

FABBRICA FUTURO

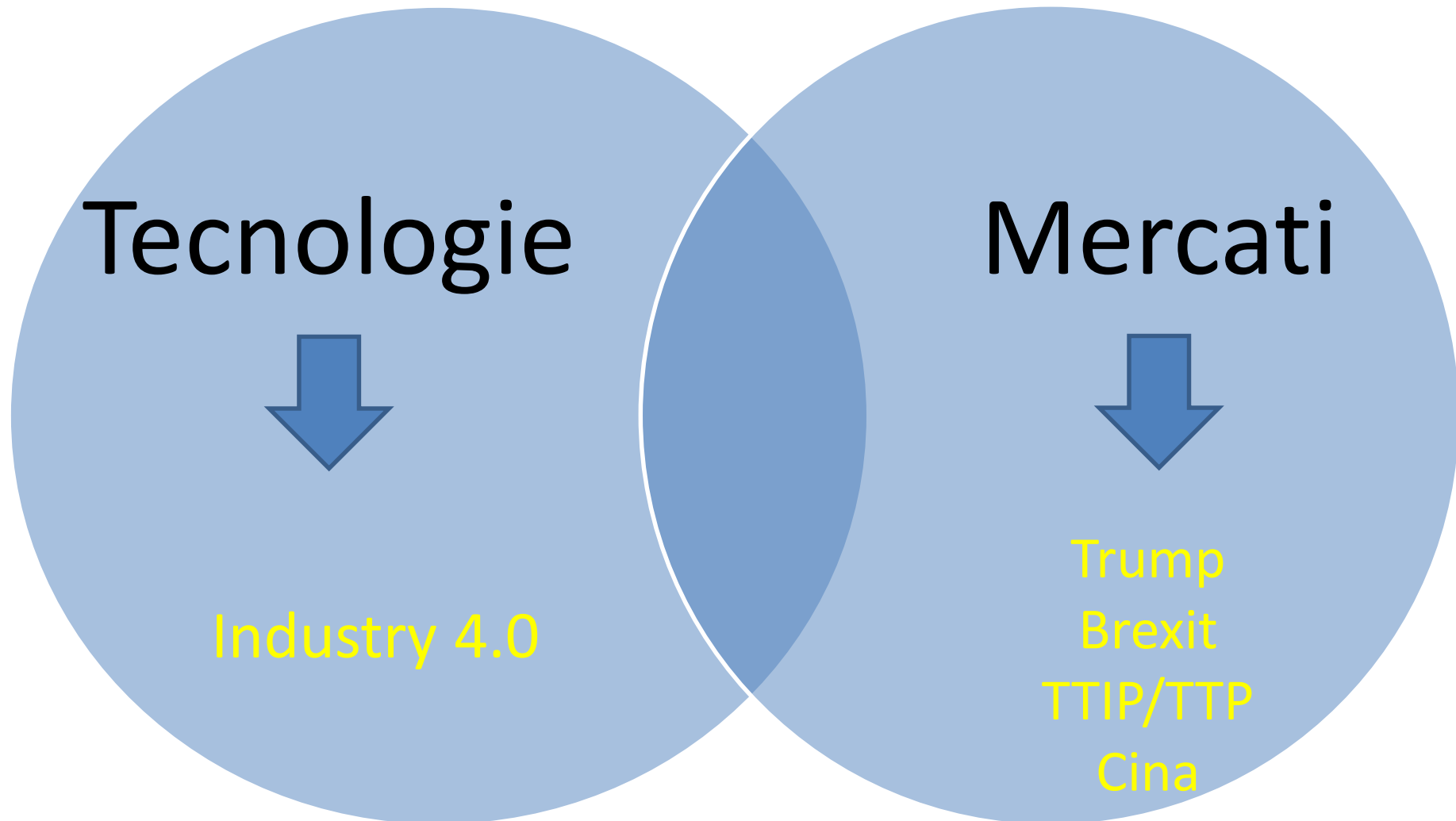
**Prospettive di sviluppo per la
manifattura italiana: analisi del contesto
competitivo tra innovazione tecnologica
e nuovi modelli di business**

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Prospettive di Sviluppo per la manifattura italiana



