

INNOVAZIONE E COMPETITIVITÀ NEL SISTEMA MANIFATTURIERO ITALIANO

Intervento di

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Workshop “Il Sistema Ricerca-Industria in Italia”

Accademia Nazionale dei Lincei

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ITALIAN MANUFACTURING INDUSTRY - THE SECOND LARGEST IN EUROPE

EU manufacturing industry in 2019

	Value of production (billion euro)	Gross value added (billion euro)	Persons employed (million)
Germany	1,984	675	7.8
ITALY	989	267	3.9
FRANCE	807	243	2.6
SPAIN	536	136	2
NETHERLANDS	341	88	0.8
BELGIUM	238	59	0.5
SWEDEN	198	61	0.6

Source: Edison Foundation calculations based on Eurostat statistics

Spesa in ricerca e sviluppo del settore privato: anno 2019

(in % del PIL)

	Tot	Elettronica	Auto	Chimica	Farmaceutica	Resto
GER	2,18	0,25	0,81	0,13	0,16	0,83
ITA	0,92	0,06	0,09	0,03	0,04	0,7
JAP	2,53	0,47	0,69	0,17	0,24	0,96
KOR	3,72	1,89	0,44	0,2	0,09	1,1

Fonte: elaborazione Fondazione Edison su dati Eurostat

SPESA IN RICERCA E SVILUPPO NELL'INDUSTRIA MECCANICA

(milioni di euro)

	2017	2018	2019
GERMANIA	7.117	7.111	7.450
ITALIA	1.834	1.981	2.015
AUSTRIA	1.074	n.a.	1.319
FRANCIA	1.142	n.a.	n.a.
SVEZIA	857	n.a.	849
SPAGNA	242	274	270

Source: Eurostat

ITALY HAS A HIGHLY ROBOTIZED MACHINERY AND METAL PRODUCTS INDUSTRY

OPERATIONAL STOCK OF INDUSTRIAL ROBOTS: METAL PRODUCTS AND INDUSTRIAL MACHINERY (2019)

G20 economies ranking	Countries [#]	Number of units
1	China	62,330
2	Japan	43,487
3	Germany	27,986
4	Italy	17,062
5	North America*	16,958
6	Republic of Korea	7,890
7	France	5,127
8	Turkey	2,226
9	United Kingdom	1,572
10	India	1,460
11	Russia Federation	1,203

G7 economies ranking

- 1 Japan
- 2 Germany
- 3 Italy**
- 4 North America*
- 5 France
- 6 United Kingdom

Other G20 economies ranking

- 1 China
- 2 Republic of Korea
- 3 Turkey
- 4 India
- 5 Russia

Data for Argentina, Australia, Brazil, Indonesia, Saudi Arabia and South Africa not available

* United States, Canada, Mexico

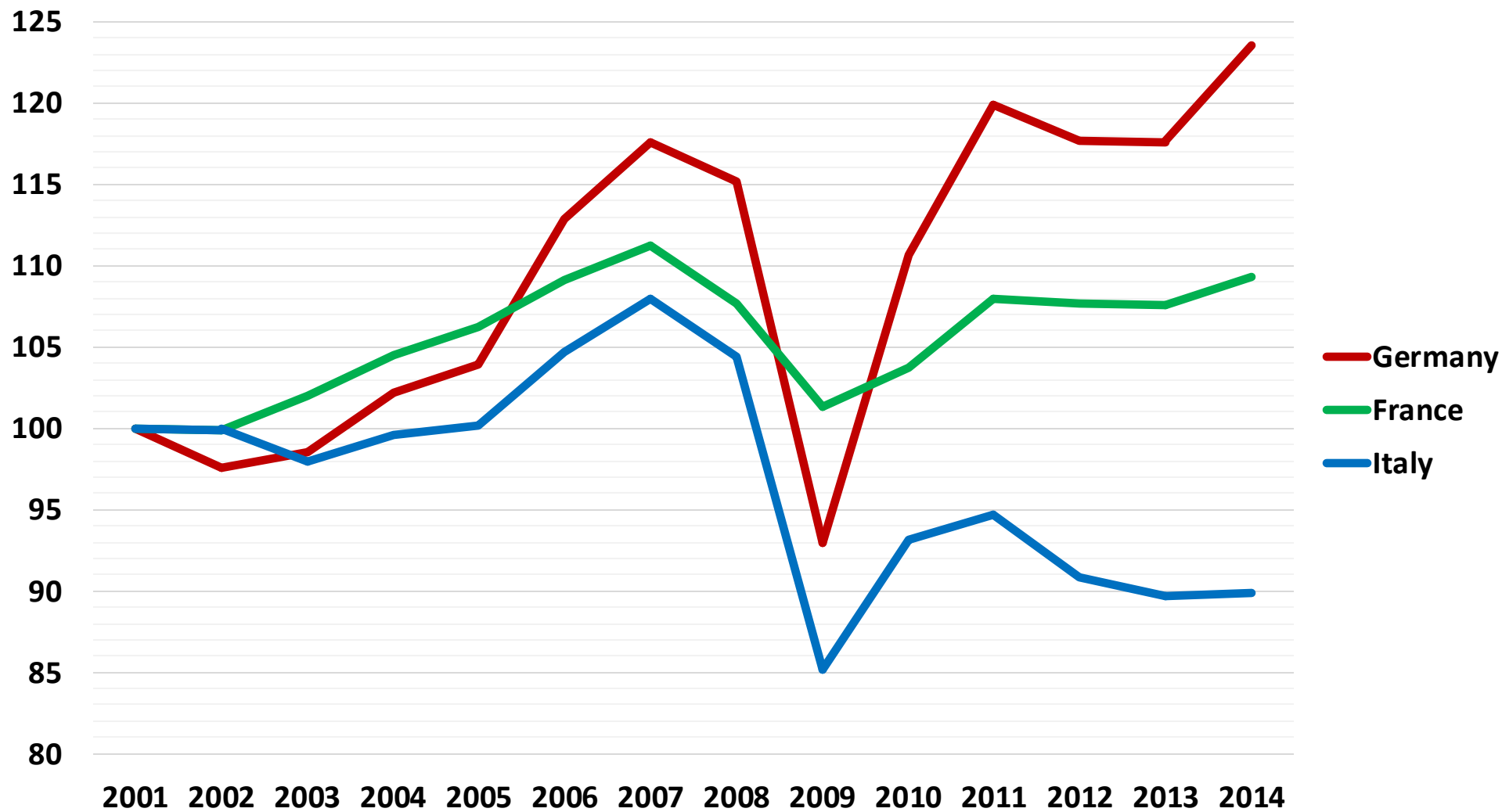
Source: Edison Foundation/CRANEC-Catholic University calculation based on VDMA, World Robotics 2020 - Industrial Robots

**DA ULTIMI
PER
CRESCITA ...**

MANUFACTURING GROSS VALUE ADDED, 2001-2014

(Chain linked volumes, index 2001=100)

