED
RAILWAY



0 km



1,213 km

MARITIME
CONTAINERS
TRANSPORT



2 million TEU



10.8 million TEU

NUMBER OF
AIRPORTS



26



56

ROBUST LOGISTICS INFRASTRUCTURE

Turkey has established intermodal logistics centers alongside key transport networks to lower the costs and increase efficiency



- ✓ 25 logistic centers
- ✓ 35 million tons additional transport capacity
- ✓ 12.8 million m² container storage and handling area

LOGISTICS CENTERS



ROBUST LOGISTICS INFRASTRUCTURE

Logistic infrastructure is further supported by efficient custom regulations and operations which facilitate trading across borders

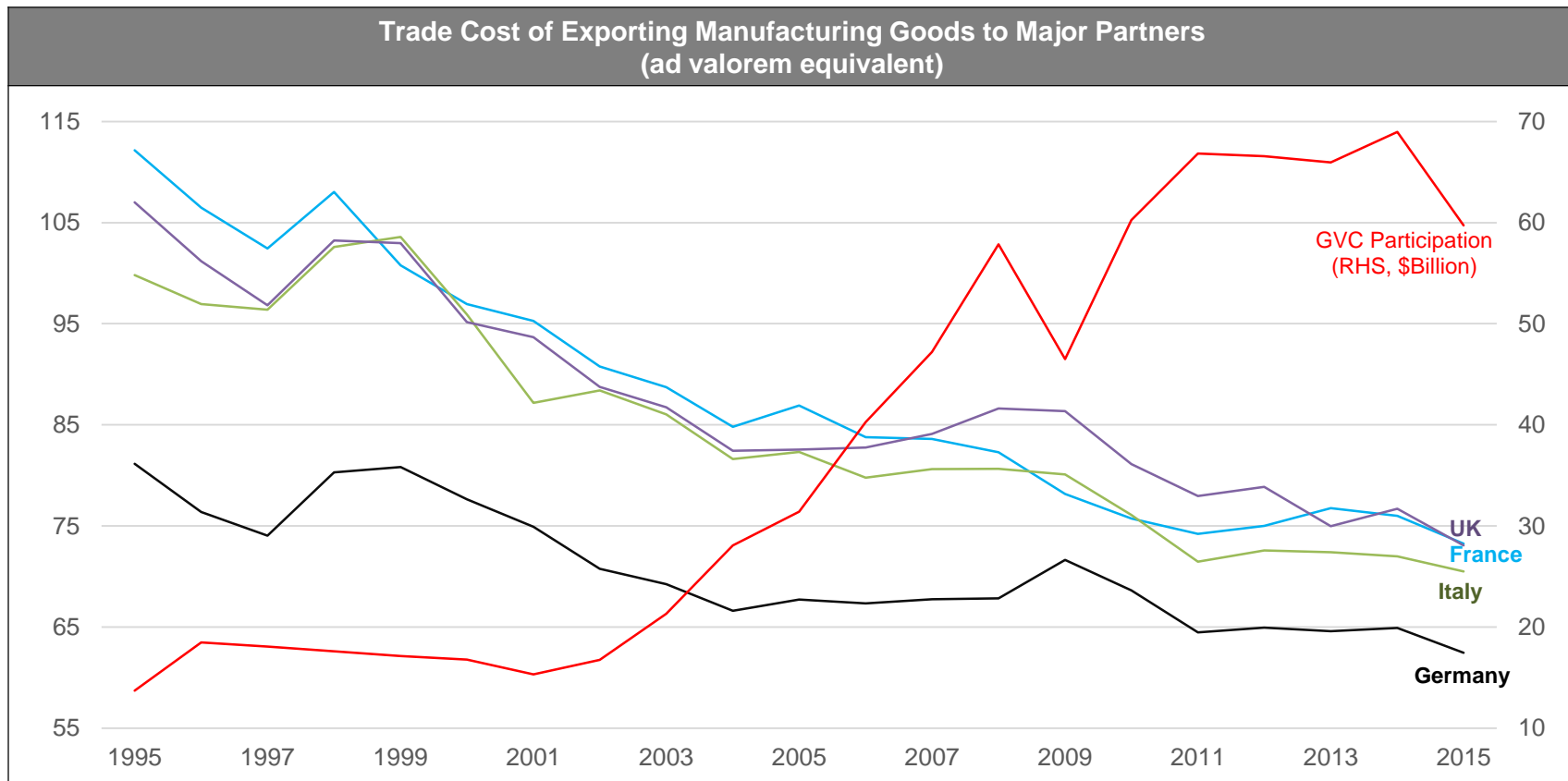
Positive Negative

Time to export: Border compliance (hours)
 Cost to export: Border compliance (USD)
 Time to export: Documentary compliance (hours)
 Cost to export: Documentary compliance (USD)
 Time to import: Border compliance (hours)
 Cost to import: Border compliance (USD)
 Time to import: Documentary compliance (hours)
 Cost to import: Documentary compliance (USD)

Trading Across Borders		
Turkey	Europe & Central Asia	OECD (High Income)
10	16.1	12.7
338	150	136.8
4	25.1	2.3
55	87.6	33.4
7	20.4	8.5
46	158.8	98.1
2	23.4	3.4
55	85.9	23.5

ROBUST LOGISTICS INFRASTRUCTURE

Turkey's robust investment in logistics infrastructure has significantly decreased trade cost, hence further increased Turkey's GVCs participation



DIVERSIFIED/SPECIALIZED MANUFACTURING

Turkey has a diversified manufacturing base with strong connections to the global value chains, supported by a well-developed infrastructure and seamless business services



AUTOMOTIVE

- 15th largest manufacturer
- 1.5 million vehicle produced
- Market: \$24 billion
- Export: \$31.2 billion



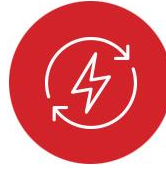
MACHINERY & ELECTRICAL EQP.

- Largest TV & white goods producer in Europe
- Market: \$38 billion
- Export: \$25 billion



AEROSPACE & DEFENCE

- \$19 billion defence spending
- Industry: \$8.7 billion
- Export: \$2.2 billion
- Air passengers: 210 million



ENERGY

- Market: \$66 billion
- Growing demand
- Energy corridor
- Untapped renewables



AGROFOOD

- Market: \$80 billion
- Export: \$17 billion
- Export to around 200 countries



INFRASTRUCTURE

- \$127 billion PPP contracts (2003-2018)
- More opportunities in transport, energy, health



FINANCE

- Robust growth with double digits
- Islamic finance to grow
- Istanbul Financial Center