Il contesto

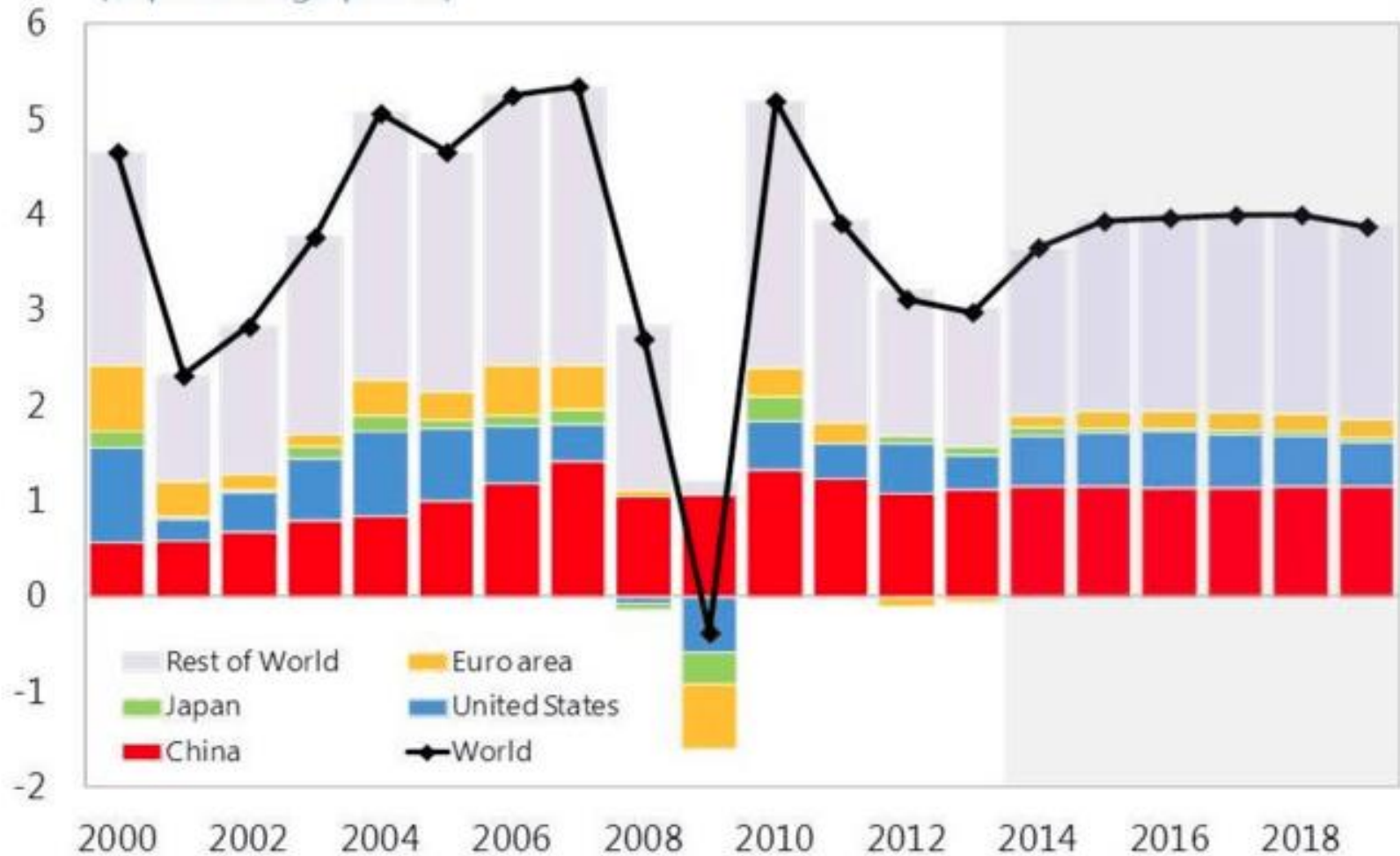
RAPPORTO SULLA COMPETITIVITÀ DEI SETTORI PRODUTTIVI

EDIZIONE 2017

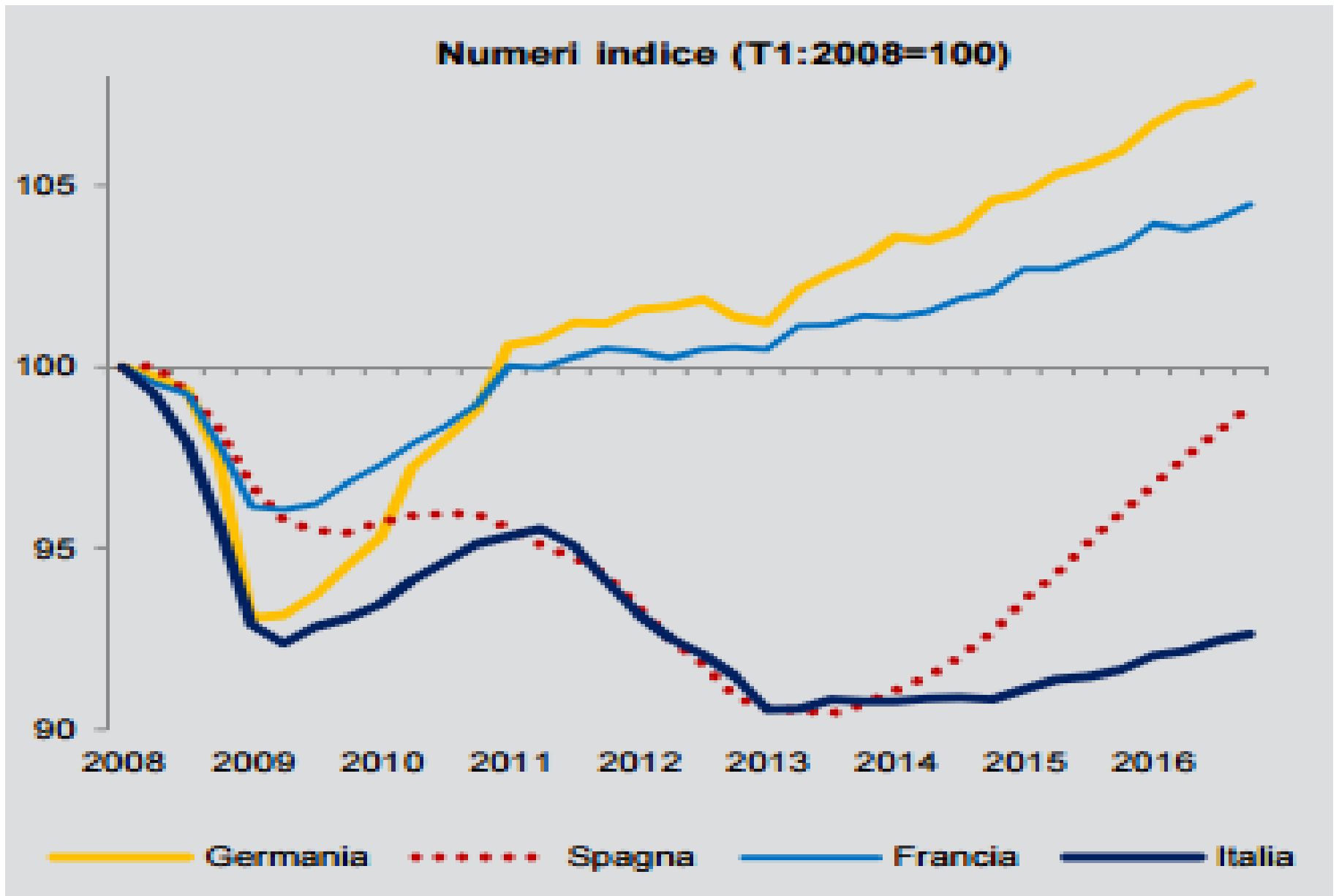
Crescita mondiale

Contribution to Global Growth

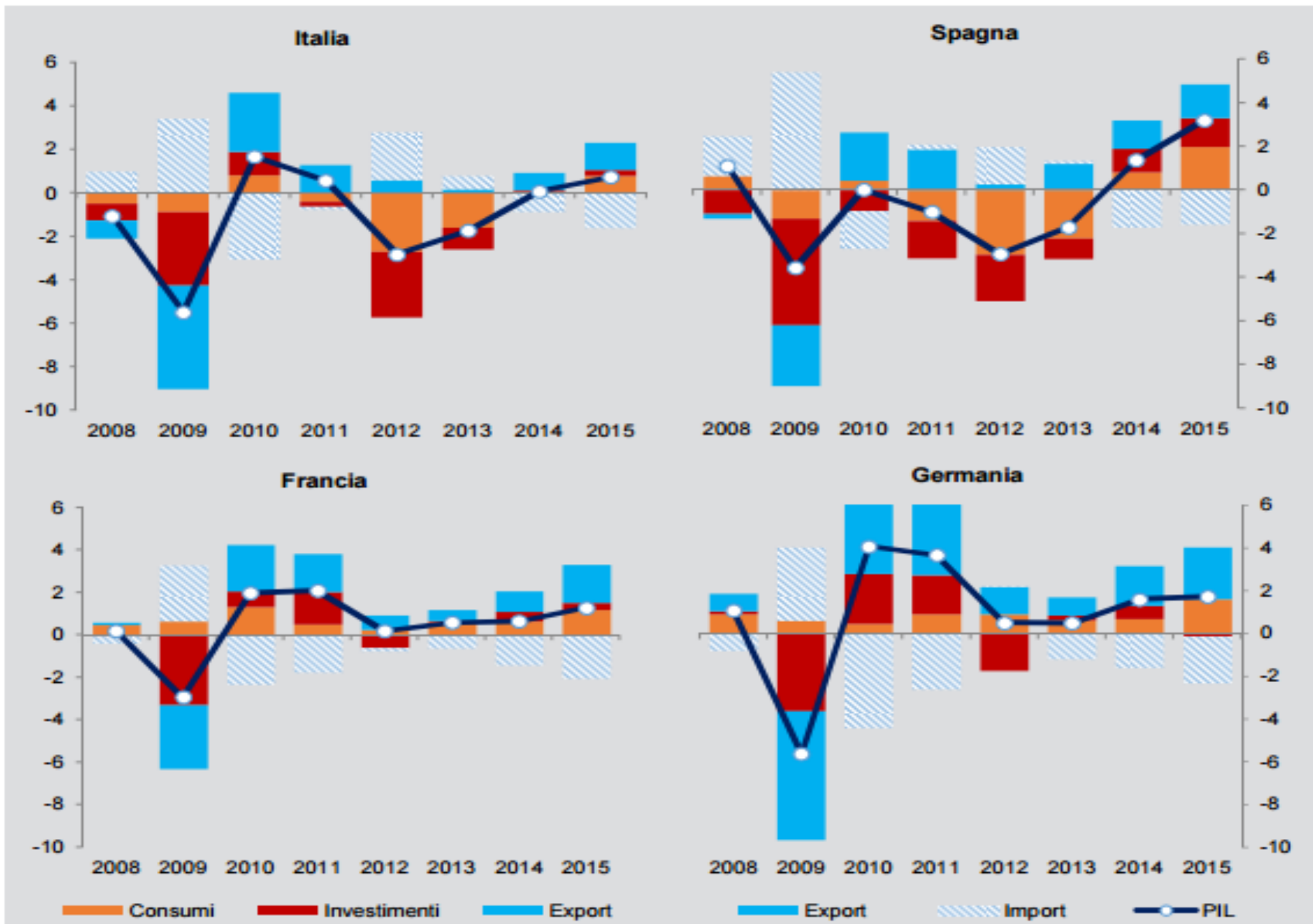
(In percentage points)