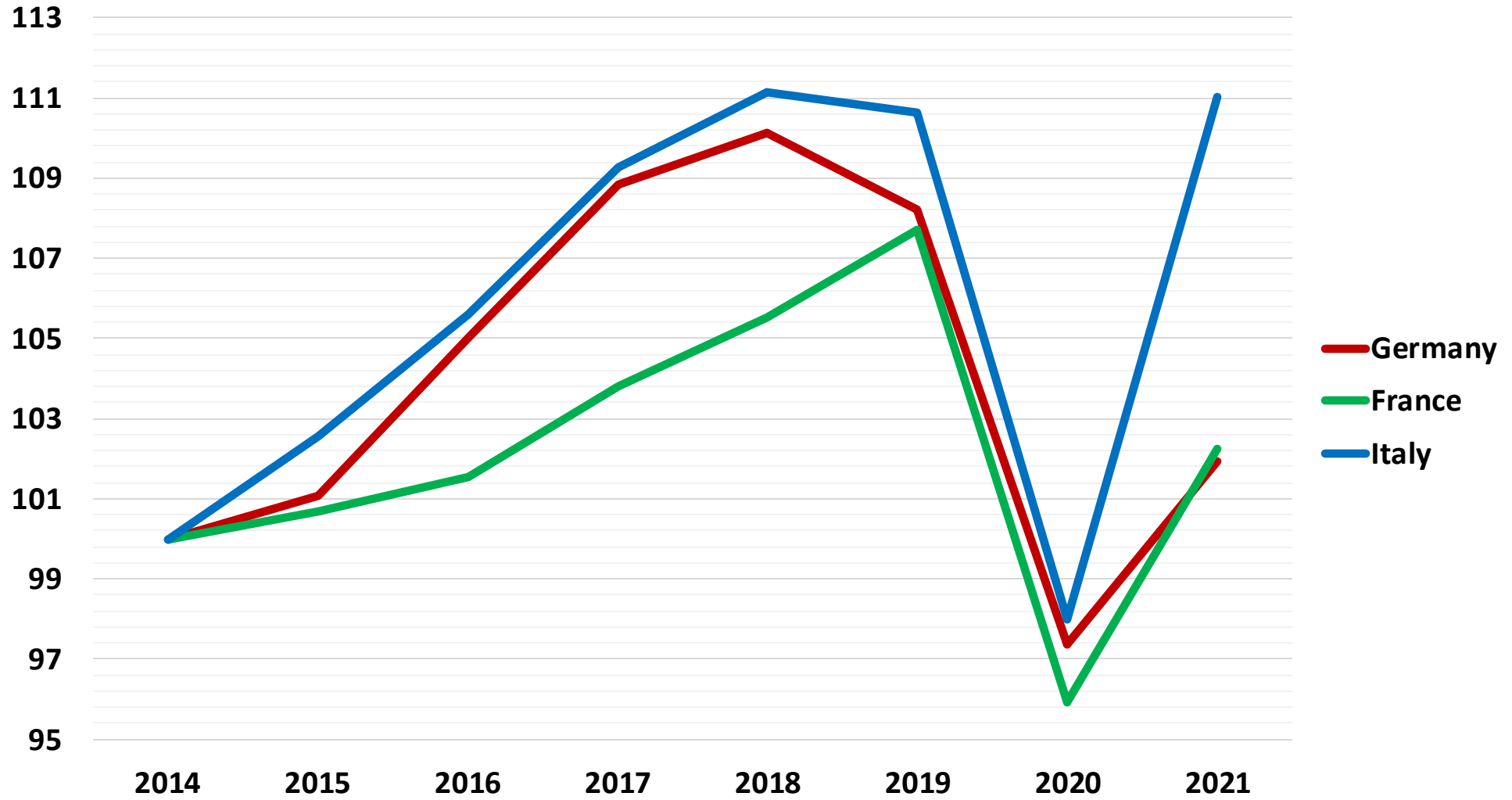
Source: Edison Foundation calculation based on Eurostat statistics



MANUFACTURING GROSS VALUE ADDED, 2014-2021

(Chain linked volumes, index 2014=100)