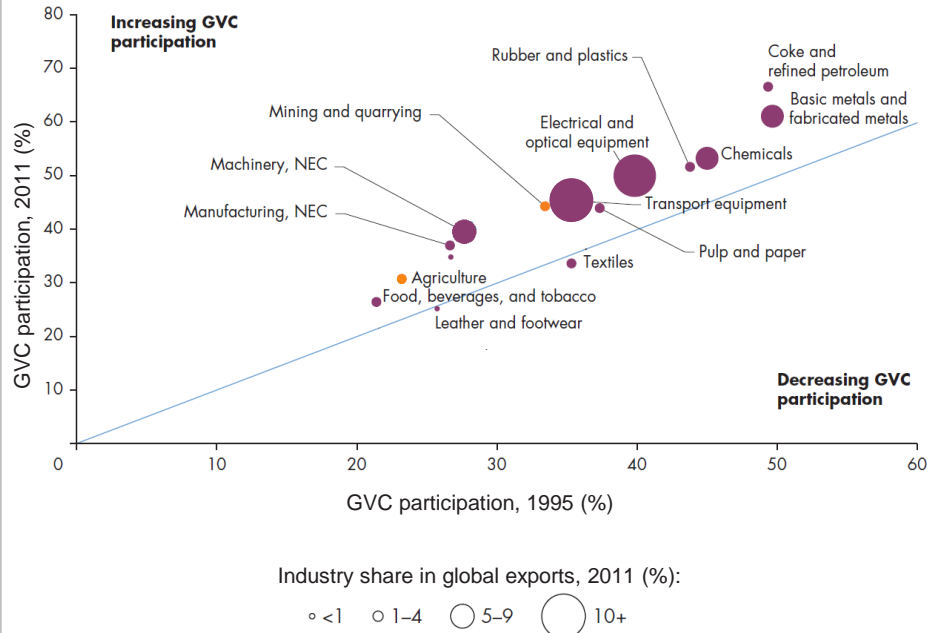
**DIVERSIFIED
MANUFACTURING**



DIVERSIFIED/SPECIALIZED MANUFACTURING

Turkey's has a comparative advantage in many industries that are highly globalized

World GVC participation by sector, 1995 and 2011



Global Trade by Leading Products (2001-2019)

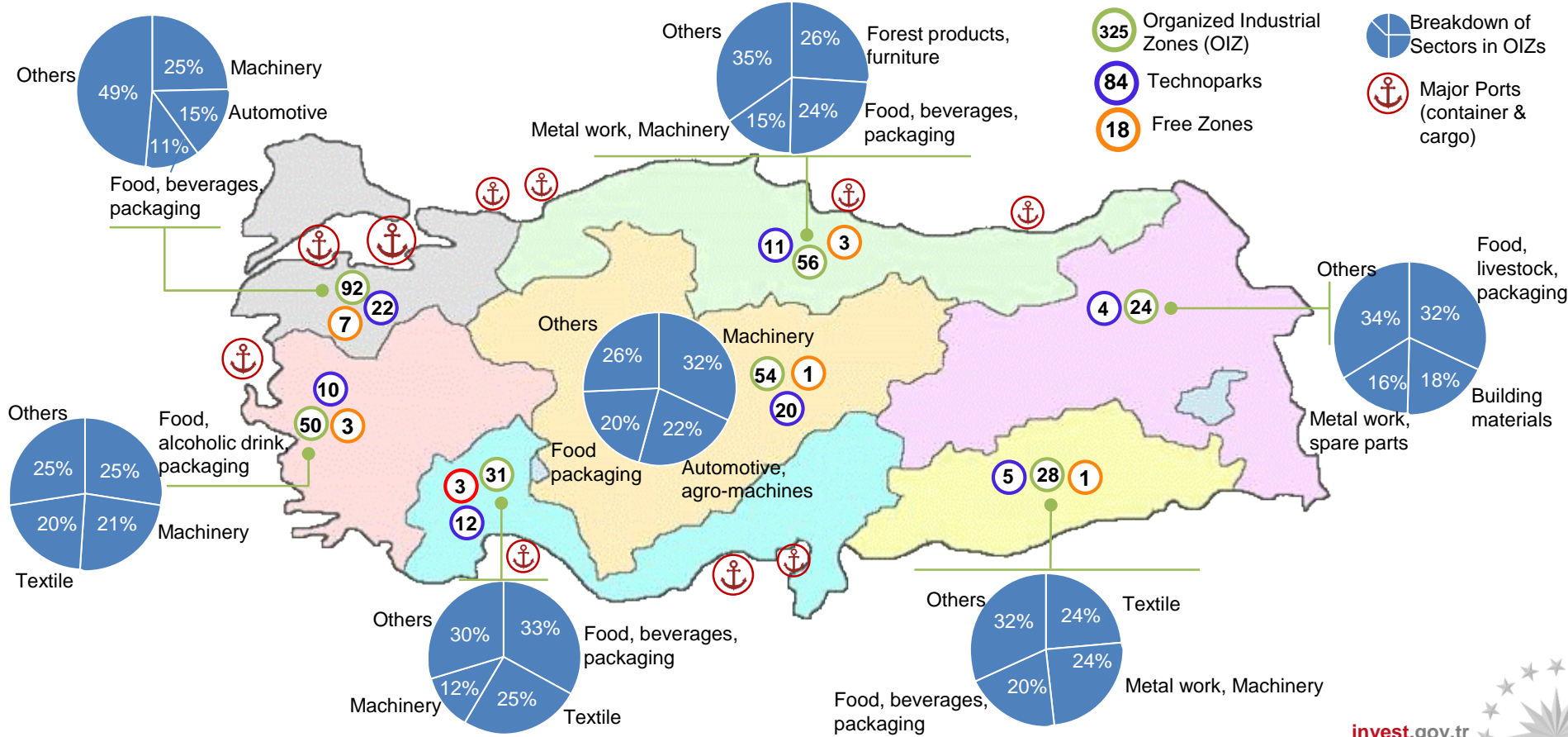
	Share in World Trade	Share in Turkey's Exports
<i>Mineral fuels, mineral oils and products of their distillation</i>	14.0%	3.8%
<i>Electrical machinery and equipment and parts thereof; sound recorders</i>	13.3%	6.2%
<i>Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof</i>	12.1%	8.3%
<i>Vehicles other than railway or tramway rolling stock</i>	7.9%	12.9%
<i>Rubber and Plastics</i>	4.3%	4.8%
<i>Natural or cultured pearls, precious or semi-precious stones, precious metals</i>	3.2%	4.9%
<i>Optical, photographic, cinematographic, measuring, checking, precision</i>	3.1%	0.4%
<i>Pharmaceutical products</i>	2.8%	0.5%
<i>Organic chemicals</i>	2.4%	0.4%
<i>Iron and steel</i>	4.0%	10.7%
<i>Aircraft, spacecraft, and parts thereof</i>	1.7%	0.5%
<i>Articles of apparel and clothing accessories</i>	2.5%	11.1%
<i>Furniture; bedding, mattresses, mattress supports, cushions</i>	1.3%	1.7%
<i>Paper and paperboard; articles of paper pulp, of paper or of paperboard</i>	1.1%	0.9%
<i>Ores, slag and ash</i>	1.0%	0.8%
<i>Miscellaneous chemical products</i>	1.0%	0.3%