Andamento PIL

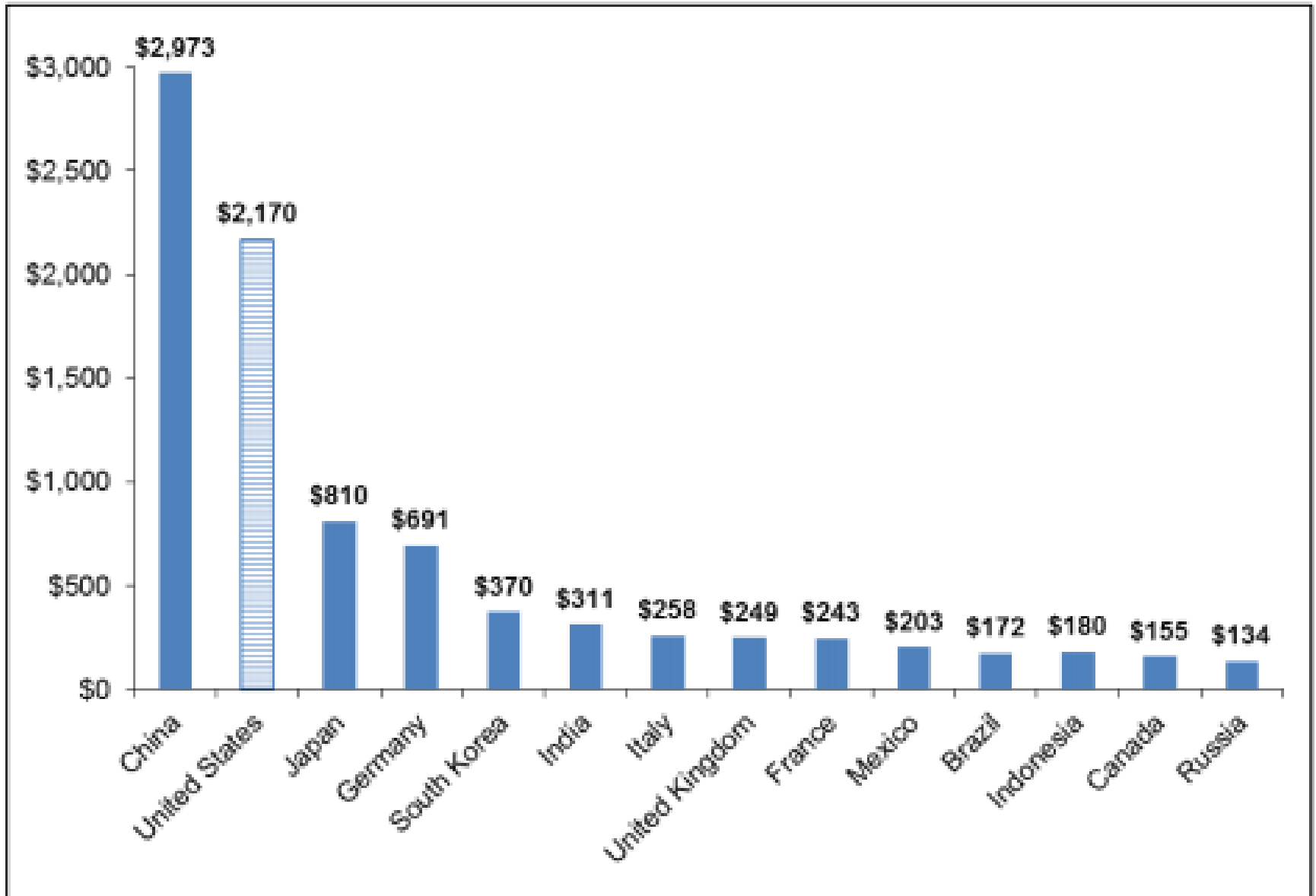


Variazioni PIL

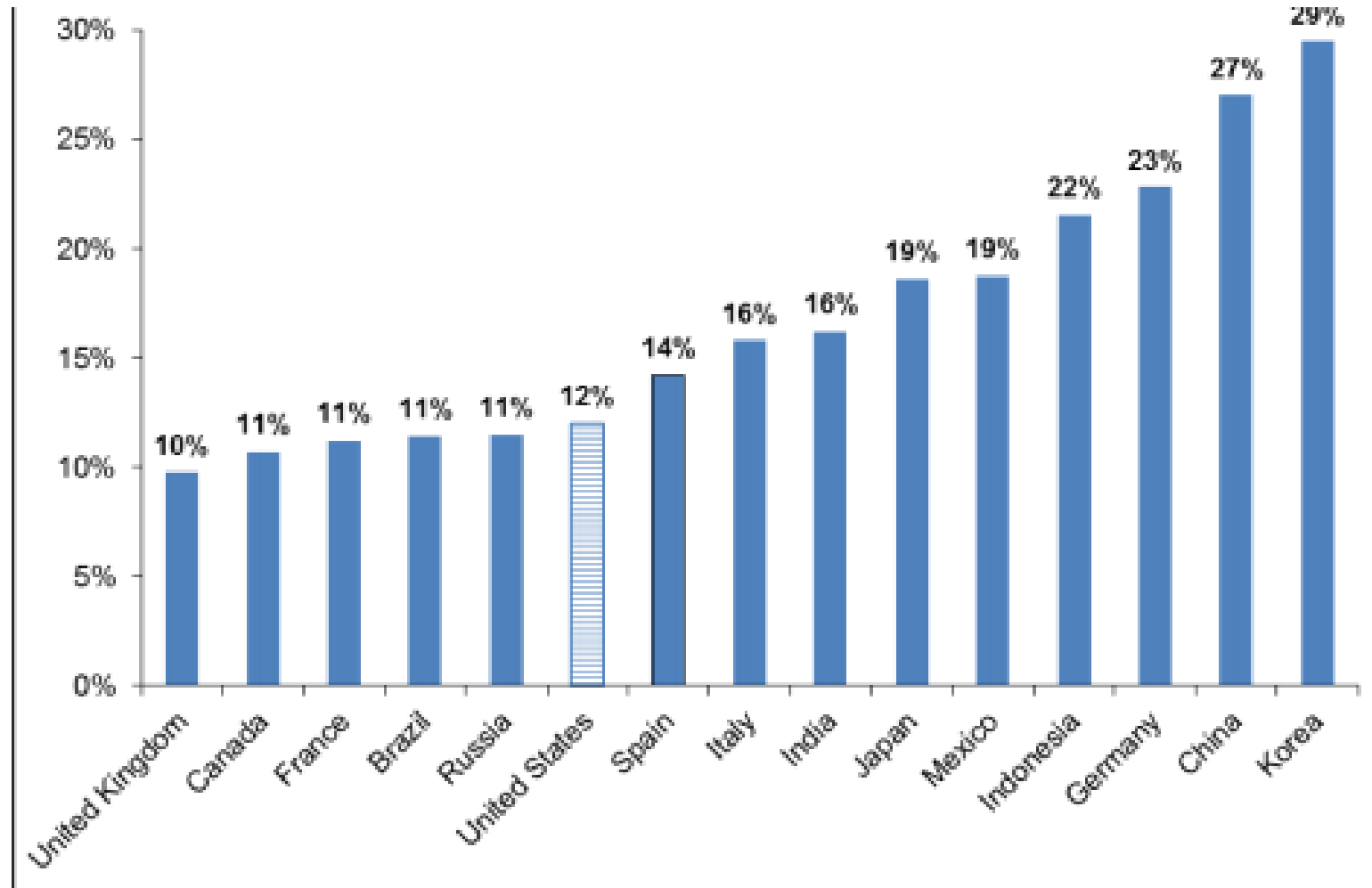


Valore aggiunto manifatturiero

(miliardi di dollari - 2015)



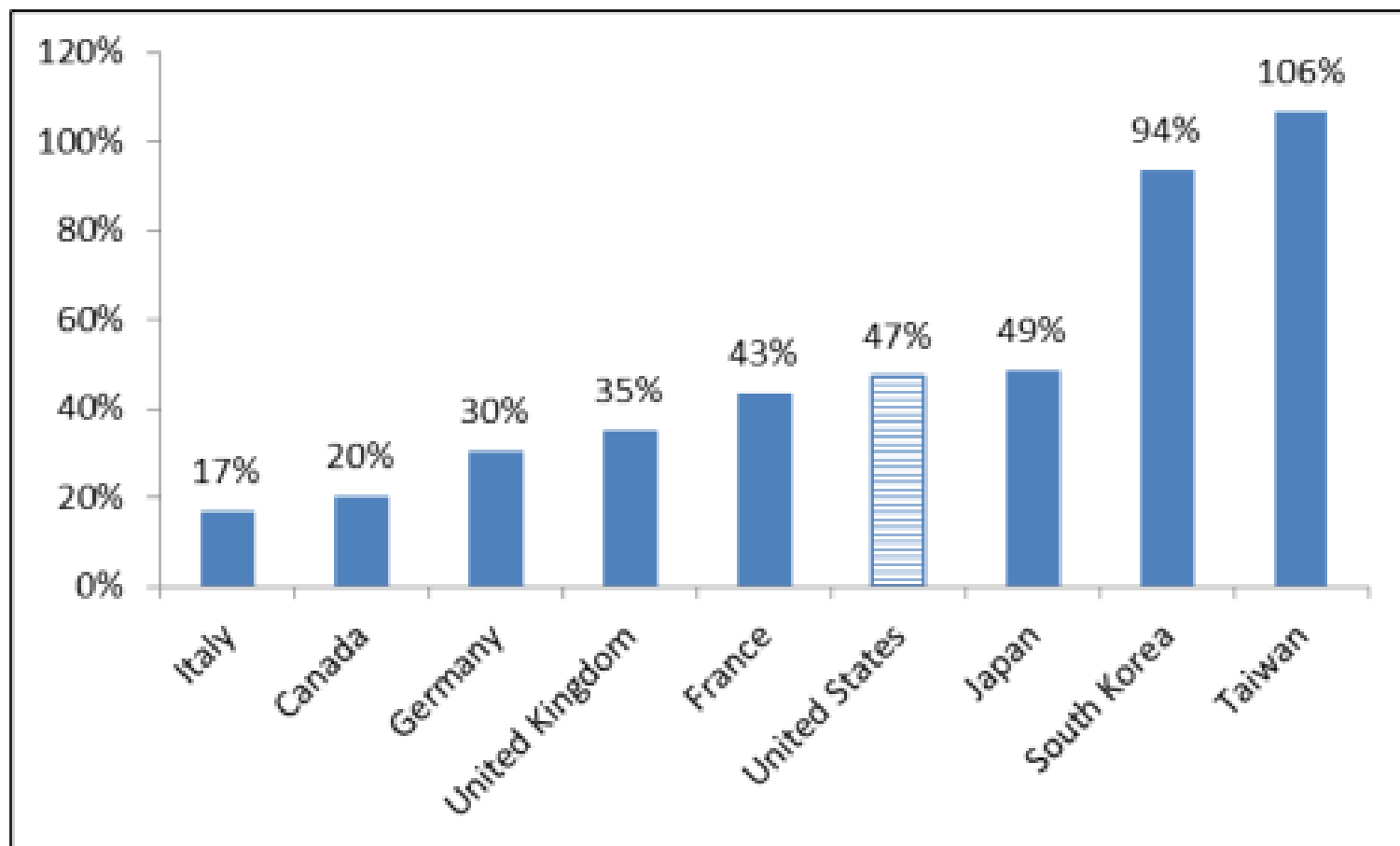
Valore aggiunto manifatturiero su PIL 2015



Source: United Nations National Accounts Main Aggregates Database, value added by economic activity and Gross Domestic Product, at current prices—national currency.