Source: Edison Foundation calculation based on Eurostat statistics

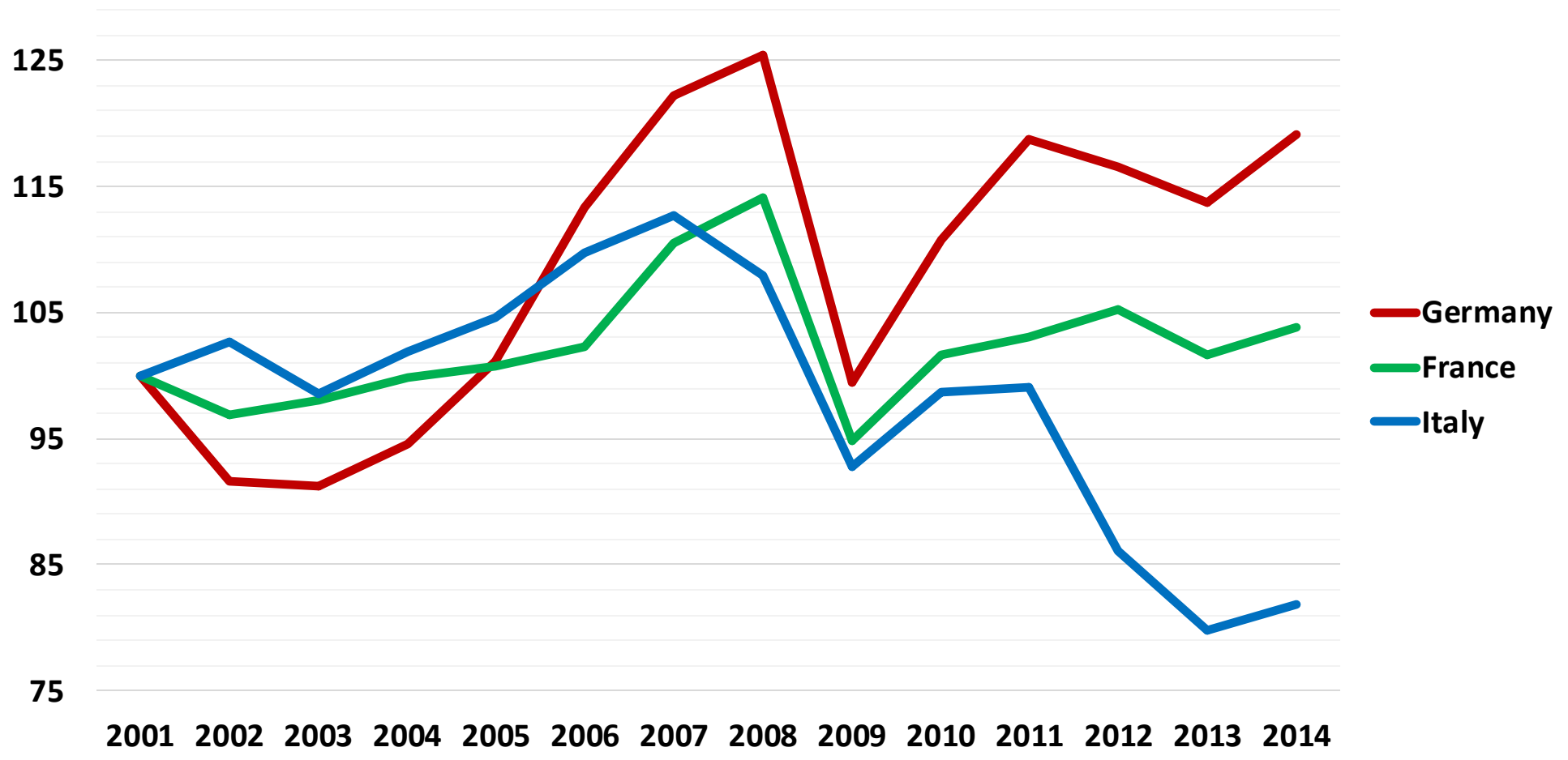


**DOPO ANNI DI
DECLINO DEGLI
INVESTIMENTI ...**

GROSS FIXED INVESTMENT IN MACHINERY AND EQUIPMENT, 2001-2014

(Chain linked volumes, index 2001=100)

Source: Edison Foundation calculation based on Eurostat statistics

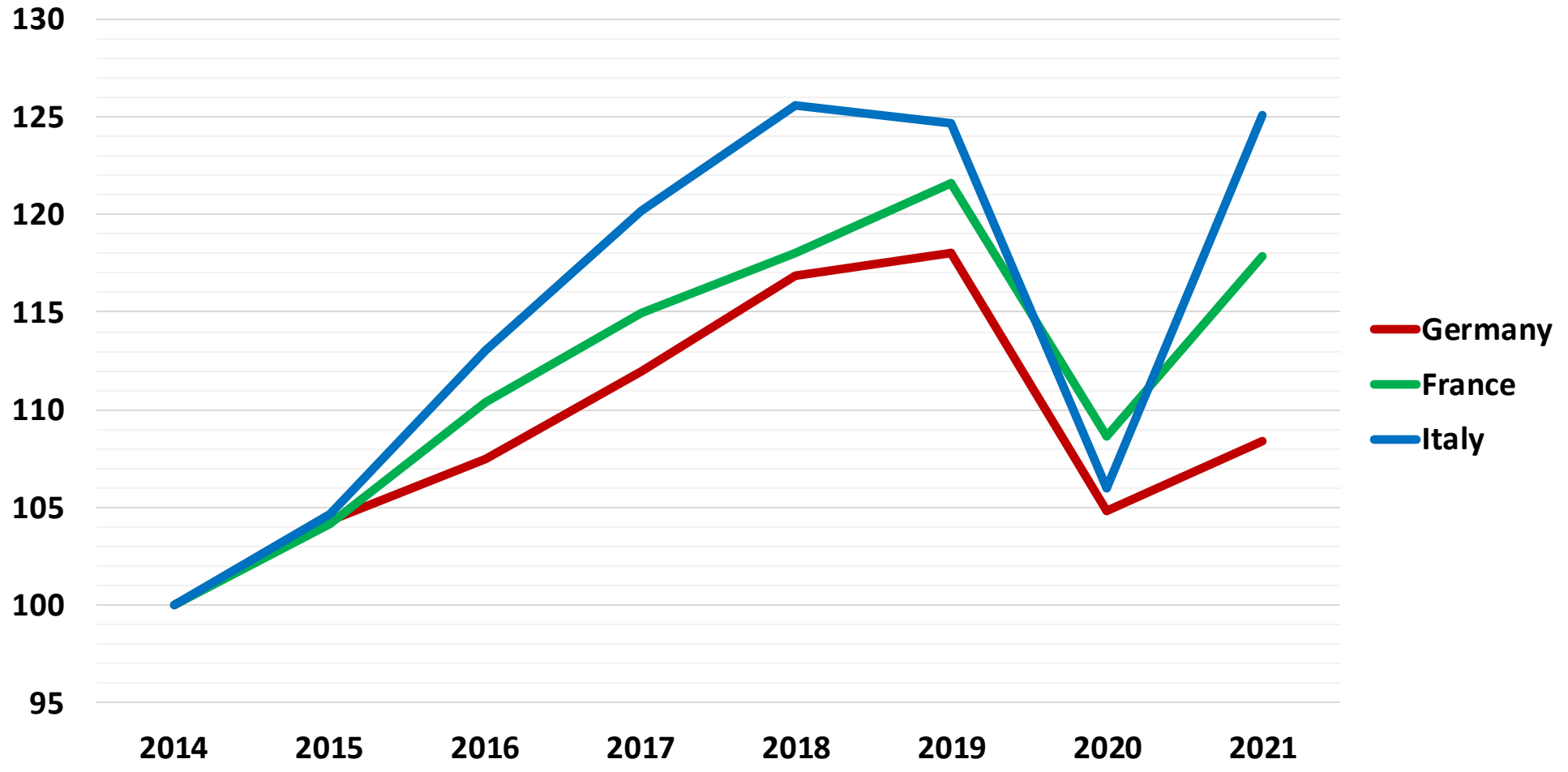


**... LA RIVOLUZIONE
DEL PIANO
INDUSTRIA 4.0**

**GROSS FIXED INVESTMENT
IN MACHINERY AND EQUIPMENT, 2014-2021**

(Chain linked volumes, index 2014=100)