**Italic*: top 16 traded/exported products both in the world and Turkey (with a share ≥1%)
Highlighted are products that Turkey has a higher share than world average



INDUSTRY CLUSTERS

Turkey's diversified economy is based on a group of key clusters supported by industrial, logistic, and tech infrastructure across Turkey



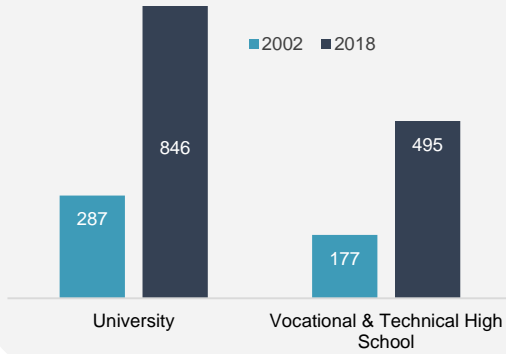
Source: Ministry of Industry and Technology, Ministry of Trade, OSBÜK. Out of 325 OIZs, 242 are in service, 83 are under construction, out of 84 technoparks, 69 are in service, 15 are under construction as of Apr 2020



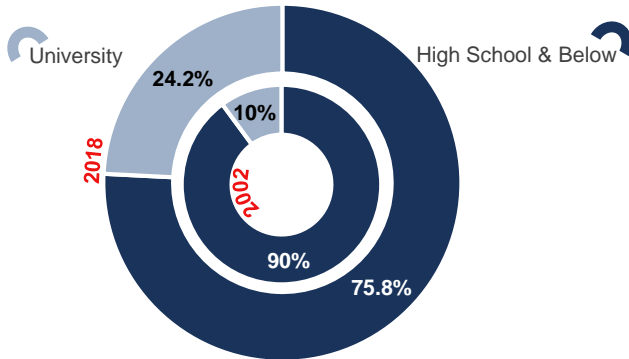
QUALIFIED & COST-COMPETITIVE LABOR FORCE