Output per ora lavorata in manifattura

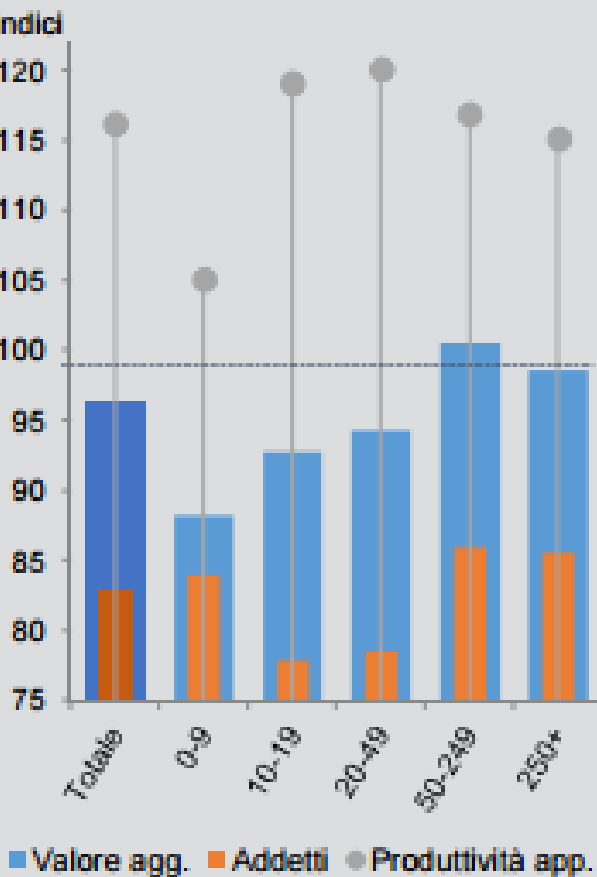
variazione percentuale 2002 2015



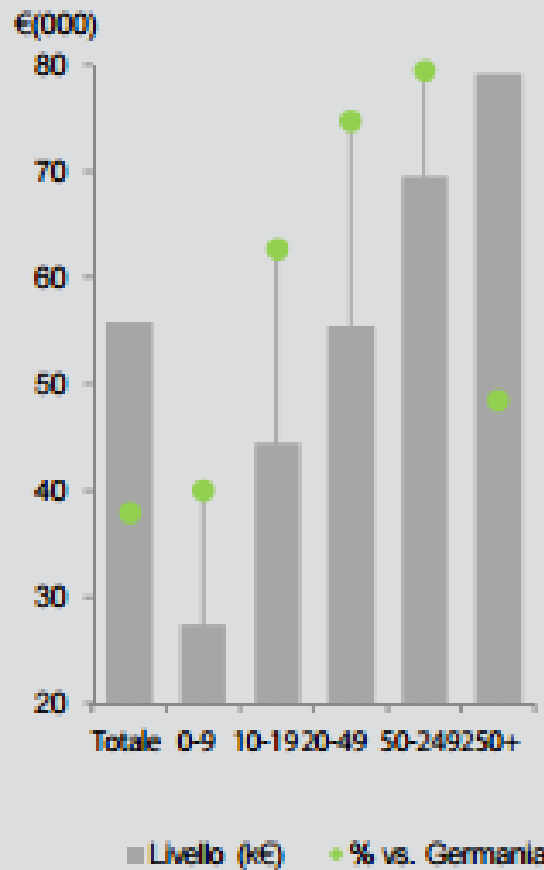
Source: The Conference Board, International Labor Comparisons Program, "International Comparisons of Manufacturing Productivity and Unit Labor Cost Trends," June 2016.

Produttività

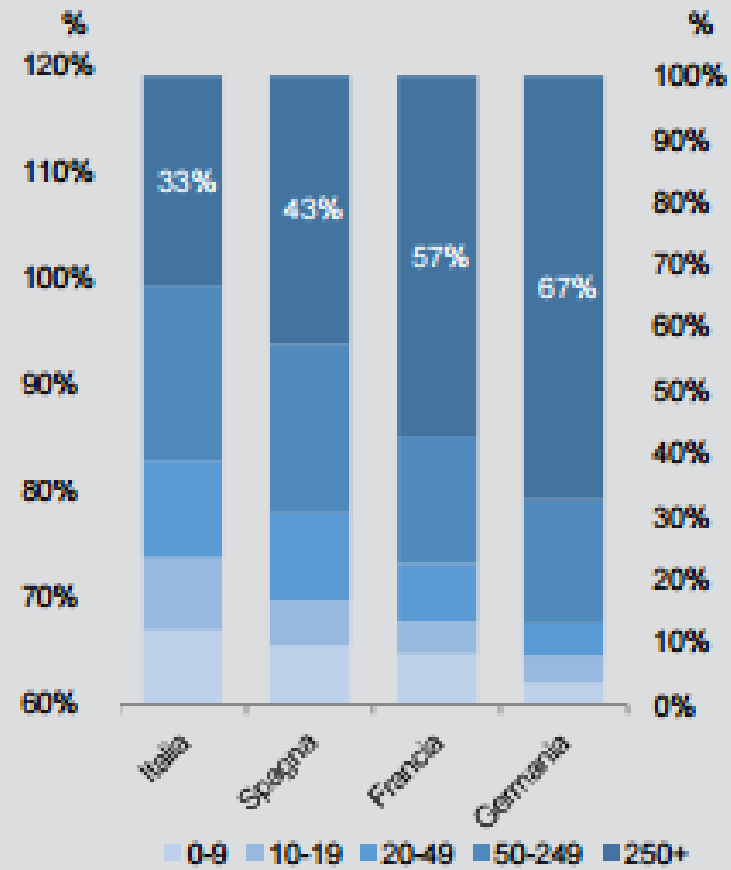
Italia: 2014 vs. 2008 (=100)



Italia: produttività in € e %

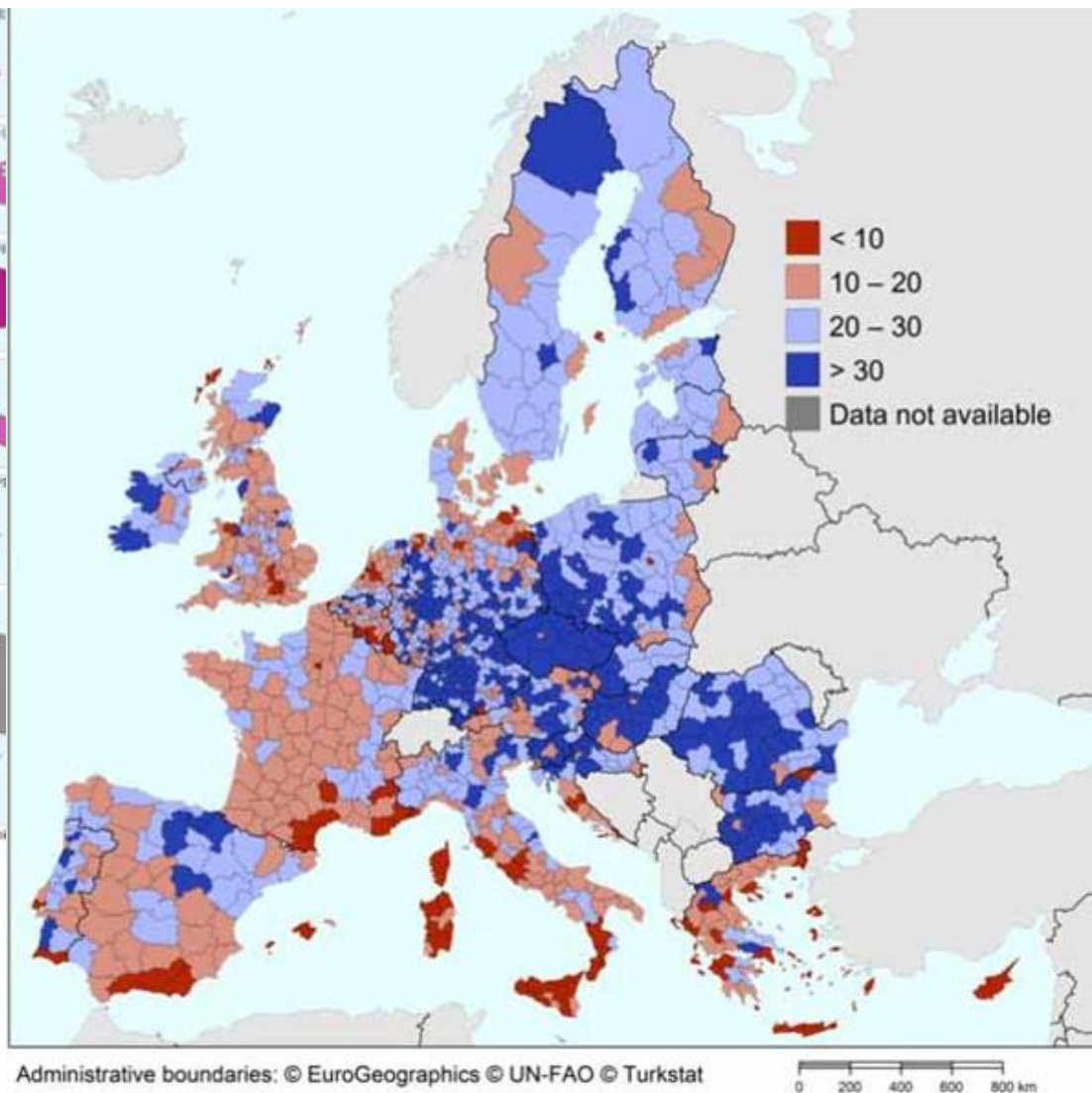
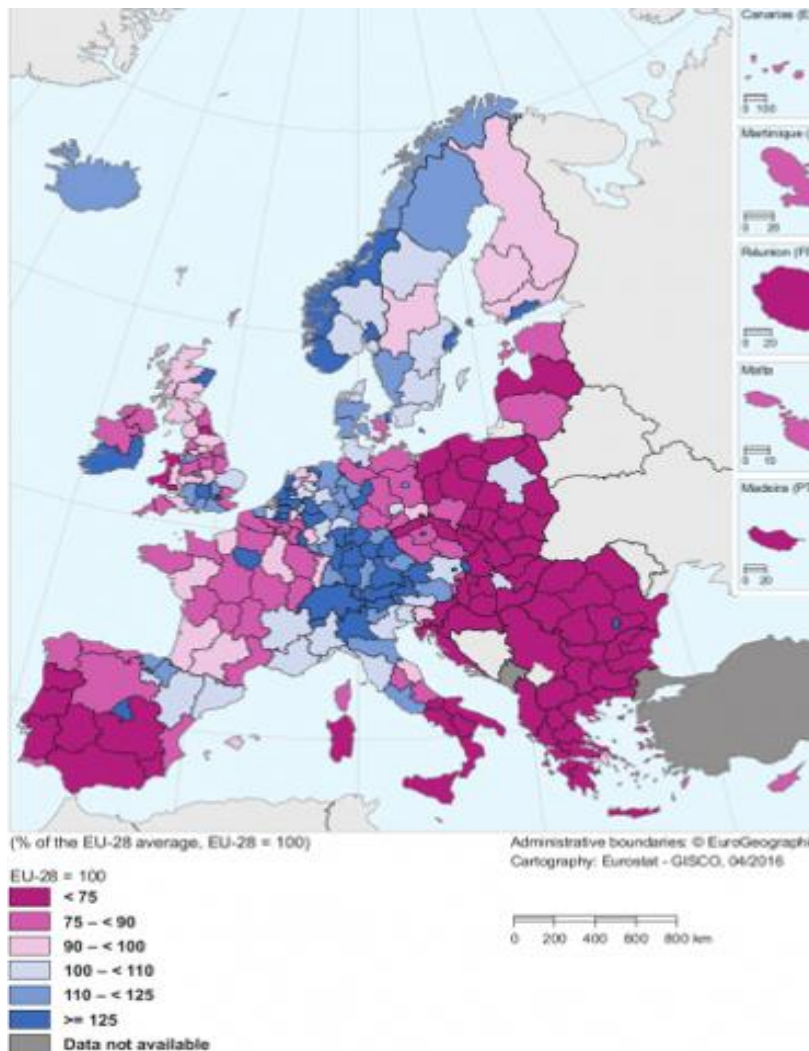


