



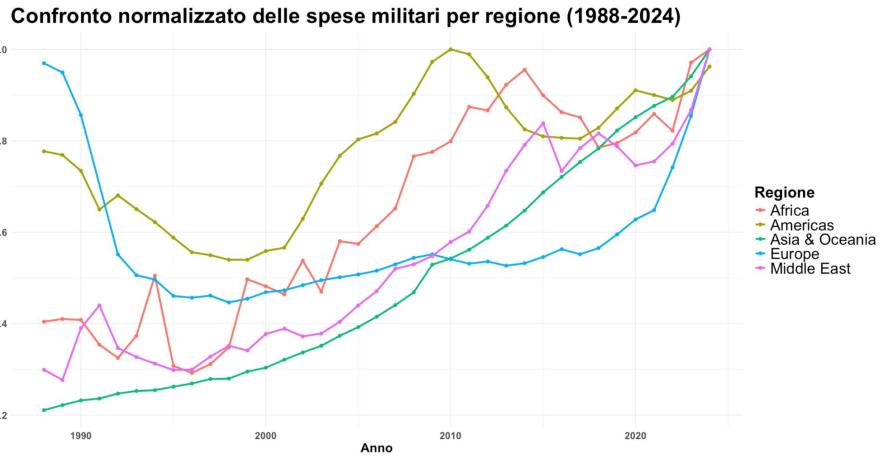
Data Visualization Pitch

From the Peace Dividend to Global Rearmament: A Trend Analysis of
World Military Expenditure (1988-2024)

Luigi Marsero

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This analysis examines the evolution of global military spending from 1988 to 2024, using data from the **SIPRI Military Expenditure Database 2024**. Through a comparative and regional approach, the research focuses on trends in five macro-areas: **Africa**, **Americas**, **Asia & Oceania**, **Europe** and the **Middle East**, highlighting the geopolitical and strategic transformations that have shaped defense budgets over the past forty years.

How has global military spending evolved from the late 1980s to today?

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Research questions

The analysis aims to provide an overview of the evolution of **international military spending**, relating quantitative trends to the global geopolitical context in the period **1988-2024**. Some of the research questions considered are:

- How has global military spending evolved from the late 1980s to today?
- How do military spending growth trajectories differ across major regions of the world (Americas, Europe, Asia & Oceania, Middle East, Africa)?
- Which regions contributed most to the increase in global military spending?
- What geopolitical and regional factors determined the evolution of global military spending?

About Data

Dataset: **SIPRI Military Expenditure Database** (<https://www.sipri.org/databases/milex>)

The dataset, developed by the Stockholm International Peace Research Institute (SIPRI), consistently collects national and regional military spending from 1949 to 2024. It is shared under a license "**fair use**", which allows its use for non-commercial purposes subject to citation of the source and within a limit of 10% of the database.

Based on official sources and updated annually, the dataset is considered reliable and complete, although with some limitations due to differences between countries, estimates for missing data and the absence of complete information before 1988.

It is well-structured and easily usable and required only minimal cleaning of the numerical formats.

Insights from the Data

The following analysis shows the evolution of world military spending (1988-2024), divided into five macro-geographical areas: Asia & Oceania, Europe, the Middle East, Africa and the Americas. This subdivision, suggested by the SIPRI dataset, allows us to observe significant regional differences in the levels and rates of spending growth, linked to different economic, political and security contexts.

From a methodological point of view, the analysis was conducted with **R** (programming language used for statistical data analysis), through:

- **historical series** to represent the time trend (1988-2024);
- **normalization** (index 0-1) to compare relative trends between regions, regardless of absolute values.

This approach allowed us to highlight:

1. the **extent of military expenditure**
2. how and when military spending **reacts to major global geopolitical events**