Turkey's education system supports a skilled labor pool that meets business requirements with a cost-competitive edge

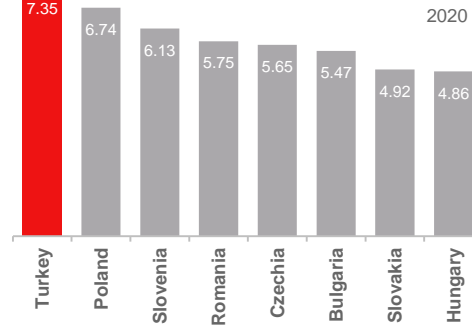
Annual Number of Graduates (thousands)



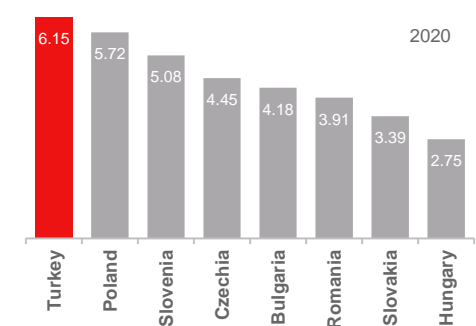
Labor Force by Education Level



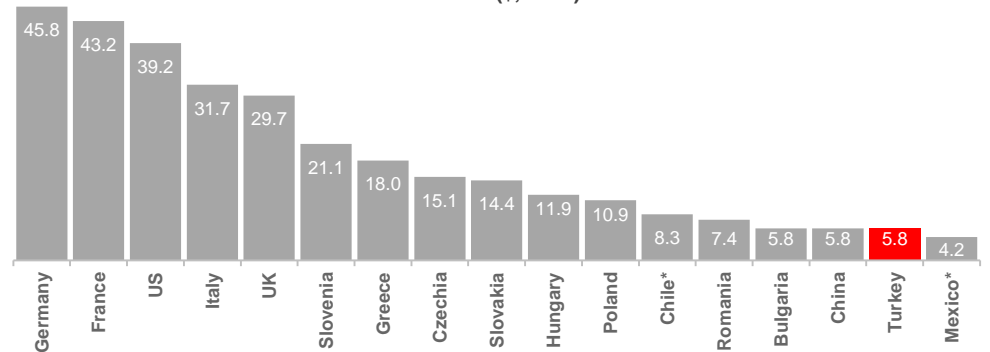
Availability of Qualified Engineers (10=Available; 0=Unavailable)



Availability of Competent Senior Managers (10=Available; 0=Unavailable)