Source: Edison Foundation calculation based on Eurostat statistics

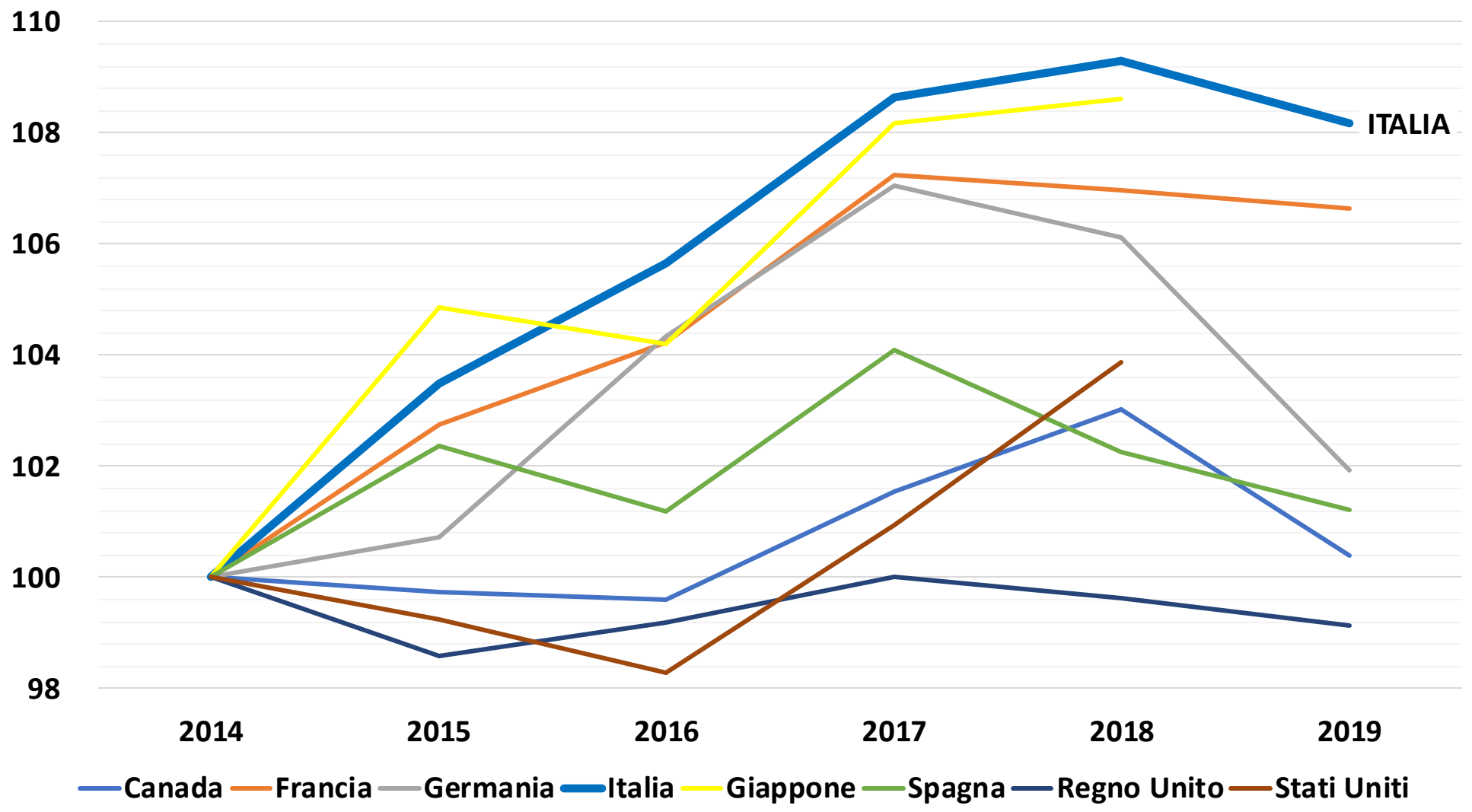


IL BOOM DELLA PRODUTTIVITA'

PRODUTTIVITA' DEL LAVORO NELL'INDUSTRIA MANIFATTURIERA

(valore aggiunto per occupato a prezzi costanti, indici base 2014=100)

Fonte: elaborazione Fondazione Edison su dati OCSE

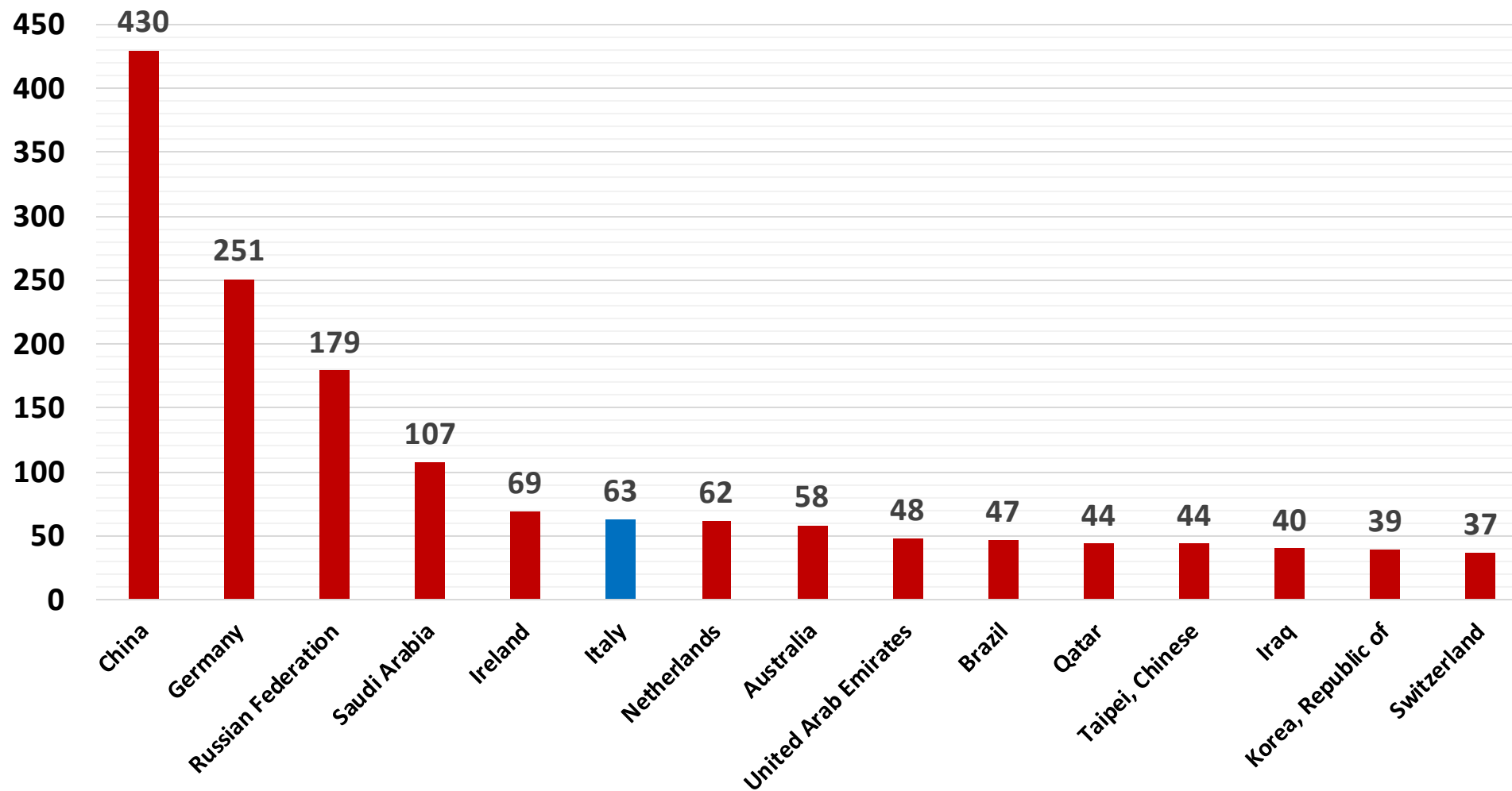


IL RAFFORZAMENTO DELLA COMPETITIVITA'

BILANCIA COMMERCIALE, ANNO 2019: PRIMI 15 PAESI AL MONDO PER SURPLUS CON L'ESTERO

(miliardi di dollari)