Trends in Military Expenditures in Africa

1990s - Post-Cold War Transition

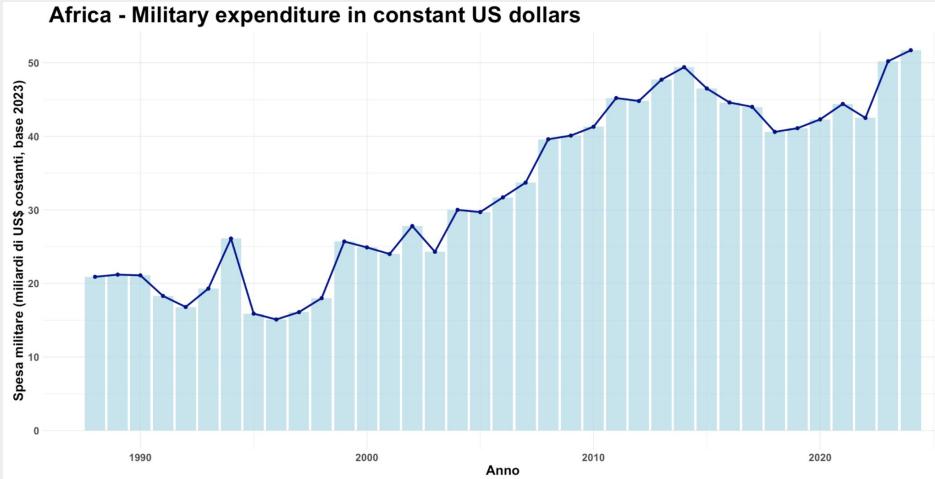
The end of superpower support led to a **drop in expenditure**, as regimes once backed by the USA or USSR weakened. In the late decade, **internal wars** and the **Ethiopia-Eritrea conflict (1998-2000)** reversed the decline, marking the start of recovery.

2000-2014 - Economic expansion and rearmament

The **commodities boom** (oil, gas, minerals) financed military modernisation in **Algeria, Angola, Nigeria, South Africa**. New partnerships with **China, Russia and Europe** strengthened state capacity. **2011 Arab Spring** and the **Libyan wars** triggered renewed regional militarisation.

2015-2024 - Insecurity and geopolitical realignment

The **Sahel crisis** (Mali, Niger, Burkina Faso) and jihadist insurgencies reshaped priorities. Coups in **Burkina Faso, Niger, Guinea, Benin** and the creation of the **AES alliance** signalled a **shift towards Russia and anti-Western rhetoric**. → Military spending remains high, driven by instability, new alliances and security fragmentation.



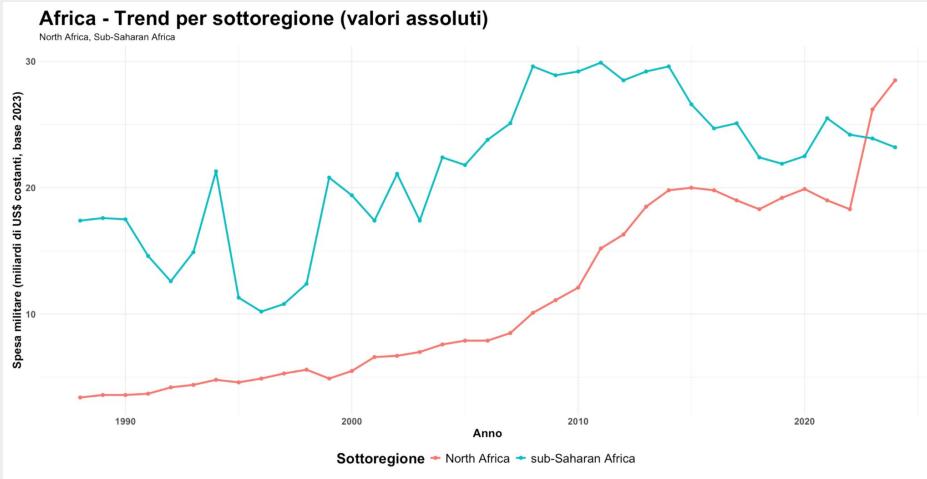
"Africa - Military expenditure in constant US dollars" by Luigi Marsero, based on data from the **SIPRI Military Expenditure Database** (© SIPRI), is licensed under a **Creative Commons CC BY-NC-SA 4.0 license**

Africa: contribution by subregion

The graph highlights two distinct trajectories:

- **North Africa** shows the most marked and steady growth since 2000. After a phase of stability in the years '90, spending increases rapidly, driven by Egypt, Algeria and Morocco, especially after the Arab Spring and the heightening of tensions in the Sahel. Today it represents the prevailing share of African military spending, with values more than tripling compared to the years '90.
- **Sub-Saharan Africa** has a more irregular pattern, with strong fluctuations linked to internal conflicts and instabilities (Ethiopia, DRC, Sudan, Nigeria). After 2000 it is growing gradually, but without reaching North African levels.