Quote di valore aggiunto



PII procapite (media europea)

Valore aggiunto industria su PII



(*) Norway: 2013, Switzerland, Albania and Serbia: national data. Switzerland and Albania: provisional.
Source: Eurostat (online data codes: nerna_10r_2gdp and nerna_10_pc)

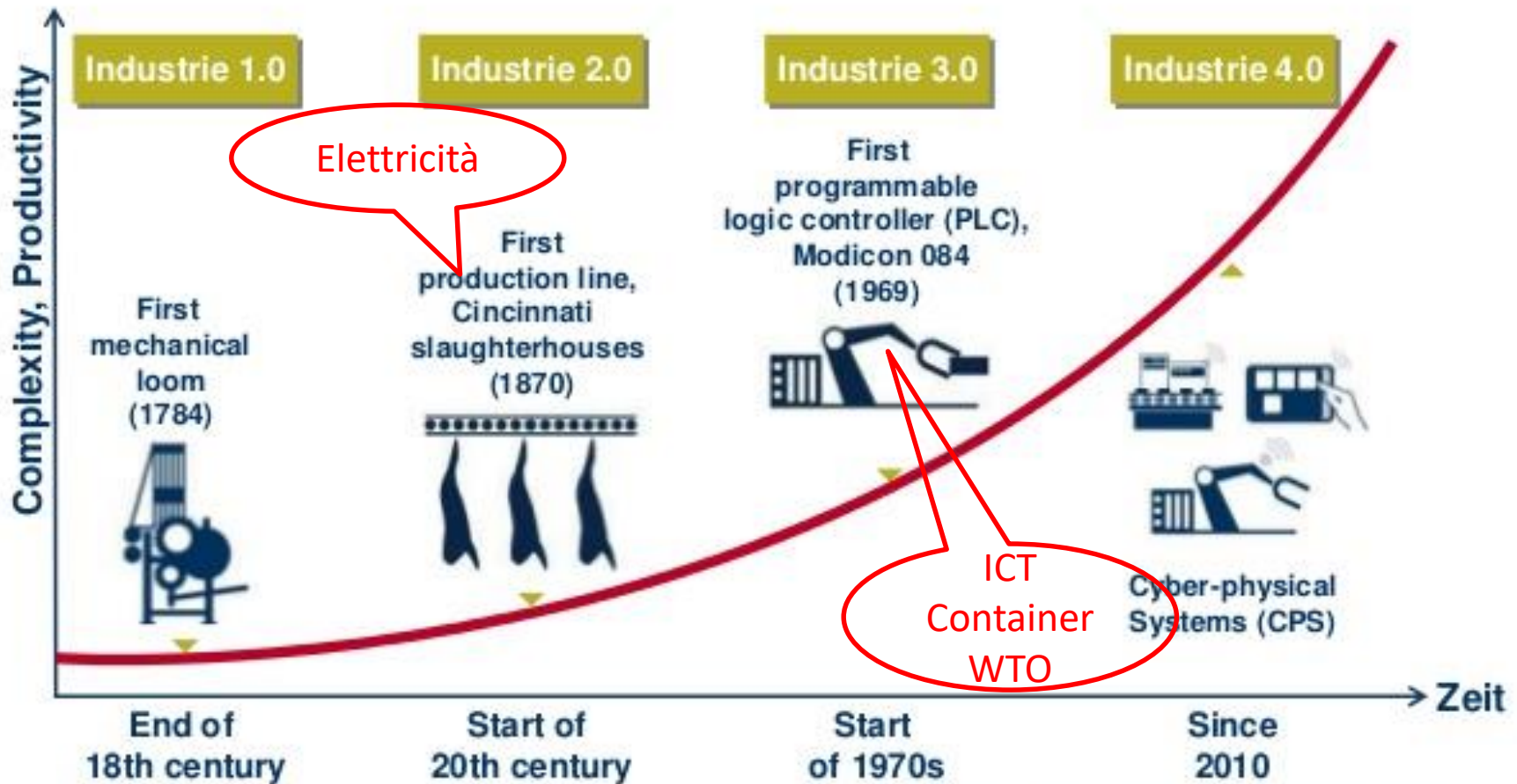
Tecnologie



Industry 4.0

“Certainly there will be taxes that relate to automation. Right now, the human worker who does, say, \$50,000 worth of work in a factory, that income is taxed and you get income tax, social security tax, all those things. If a robot comes in to do the same thing, you’d think that we’d tax the robot at a similar level.”

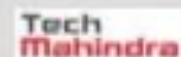
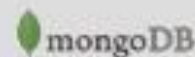
Industrie 4.0: The next Industrial Revolution



Source: Forschungsunion, acatech, Abschlussbericht Arbeitskreis Industrie 4.0

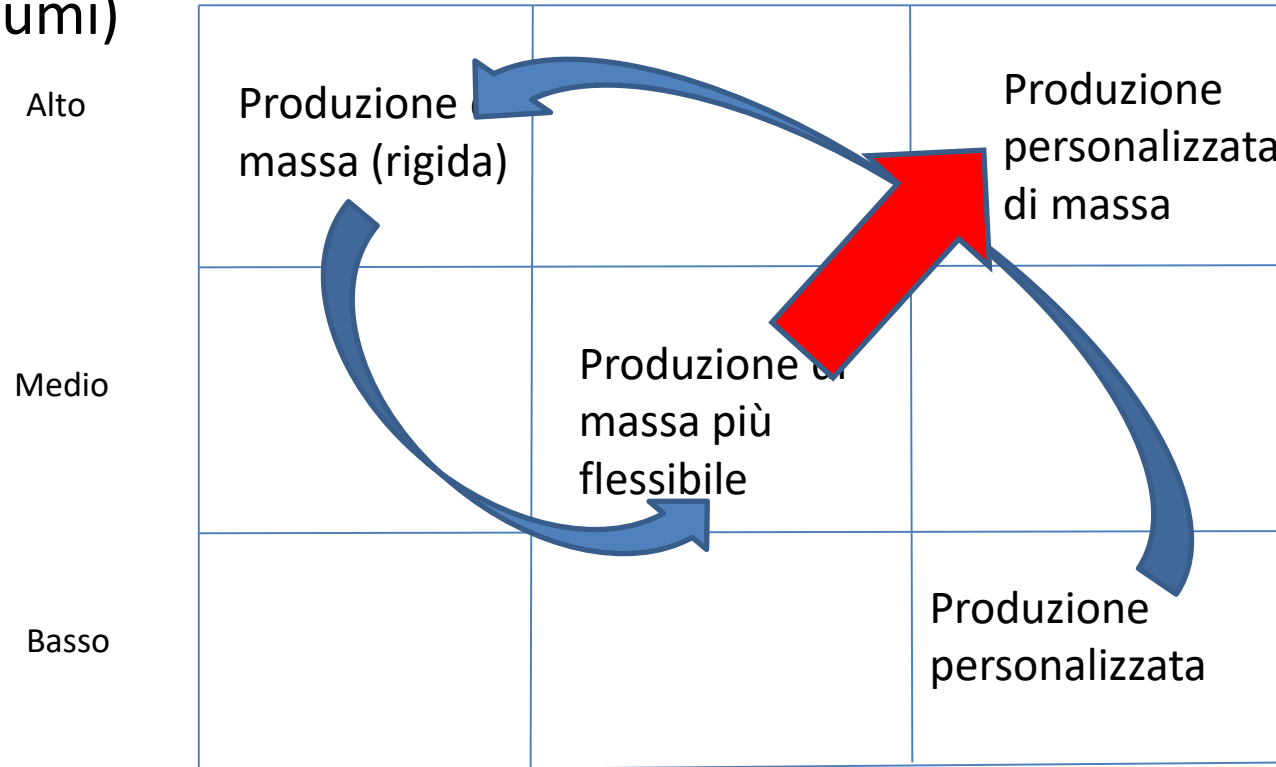
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Le rivoluzioni industriali