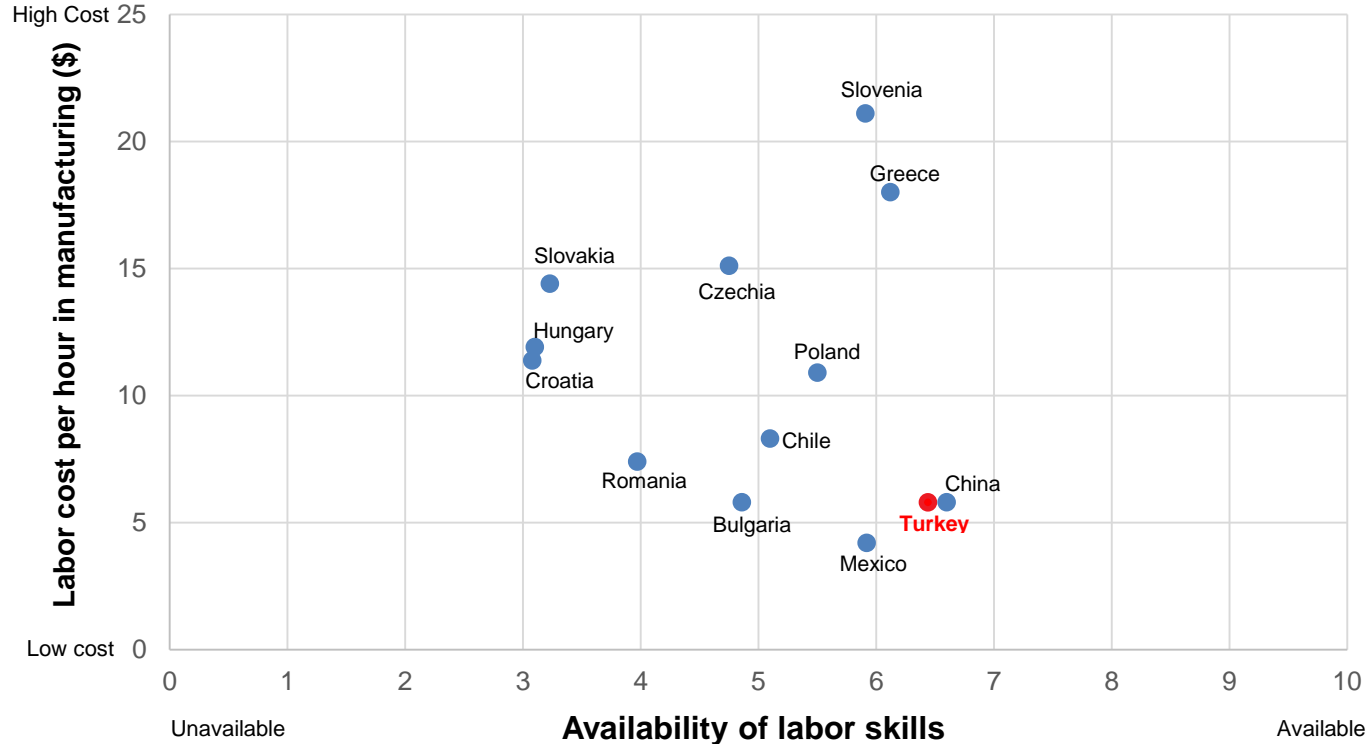
Labor Cost per hour in Manufacturing (\$, 2019)



QUALIFIED & COST-COMPETITIVE LABOR FORCE

Turkey offers a high-quality labor force with a cost-competitive advantage

Labor Force Quality





Manufacturing Incentives

- ✓ Tax deduction & exemption +



Employment Incentives

- ✓ Payroll & Training support +

R&D and Innovation Incentives

- ✓ Tax deduction & exemption +



Incentives for Service Exporters

- ✓ Tax deduction for exporting services in;

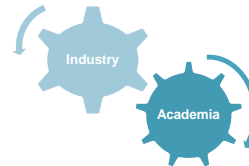
Engineering
Architecture
Design
Software
Medical Reporting

Accounting
Call Center
Datacenter
Education
Healthcare



Technology Development Zones

- ✓ To support R&D
- ✓ Tax deduction & exemption +



Exclusive Zones

- Free Zones
- ✓ Tax deduction & exemption +
- Organized Industrial Zones
- ✓ Developed infrastructure



Technoparks

- **69** Technoparks (an additional **15** underway)
- **~60K** employment by **5,749** companies
- **6%** international companies
- **>1200** companies with academia partnership
- Total export is **USD 4.7Billion**



R&D Centers

- **1,236** R&D Centers
- **>60K** employment; **18%** with graduate degree in ICT
- **15%** international companies



Universities

- 10 universities in Top 1000; 2 in Top 500 (QS World University Rankings 2019)
- Over 1100 academicians in ICT