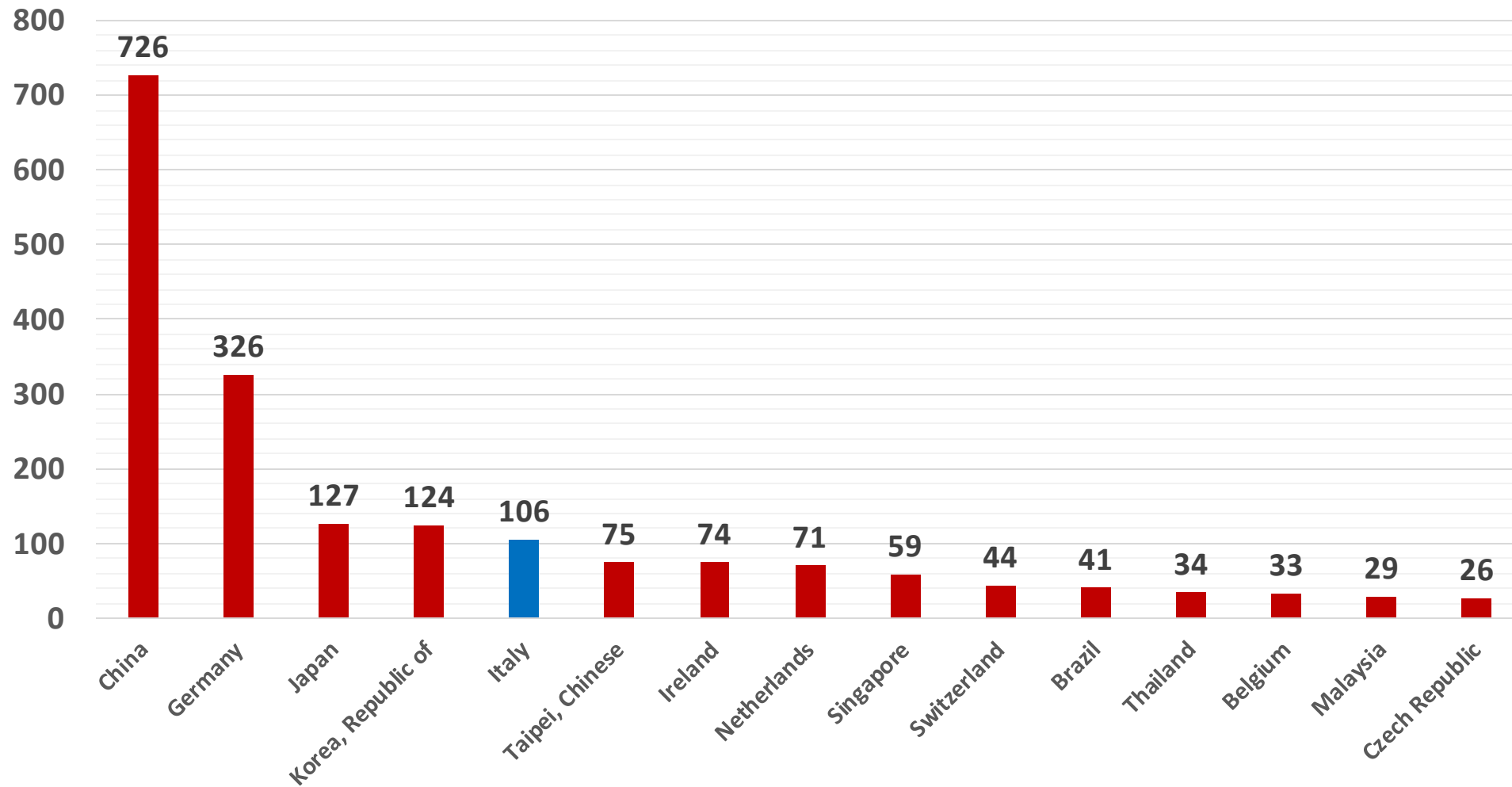
Fonte: elaborazione Fondazione Edison su dati ITC e ONU



BILANCIA COMMERCIALE ESCLUSI I COMBUSTIBILI FOSSILI, ANNO 2019: PRIMI 15 PAESI AL MONDO PER SURPLUS CON L'ESTERO

(miliardi di dollari)

Fonte: elaborazione Fondazione Edison su dati ITC e ONU



STRUTTURA DELLA BILANCIA COMMERCIALE CON L'ESTERO DI ALCUNE NAZIONI

ANNO 2019

(classificazione merceologica HS6; valori in miliardi di dollari)

NOTA: nazioni ordinate in base alla colonna E

Nazioni	(A=B-F) Totale bilancia commerciale con l'estero	(B=C+D) Surplus complessivo dei prodotti HS6 in attivo con l'estero	di cui: (C) Surplus totale dei prodotti HS6 con un attivo superiore o uguale a 500 milioni di dollari ("grandi" prodotti)	di cui: (D) Surplus totale dei prodotti HS6 con un attivo inferiore a 500 milioni di dollari (prodotti "medio-piccoli")	(E=D:B) Peso dei prodotti "medio piccoli" sul valore totale dei prodotti in surplus, in percentuale	(F) Deficit complessivo dei prodotti HS6 in disavanzo con l'estero
ITALIA	62.8	272.4	137.9	134.5	49.3	-209.6
PAESI BASSI	61.9	195,6	116.4	79.2	40.4	-133.7
TAIPEI	43.6	192.3	129.8	62.6	32.6	-148.7
GERMANIA	250.7	571.0	394.7	176.3	30.8	-320.3
SVIZZERA	36.9	142.8	108.5	34.3	24.0	-105.9
GIAPPONE	-15.1	476.3	371.1	105.2	22.1	-491.4
COREA DEL SUD	39.1	319.0	249.3	69.8	21.9	-280.0
CINA	429.6	1774.9	1,484.3	290.5	16.4	-1345.3
IRLANDA	69.3	128.2	111.5	16.7	13.0	-59.0

Fonte: elaborazione Fondazione Edison su dati ITC e ONU

The «Magnificent» Seven Made in Italy Sectors (The 3 F's and 4 M's)

- 1. Fashion**
- 2. Furniture and building materials**
- 3. Food, wine and tobacco**
- 4. Metal products**
- 5. Machinery and equipment**
- 6. Motor yachts and other transport equipment**
- 7. Medicaments and personal care products**

**THE "MAGNIFICENT" SEVEN MADE IN ITALY SECTORS: THE TOP PRODUCTS FOR TRADE BALANCE
(HS6 products - November 2020-October 2021; USD Billion)**

Rank	Fashion		Furniture and building materials		Food, wine and tobacco		Metal products, articles of plastics and paper		Machinery and equipment		Motor yachts and other transport equipment		Medicaments and personal care products	
	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance
1	Articles of jewellery	6.0												
2					Wine of fresh grapes	5.7								
3											Vehicles; spark-ignition over 3 000 cc	5.5		
4			Ceramic tiles of a water absorption not over 0.5%	4.8										
5													Medicaments packaged for retail sale	4.6
6									Taps and valves	4.5				
7	Handbags with outer surface of leather	3.9												
8											Motor yachts	3.1		
9									Packing or wrapping machinery	2.9				
10											Vehicles diesel for transport of goods not exceeding 5 tonnes	2.5		

Source: Edison Foundation calculations based on ITC and United Nations statistics