Scale
(Volumi)



Basso

Medio

Alto

Scope
(Differenziazione
del prodotto)

Industry 4.0





Diversity of efforts across Europe

© EC | VCE | VCS | FC | OSS | 2017

EU-level Initiatives

- Application PPPs: FoF, SPIRE
- I4MS
- Smart Anything Everywhere
- ICT PPPs

Multi-region Initiatives

- Vanguard

United Kingdom

- High Value Manufacturing
- Innovate UK
- Action Plan for Manufacturing (Scotland)

Belgium

- Made Different
- Flanders Make/iMinds (Flanders)

France

- Usine du Futur
- FoF Ile-de-France

Portugal

Produtech

Sweden

Produktion 2030

Netherlands

Smart Industry

Finland

- FIMECC PPP Programmes (MANU, S-STEP, SIMP, S4Fleet)
- Industrial Internet Business Revolution
- IoT pilot Factory (IoT PFF)

Poland

- INNOMOTO
- INNOLOT
- Digital manufacturing for the SME (Mazovia)

Germany

- Industrie 4,0
- Smart Service World
- Autonomik für Industrie 4.0
- It's OWL (Ostwestfalen-Lippe)
- Allianz Industrie 4.0 (Baden-Württemberg)

Austria

Produktion der Zukunft

Italy

- Fabbrica Intelligente
- Ass. Fabbr. Intell. Lombardia

Greece

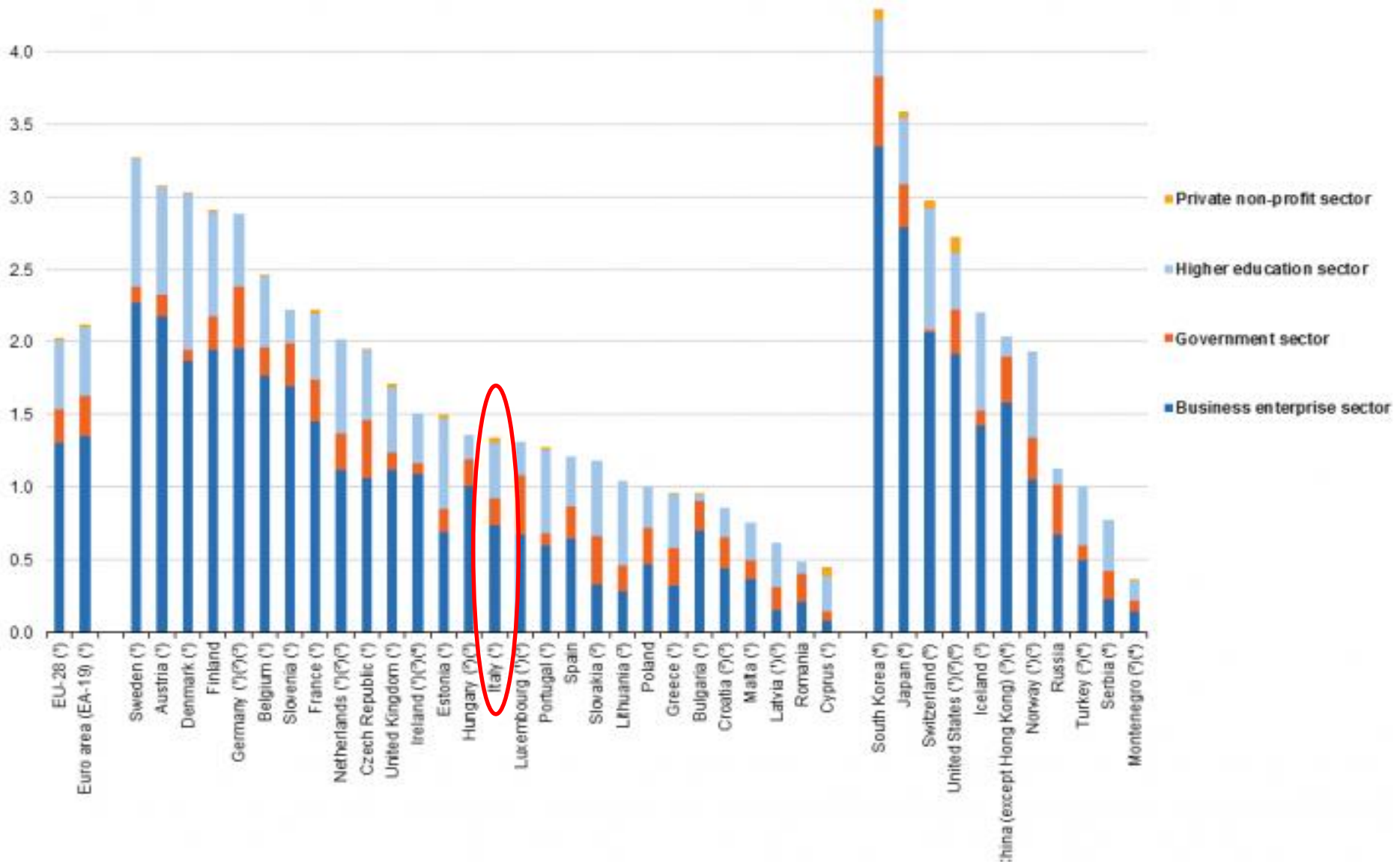
Operational Programme in Region Western Greece

Spain:

- Connected industry 4.0
- Regional initiatives

European initiatives are in red
National initiatives are in blue
Regional initiatives are in green

R&D/PIL



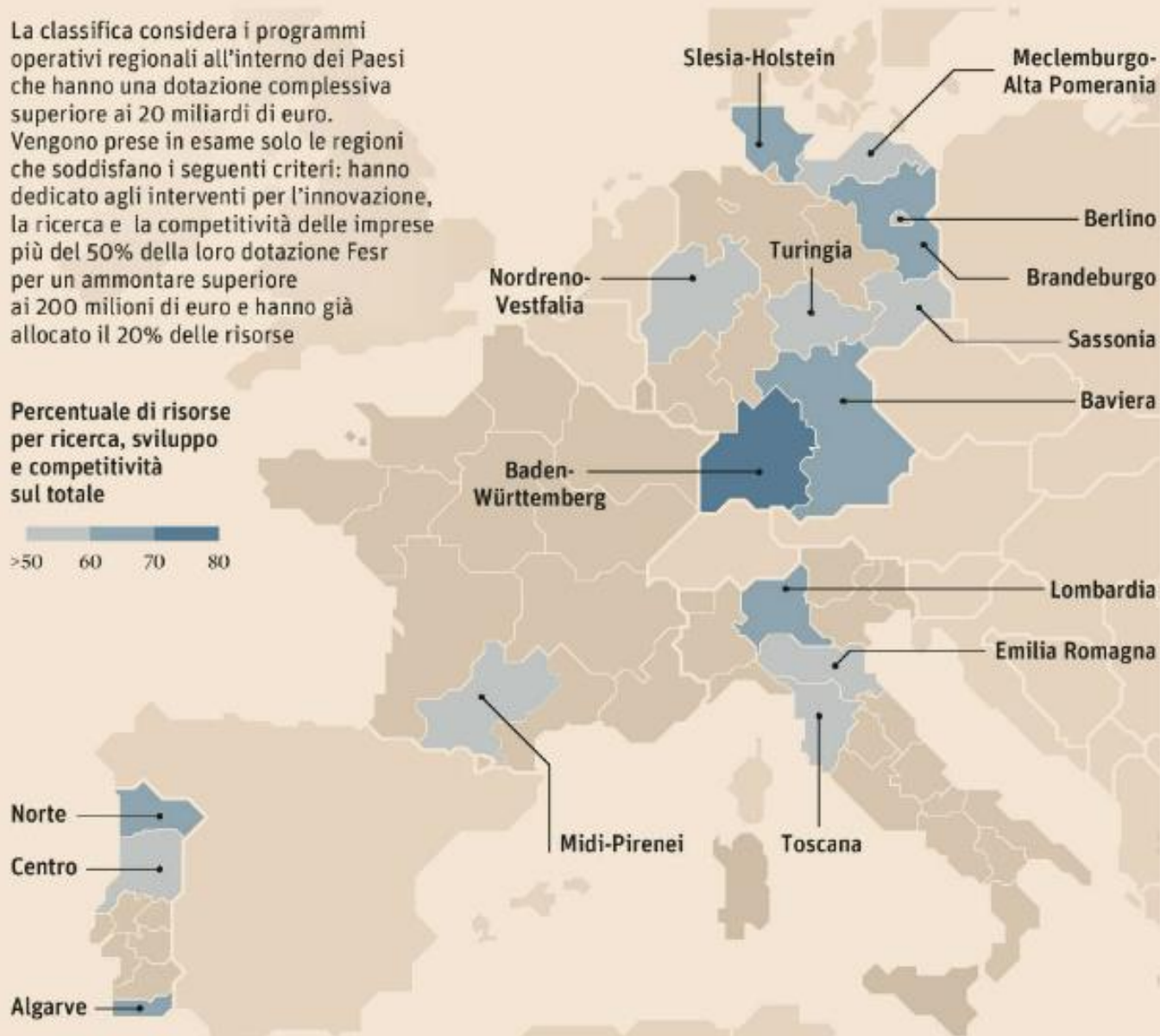
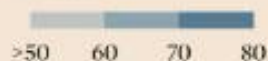
R&D/valore aggiunto in manifattura