In summary, **the overall African dynamic is driven by the North, while sub-Saharan contributes in a more volatile and limited way**, reflecting the region's political and fiscal fragilities.



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Trends in Military Expenditures in the Americas

1980s - End of the Cold War

Dominance of the US, engaged in **competition with the USSR** → very high spending levels. In Latin America, military regimes and conflicts in Central America (Nicaragua, El Salvador, Guatemala) → sustained expenditures but limited in absolute value.

1990s - End of bipolarity

The **collapse of the USSR** and the reduction of global tensions → U.S. defense cuts ("peace dividend").
In Latin America, democratic transition and economic reforms → sharp decline in military spending.

2000-2014 - War on Terror and economic boom

After **September 11**, the U.S. massively increased its budget for the wars in Afghanistan and Iraq.

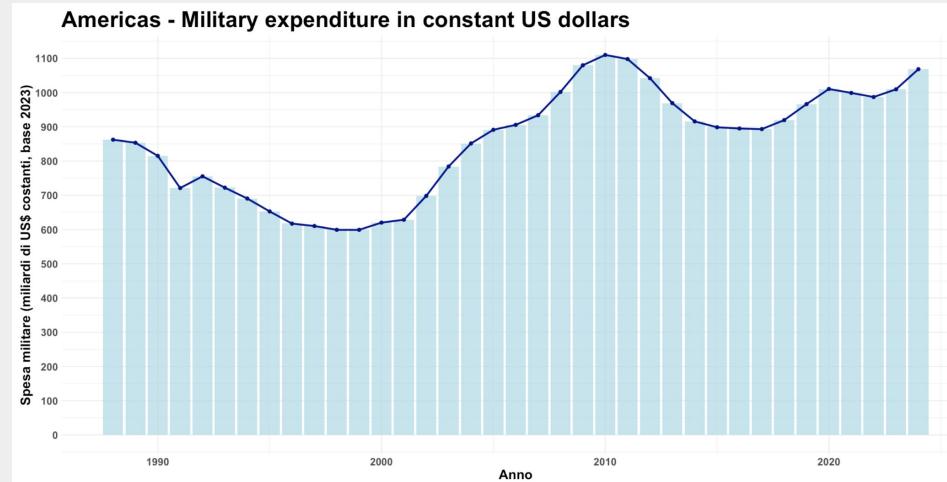
In South America (Brazil, Chile, Colombia), economic growth and military modernization → a new expansionary phase.

2010s - Stabilization

U.S. troop withdrawals and the 2014-2016 economic crisis → slowdown. High expenditures persist for internal security and the fight against drug trafficking.

From 2020 - Renewed growth

U.S. nuclear and cyber modernization, rearment in Brazil, Mexico and Colombia → renewed rise in military spending amid global **tensions**.



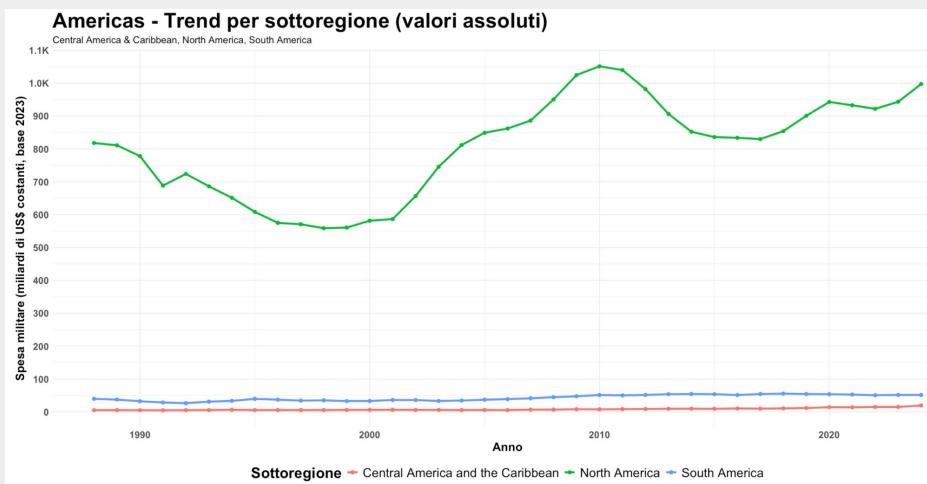
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Americas: contribution by subregion

The graph shows a structural gap between the North and South of the continent.