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	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance
11											Parts for tractors, motor vehicles for the transport of ten or more persons	2.4		
12	Sunglasses	2.4												
13					Uncooked pasta not containing eggs	2.3								
14							Articles of iron or steel	2.1						
15	Footwear with uppers of leather	2.1												
16					Manufactured tobacco	2.0								
17			Parts of furniture	1.9										
18			Wooden furniture	1.9										
19					Sparkling wine of fresh grapes	1.8								
20									Machines and mechanical appliances, n.e.s.	1.8				

Source: Edison Foundation calculations based on ITC and United Nations statistics

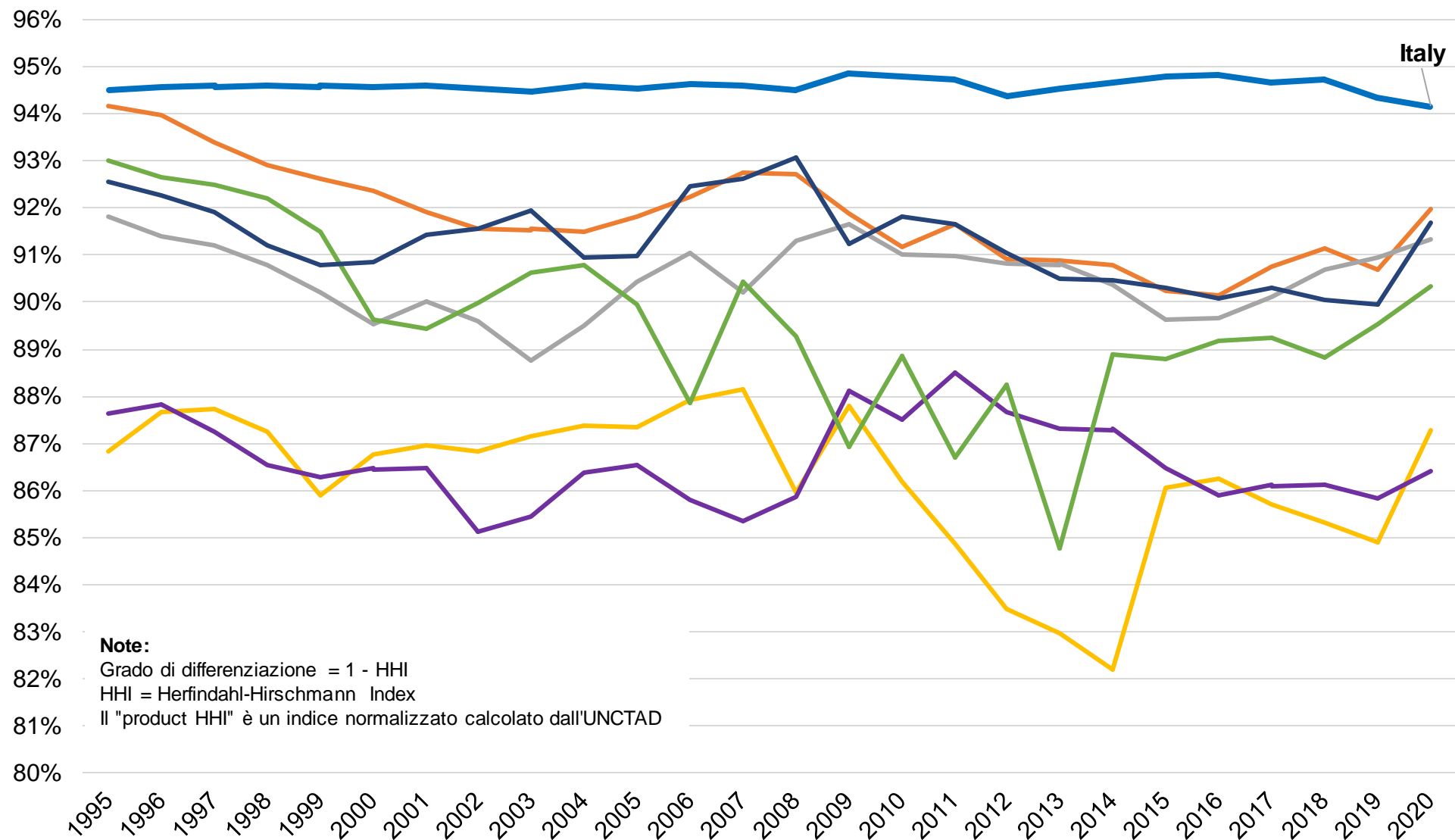
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	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance	Products	Trade balance
21							Tubes, welded, of square or rectangular cross-section, of iron and steel	1.8						
22			Upholstered seats, with wooden frames	1.7										
23							Articles of plastics	1.7						
24					Roasted coffee	1.6								
25					Bread, pastry, cakes, biscuits	1.5								
26	Handbags with outer surface not in leather	1.5												
27					Chocolate and other preparations containing cocoa	1.5								
28									Parts of packing machinery	1.5				
29							Articles of aluminium	1.4						
30									Gears and gearing for machinery	1.4				

Source: Edison Foundation calculations based on ITC and United Nations statistics

Grado di differenziazione di prodotto dell'export dei Paesi avanzati del G20

Canada France Germany Italy Japan United Kingdom United States of America



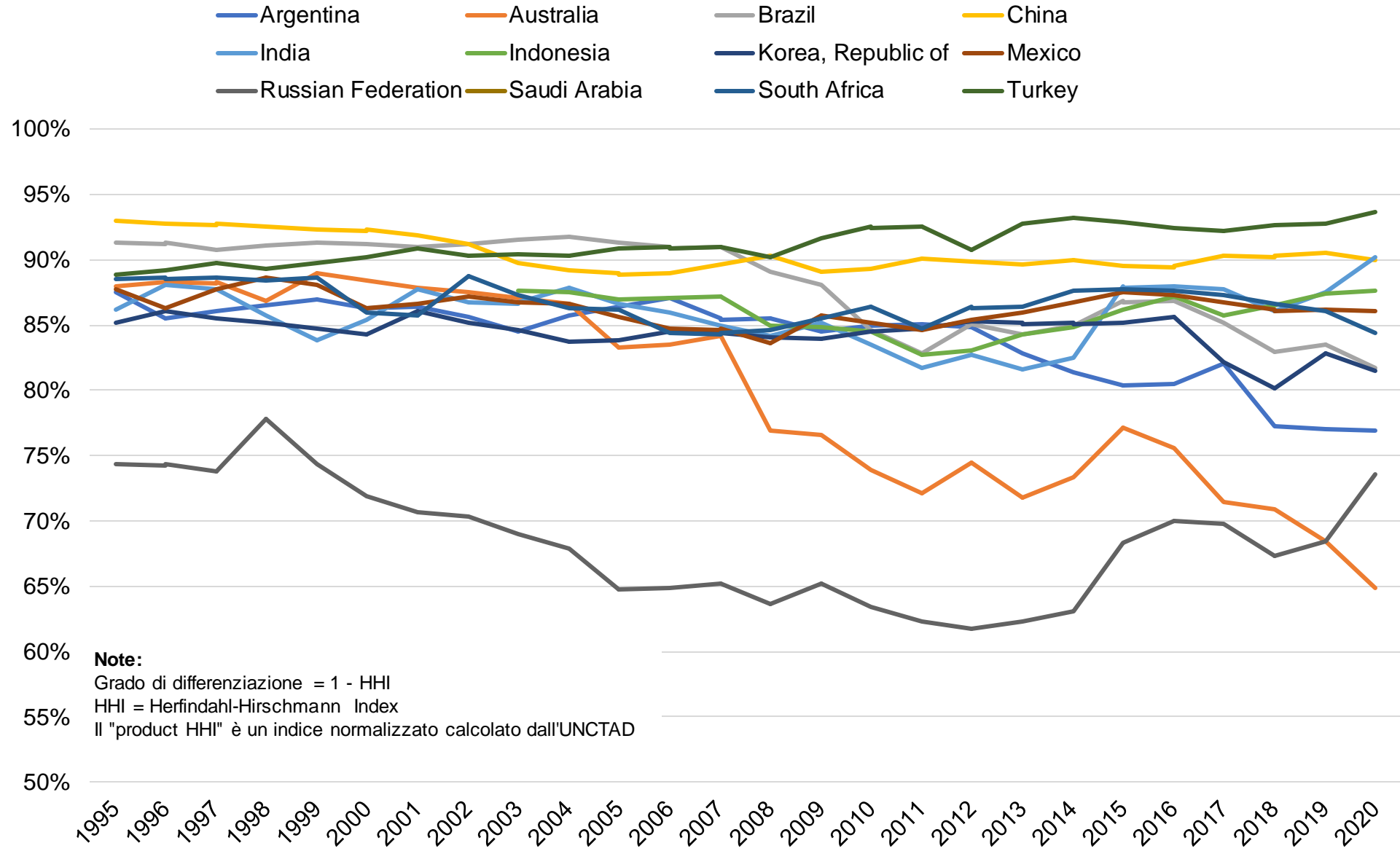
Note:

Grado di differenziazione = 1 - HHI

HHI = Herfindahl-Hirschmann Index

Il "product HHI" è un indice normalizzato calcolato dall'UNCTAD

Grado di differenziazione di prodotto dell'export dei Paesi emergenti del G20

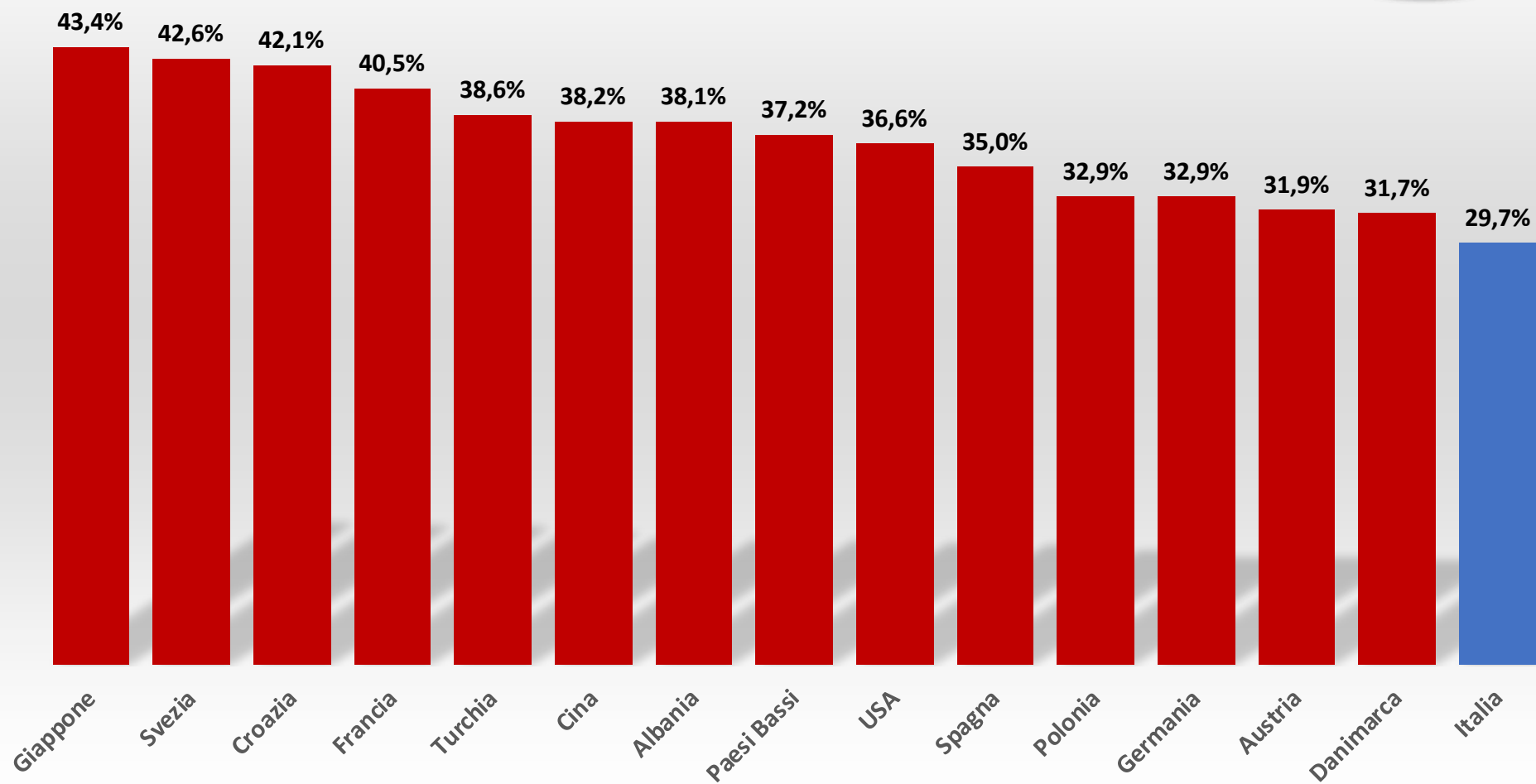


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Peso dei primi 50 prodotti esportati sul totale delle esportazioni a livello mondiale (esclusa Arabia Saudita per mancanza dati)