	2010	2011	2012	2013	2014
France	6,57%	6,76%	7,00%	7,30%	NO
Germany	7,24%	7,76%	8,10%	7,62%	7,95%
Italy	3,26%	3,58%	3,71%	3,67%	3,75%
Japan	11,99%	12,26%	12,12%	12,49%	NO
Korea	7,57%	8,61%	9,40%	NO	NO
Spain	3,08%	3,30%	3,15%	3,03%	NO
United Kingdom	4,10%	4,32%	4,30%	4,44%	4,78%
United States	10,45%	10,29%	10,44%	10,71%	NO

La mappa di chi utilizza meglio gli aiuti a ricerca, innovazione e competitività

La classifica considera i programmi operativi regionali all'interno dei Paesi che hanno una dotazione complessiva superiore ai 20 miliardi di euro. Vengono prese in esame solo le regioni che soddisfano i seguenti criteri: hanno dedicato agli interventi per l'innovazione, la ricerca e la competitività delle imprese più del 50% della loro dotazione Fesr per un ammontare superiore ai 200 milioni di euro e hanno già allocato il 20% delle risorse

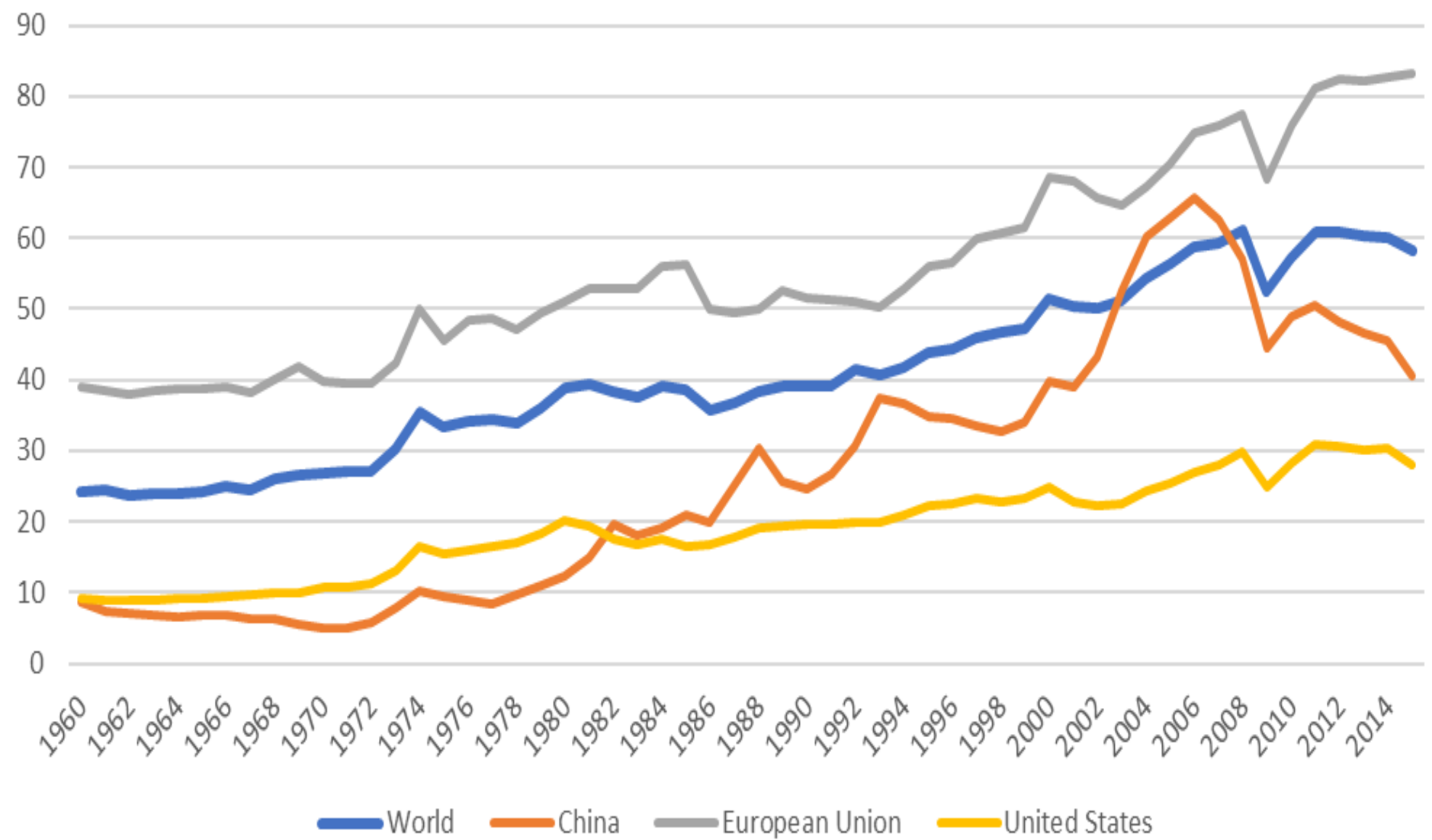
Percentuale di risorse per ricerca, sviluppo e competitività sul totale



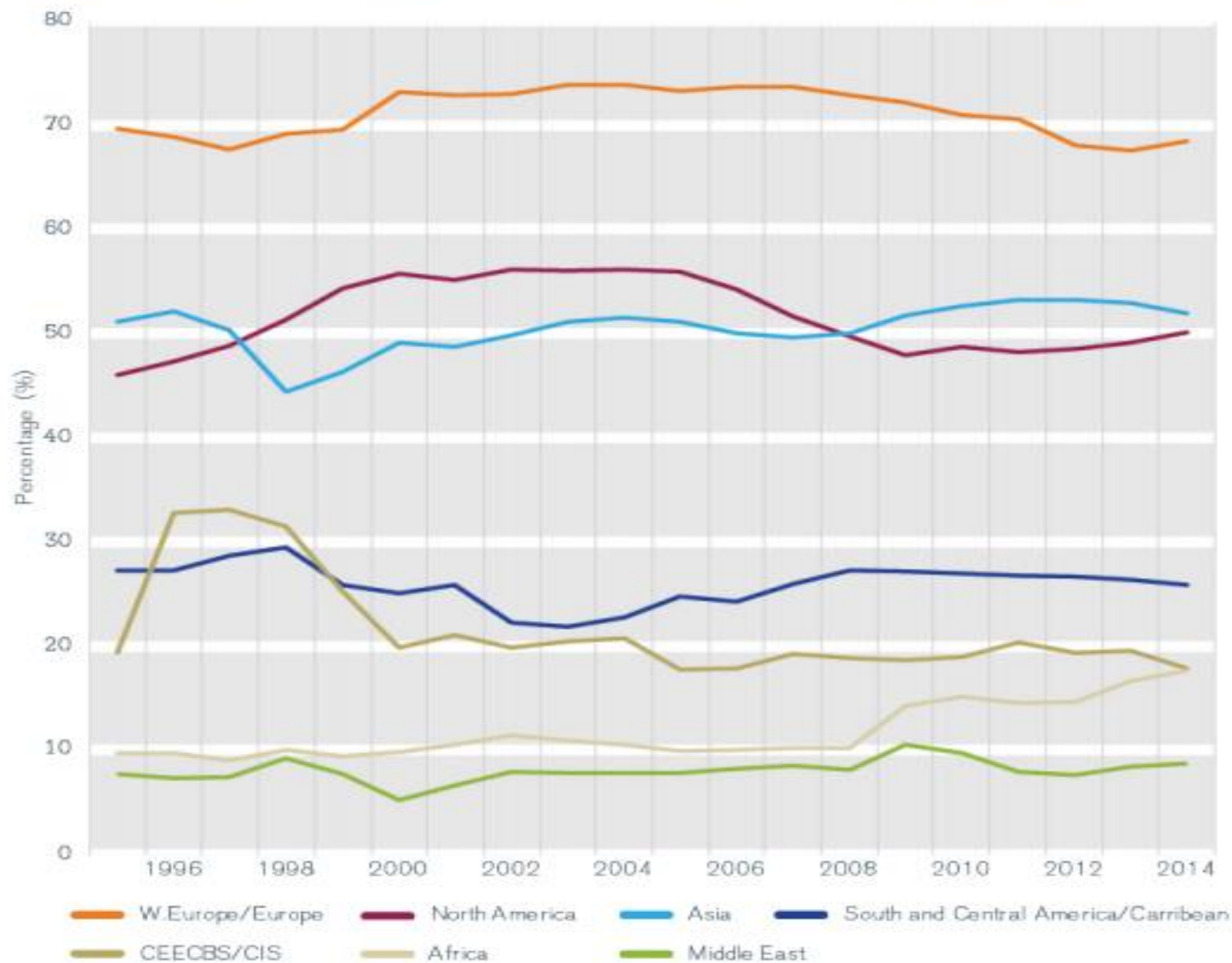
deglobalizzazione

Brexit
Trump
TTIP
TTP

Export/PIL



Share of intra-regional exports in total exports, 1995-2014



Cina: la fabbrica del mondo

25% valore aggiunto manifatturiero globale

Nel 2015, ha prodotto o assemblato

- 28% delle automobili
- 41% delle navi
- più del 80% dei computer
- più del 90% dei telefoni cellulari
- 60% delle TV a colori
- più del 50% dei frigoriferi
- 80% dei condizionatori
- 24% dell'energia mondiale
- metà dell'acciaio