- **North America** clearly dominates: the United States concentrates over 90% of total spending. The trend reflects the main phases of American politics: post-Cold War decline, sharp increase after '9/11, stabilization in 2010 and new growth after 2020 with modernization and competition with China and Russia.
- **South America** maintains a moderate but stable level, supported by Brazil, Colombia and Chile. Spending grows with the commodity boom (2000s) and stabilizes in subsequent years.
- **Central America and the Caribbean** remain marginal, with low values and minimal variations related to internal security and drug trafficking.

Overall, **the regional trend is almost entirely driven by North America**.



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Trends in Military Expenditures in Asia & Oceania

Late 1980s - Early 1990s: Post-Cold War Reorganization

The region experiences a phase of stability and adjustment.

Japan and Australia maintain cautious budgets, while **China begins the modernization of its armed forces**.

Many Southeast Asian countries reduce spending to focus on economic development.

2000s - Growth and Gradual Rearmament

China's economic rise supports a **long-term, structural military build-up**.

India, South Korea, Japan and Australia steadily increase their defense budgets for modernization → **Continuous expansion**, with expenditures doubling compared to the 1990s.

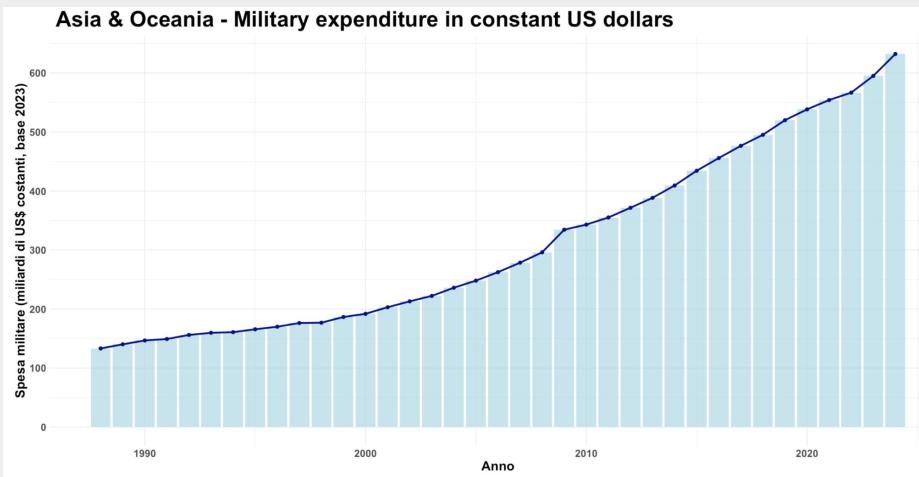
2010-2020 - Strategic Competition

The region becomes the **center of global competition**:

China invests heavily in its navy, space, and cyber defense; the United States launches the "**Pivot to Asia**" strategy; India and regional allies strengthen cooperation → **New historical spending peaks**.

From 2020 - Accelerated Rearmament

The pandemic, the war in Ukraine and tensions over Taiwan drive a **record surge in military expenditure** across the region.



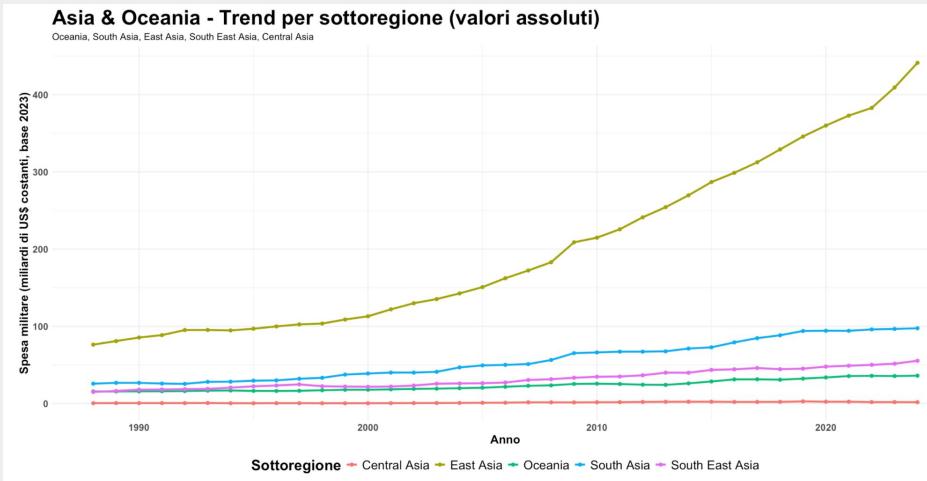
"**Asia & Oceania - Military expenditure in constant US dollars**" by Luigi Marsero, based on data from the **SIPRI Military Expenditure Database** (© SIPRI), is licensed under a **Creative Commons CC BY-NC-SA 4.0 license**