TECHNOPARKS AND R&D CENTERS MAKE IMPORTANT CONTRIBUTIONS TO INNOVATION ECOSYSTEM AND TECHNOLOGY DEVELOPMENT

Turkey's GERD (gross expenditure on R&D) is 1% of GDP

Turkey ranks 19th in GERD financed by business enterprises

Source: Global Innovation Index 2018

Out of 63 countries, Turkey ranks

- 26th in female researchers ratio
- 11th in R&D productivity by publication

Source: IMD Digital Competitiveness Index 2018

Technoparks & R&D Centers

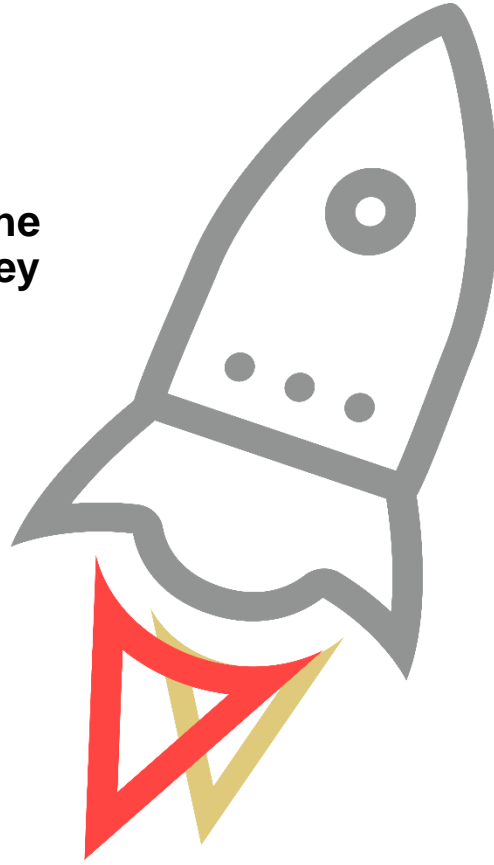


Turkey's R&D ecosystem is further supported by lucrative incentives to support tech entrepreneurs to create high value-added activity

Incentives Through Innovation Lifecycle

TUBITAK 1514 VC Support Program is launched to support the VC ecosystem in Turkey

ANGEL INVESTORS ARE EXEMPT FROM INCOME TAX BY 80-100% AT THE AMOUNT OF THEIR INVESTMENT



START

Technostartup Incentives:

Cash support up to 200K TRY



PRODUCT / PROJECT DEVELOPMENT

Tubitak programs:

Cash support up to 60-80% of the project budget



COMMERCIALIZATION

Technoparks and R&D Centers:

Income Tax Exemption

Tax cuts up to 20-30% of the personnel cost



MANUFACTURING

SME Technoinvestment Incentives:

Cash/credit support up to 5Million TRY for SMEs



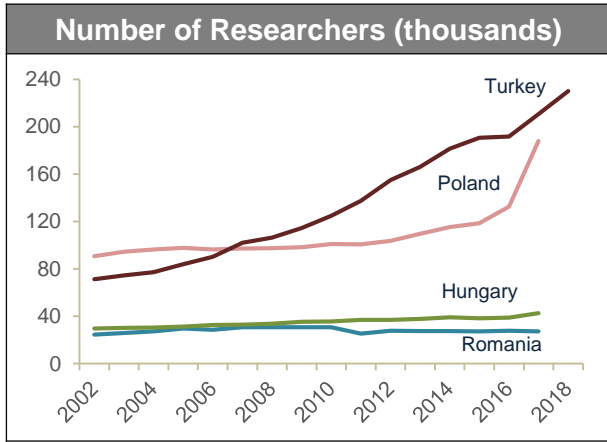
GROWTH & COMPETITION

Patented sales:

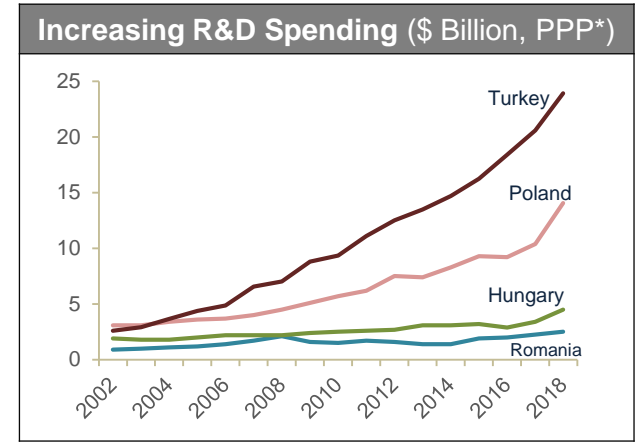
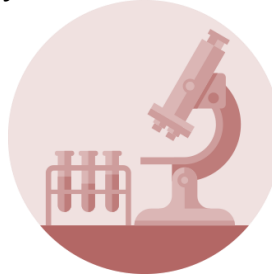
Income Tax & VAT Exemption