CHINA MANUFACTURING 2025

- Costo del lavoro cresce del 10% all'anno
- Popolazione invecchia
- Necessità di controllare più valore aggiunto
- Ritardo tecnologico in molti settori
- Alcune produzioni si stanno spostando verso altri paesi
- Cambio modello di sviluppo

CHINA MANUFACTURING 2025: i settori

- Next generation IT
- High-end numerical control machinery and robotics
- Aerospace and aviation equipment
- Maritime engineering equipment and high-tech maritime vessel manufacturing
- Advanced rail equipment
- Energy-saving vehicles and NEVs
- Electrical equipment
- Agricultural machinery and equipment
- New materials
- Biopharmaceuticals and high-performance medical devices

CHINA MANUFACTURING 2025: gli obiettivi

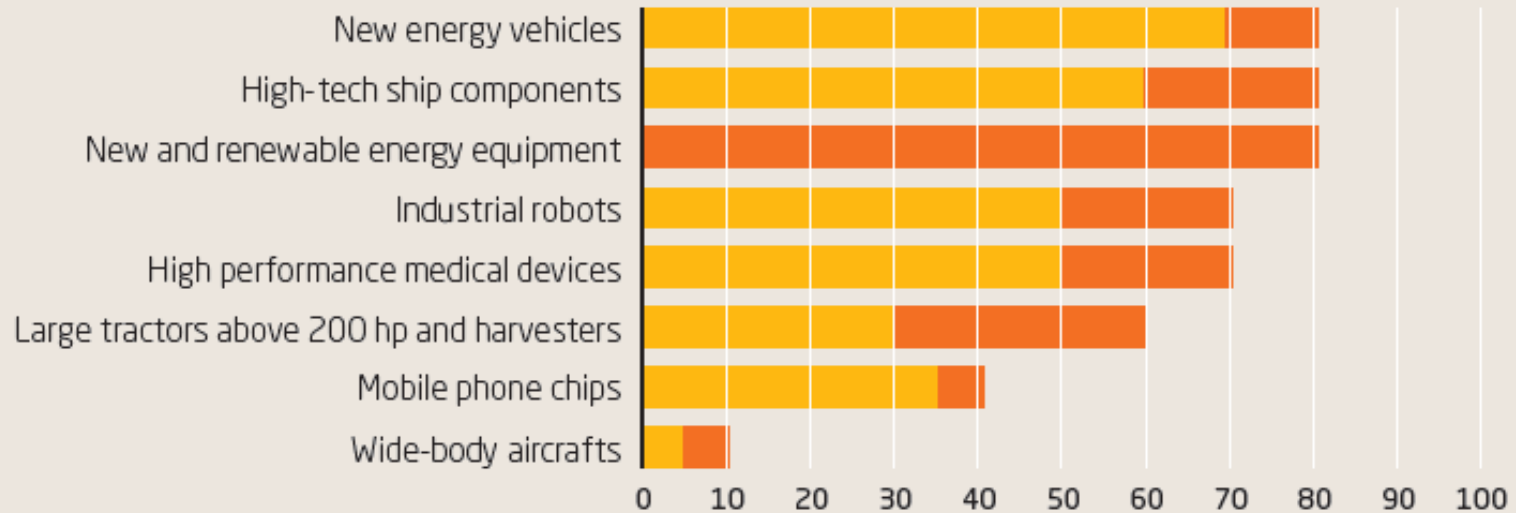
- 40% of basic components and basic materials to be domestically manufactured by 2020, rising to 70% by 2025.
- 30% reduction in operating costs, production cycles and product defect rates by 2020, rising to 50% by 2025.
- 15 innovation centers to be established by 2020, with this number rising to 40 by 2025.



Made in China 2025 aims at substitution

Semi-official targets for the domestic market share of Chinese products (in per cent)

■ 2020 ■ 2025



Source: Expert Commission for the Construction of a Manufacturing Superpower

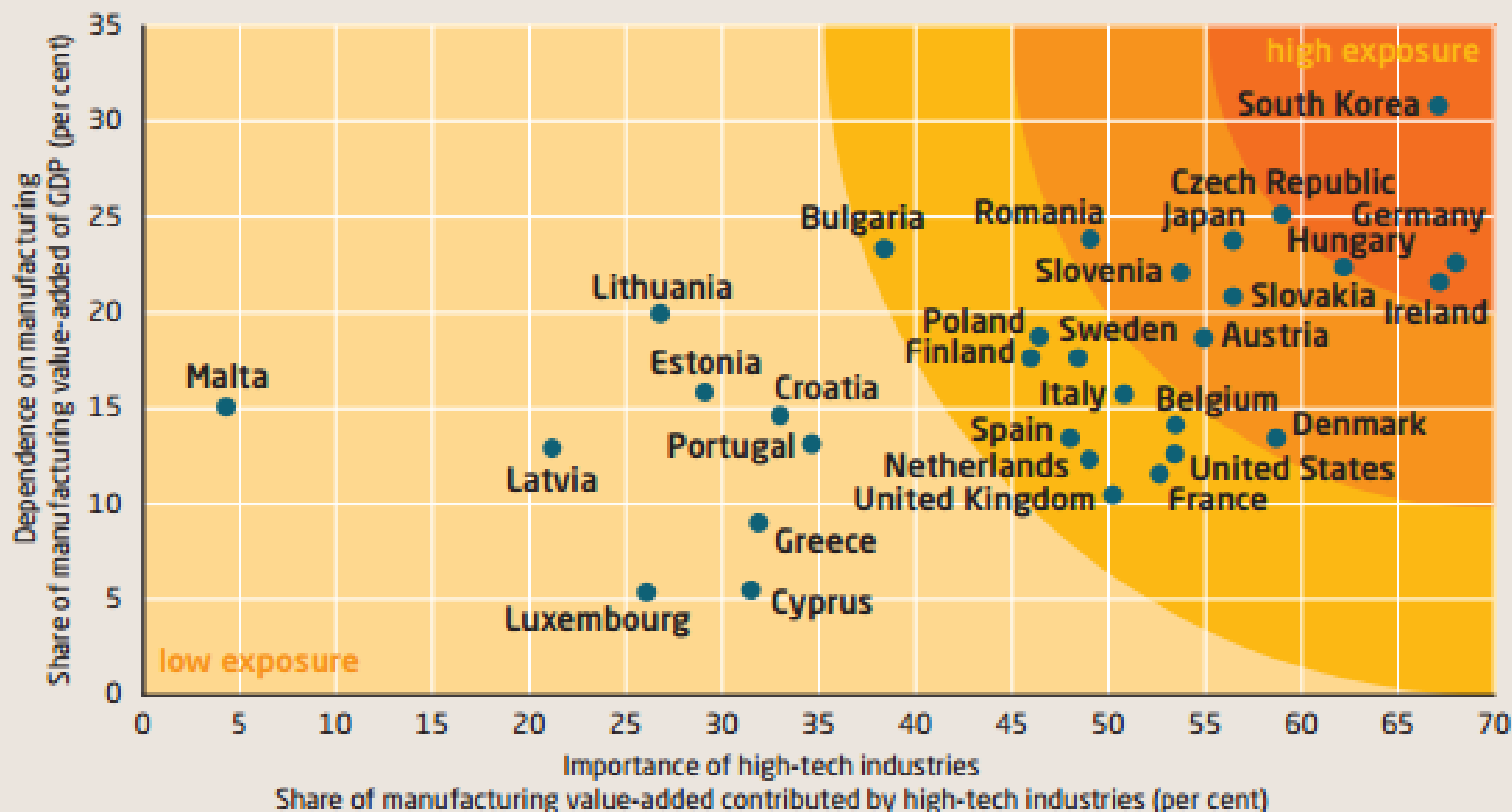
Gli strumenti di policy

1. Forced technology transfers in exchange for market access
2. Market access and government procurement restrictions for FIEs
3. Standards
4. Subsidies
5. Financial policy
6. Government-backed investment funds
7. Support from local government
8. Technology-seeking investments abroad
9. SOEs: mergers and politicisation
10. Public-private partnerships

Problemi per noi?

Under Pressure: Industrialised countries will feel the heat of Made in China 2025

Vulnerability of select industrial countries to Made in China 2025



Source: MERICS

Quindi...

- Industry 4.0 – nuovi mercati spingono per un consolidamento a livello d'impresa e di filiera
- Non vuol dire che non ci sia spazio per i piccoli
- Ci vogliono però alcuni elementi di base: R&D e formazione
- Non c'è un problema di dimensione solo per le imprese ma anche per i mercati