Primi 15 Paesi con il peso più basso; anno 2019

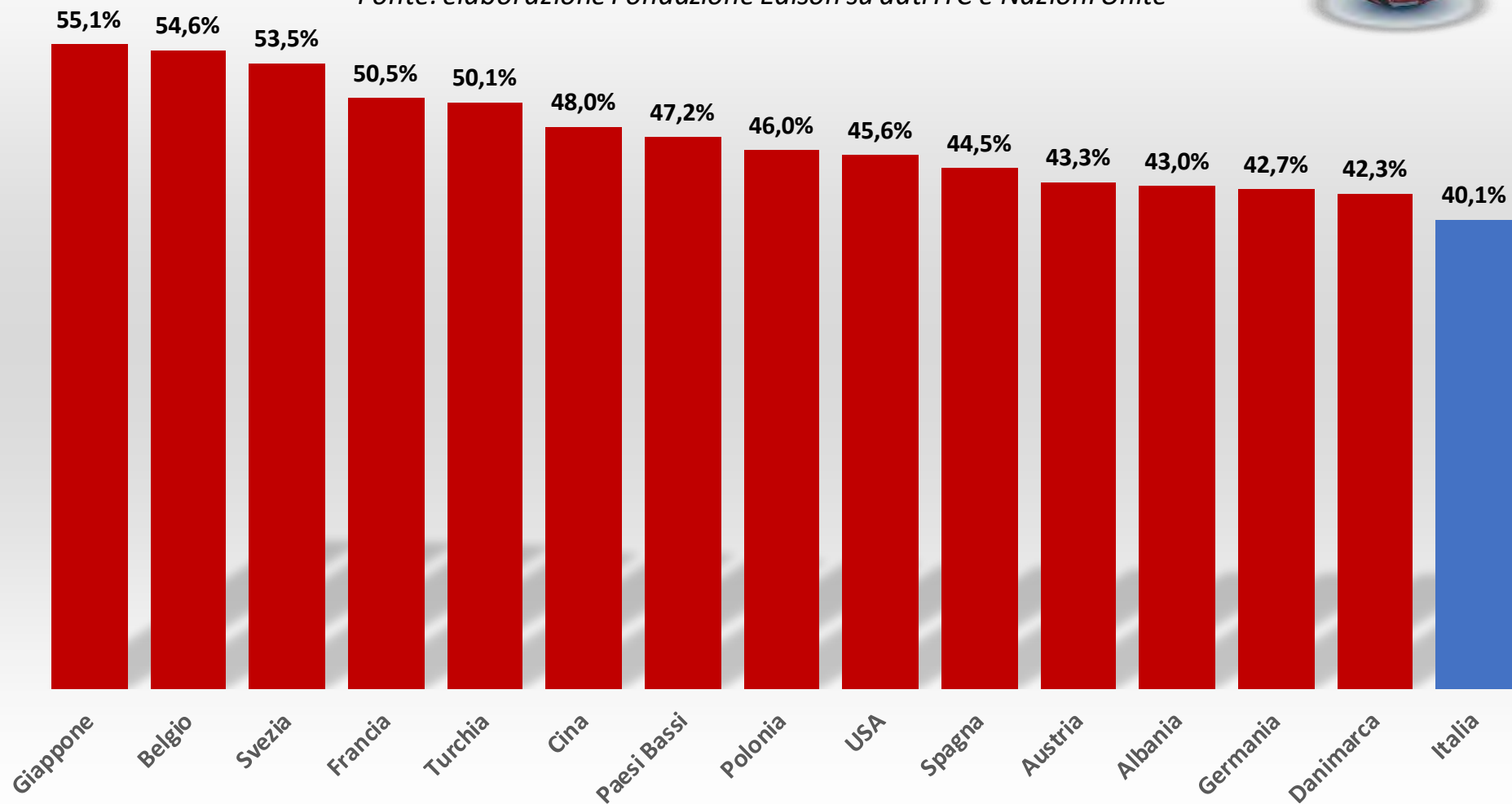
Fonte: elaborazione Fondazione Edison su dati ITC e Nazioni Unite



Peso dei primi 100 prodotti esportati sul totale delle esportazioni a livello mondiale (esclusa Arabia Saudita per mancanza dati)

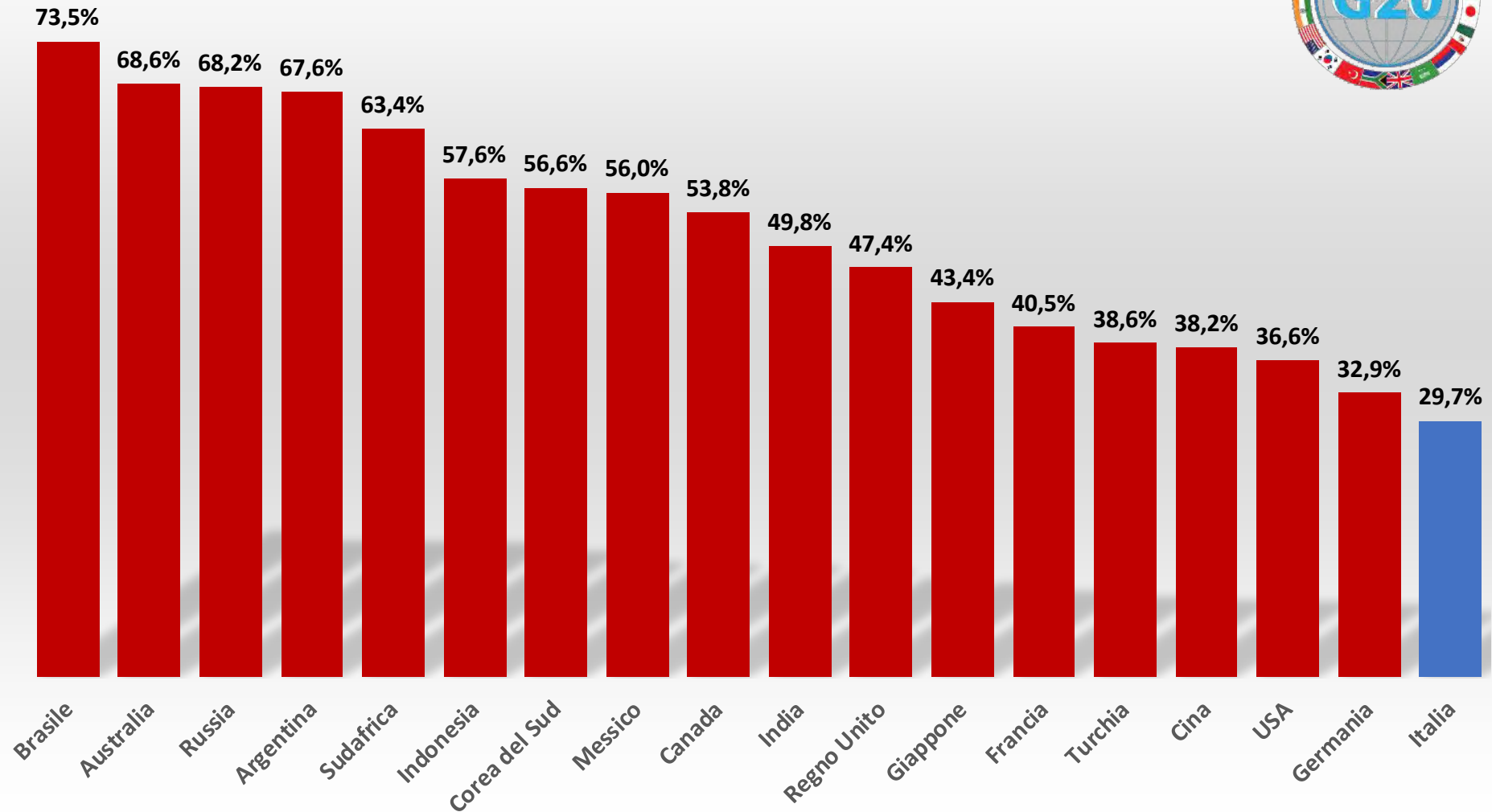
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