Asia & Oceania: contribution by subregion

The chart highlights a **strong internal imbalance**, with **East Asia**—particularly **China**—dominating the regional dynamic.

- **East Asia** drives growth with an almost uninterrupted increase since 1990, supported by **China's rearmament** and the modernization of Japan and South Korea. It is the main contributor to the global expansion of military expenditure.
- **South Asia** (India, Pakistan) shows a gradual but steady rise, driven by Indo-Pakistani competition and tensions with China.
- **South-East Asia** records a moderate increase, influenced by disputes in the South China Sea and the need to modernize naval forces.
- **Oceania** and **Central Asia** remain marginal but growing, led by Australia and Kazakhstan.

Overall, **East Asia stands as the engine of global military spending**, setting the pace for the broader Asia-Pacific region



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Trends in Military Expenditure in Europe

1980s-1990s - From the Cold War to the "Peace Dividend"

During the Cold War, Europe faced the **Soviet threat**, expanding NATO forces and developing nuclear arsenals (France, UK).

After the **fall of the Berlin Wall (1989)** and the **collapse of the USSR (1991)**, defense budgets were **drastically reduced**: bases closed, troops cut, and resources redirected to welfare → **Strong contraction in military spending**.

2000s - Stability and NATO Enlargement

The **accession of Eastern European countries to NATO** promoted gradual modernization. Operations in Kosovo, Afghanistan, and Iraq caused only temporary increases.

→ **Stable phase with limited growth**.

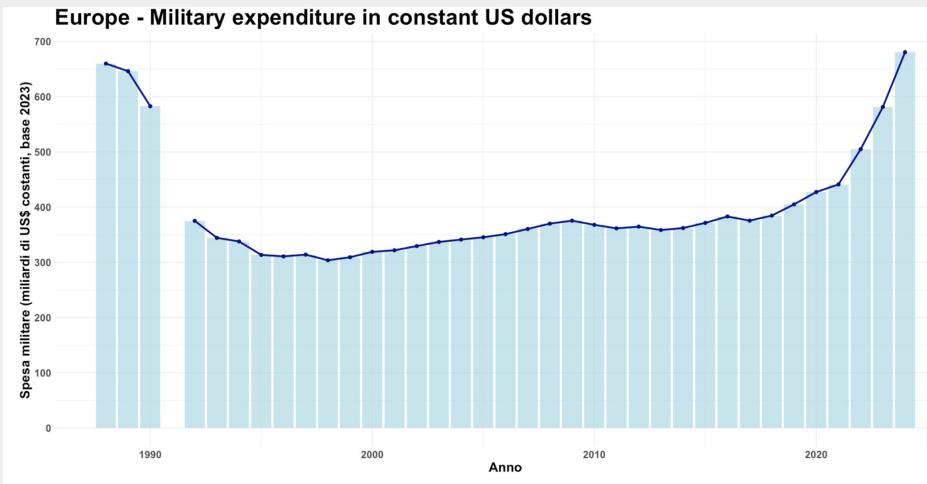
2010s - Crisis and New Threats

The **2008 financial crisis** led to major cuts, followed by a rebound after the **annexation of Crimea (2014)**.

→ **Sharp rise in Eastern Europe**.

From 2020 - Return of Rearmament

The **war in Ukraine (2022)** accelerates spending across Europe. Germany, Poland, France and the Baltics lead a new phase of **rearmament and European defense cooperation**.