R&D INCENTIVES

As a result, Turkey's R&D ecosystem has been drastically transformed, today international investors both contribute to and benefit from this favorable ecosystem



200+
R&D centers
by Multinationals



Selected Multinationals conducting R&D in Turkey

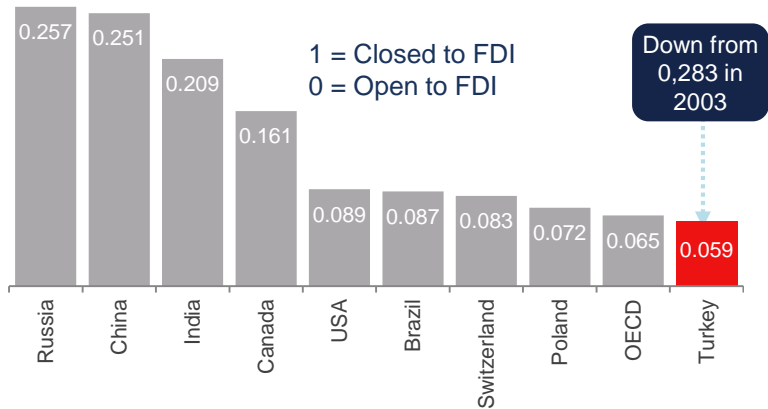


Source: OECD, Eurostat, Turkstat, Ministry of Industry and Technology. PPP: *Purchasing Power Parity

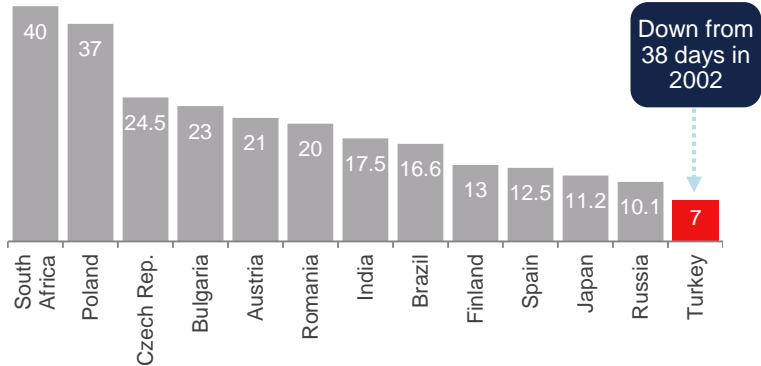
INVESTMENT CLIMATE

Turkey is one of the most open countries to foreign direct investment with a strong investment protection and promotion legislation

FDI Regulatory Restrictiveness Index, 2018



Number of Days to set up a Company, 2019



Bilateral Investment Protection Treaties with 75 countries



Treaties to avoid Double Taxation with 80 countries



Exclusive Foreign Direct Investment Law

- ✓ National treatment
- ✓ International arbitration
- ✓ Guarantee of transfers
- ✓ Employment of expats
- ✓ No restriction on foreign ownership



BILATERAL RELATIONS

Turkey and Germany have developed strong commercial and economic relations over time...

INVESTMENT

\$10
BILLION

FDI from Germany to
Turkey
2003-2019

7,853

German
companies in
Turkey as of
2019



TRADE

\$33
BILLION

bilateral trade
Export: \$15.4 bn
Import: \$18 bn
in 2019

TOURISM

5

MILLION
German tourists
visited Turkey
In 2019



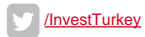
THANK YOU



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INVESTMENT OFFICE