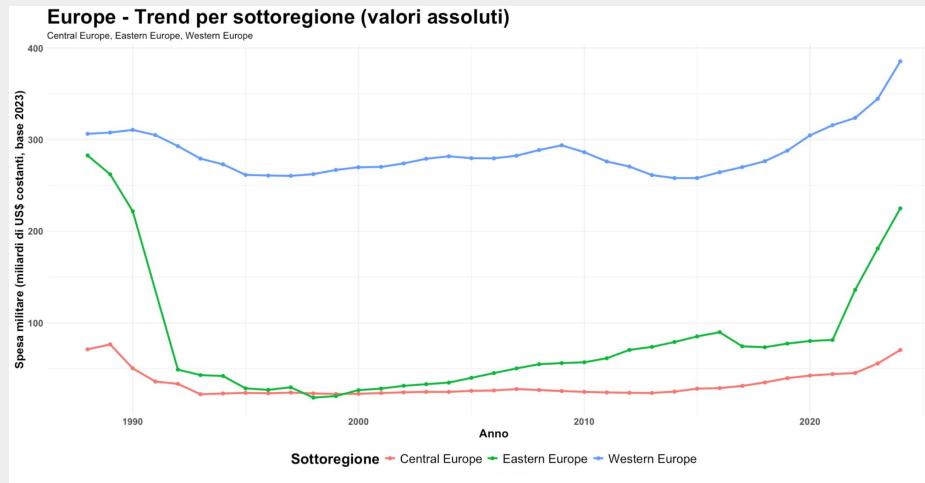
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Europe: contribution by subregion

The chart reveals **strong structural differences** among the three European subregions.

- **Western Europe** maintains the highest spending levels on the continent. After the post-Cold War decline, expenditures remained stable for about two decades, then rose sharply after **2014** (Crimea's annexation) and especially **from 2022** with the war in Ukraine.
- **Eastern Europe** experienced a dramatic collapse in the 1990s following the dissolution of the USSR but now shows the fastest growth, driven by Poland and the Baltic states.
- **Central Europe** remains at lower absolute levels but records a steady increase after **2010**, aligning with NATO's modernization standards.

Overall, the **West remains dominant in absolute terms**, while the **East has become the driving force** behind the current expansion of Europe's military spending.



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Trends in Military Expenditures in the Middle East

1988-1993 - Gulf War

The **invasion of Kuwait (1990)** and the **Gulf War** caused a sharp spike in military spending among Gulf states and Iraq. After 1992, spending partially declined but remained above pre-war levels.

1994-2002 - Gradual Modernization

Saudi Arabia, the UAE and Israel launched selective rearmament programs, while **Iran** invested in missile development despite sanctions → **Slow but steady growth**, supported by late-decade oil revenues.

2003-2010 - Iraq War and Oil Boom

The **U.S. intervention in Iraq (2003)** and record oil prices drove a **strong regional expansion** in military expenditure.

2011-2016 - Arab Spring and Multiple Conflicts

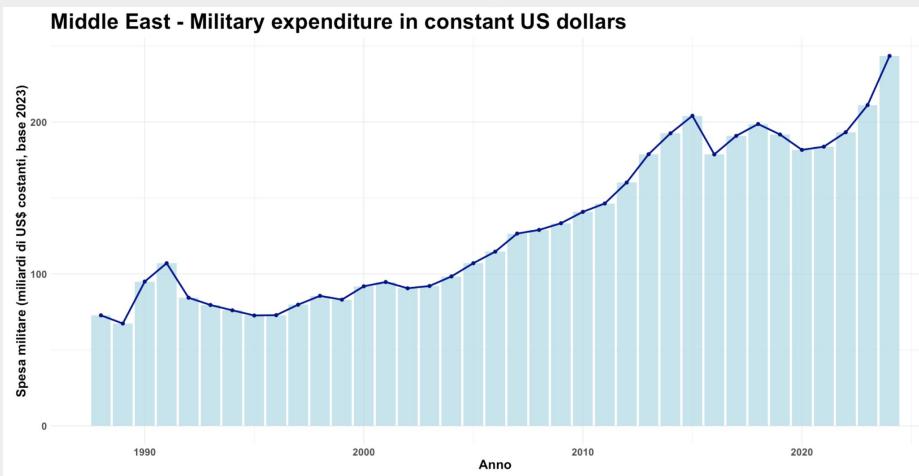
Syria, Yemen, and the rise of ISIS led to a **historic peak** in spending across the region.

2017-2020 - Temporary Slowdown

Falling oil prices and the pandemic curbed growth but did not reverse the trend.

2021-2024 - Renewed Acceleration

Economic recovery, **technological modernization** and renewed tensions (Iran-Saudi Arabia and Israel-Palestine) pushed spending to **record highs by 2024**.



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Absolute and normalized comparison of military expenditures (1988-2024)

During the analysis, the focus was not only on **how much each region spends in absolute terms**, but also on **how spending trends evolve over time**.

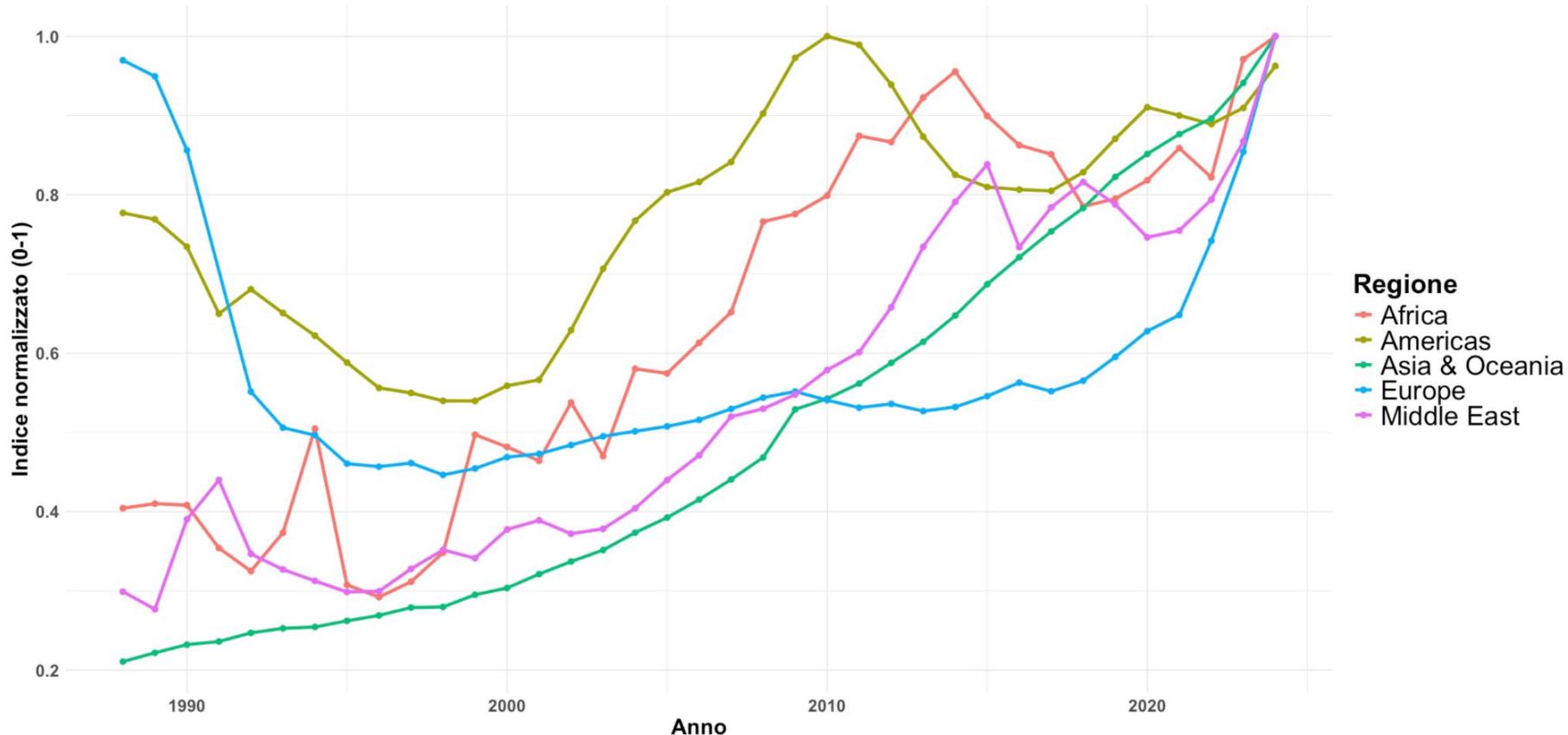
The **absolute comparison** highlights the real differences in spending volume, showing which regions invest the most. However, these values are influenced by each area's **economic and demographic size**.

The **normalized comparison** (index 0-1) instead represents the trend over time **independently of initial values**, allowing observation of only the **relative dynamics** – which regions increase, stabilize or reduce their spending.

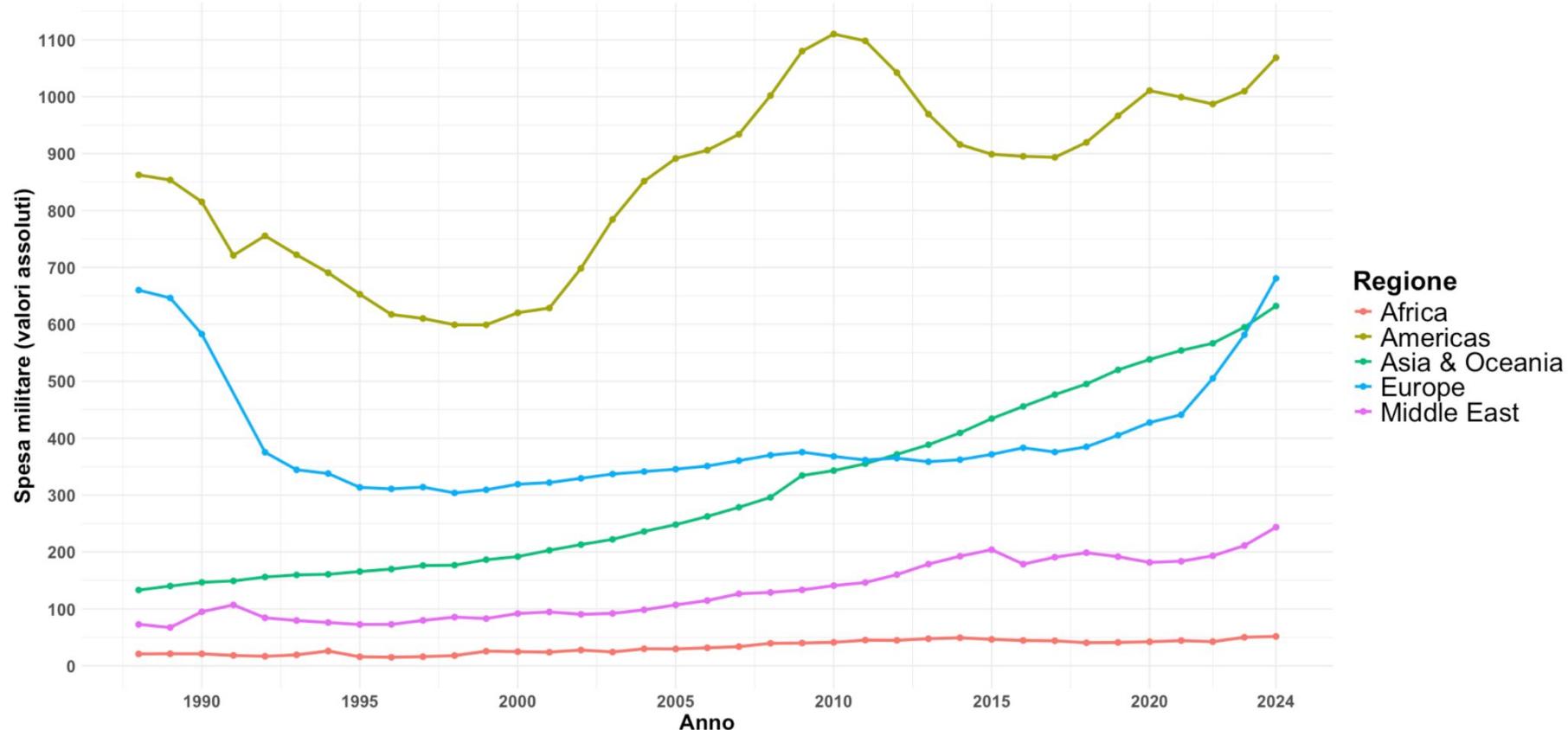
The goal is to:

- Understand the **quantitative differences** between regions;
- Analyze the **pace and direction of change** in global military expenditure.

Confronto normalizzato delle spese militari per regione (1988-2024)



Andamento delle spese militari per regione (1988-2024)



Military spending by region - 2024

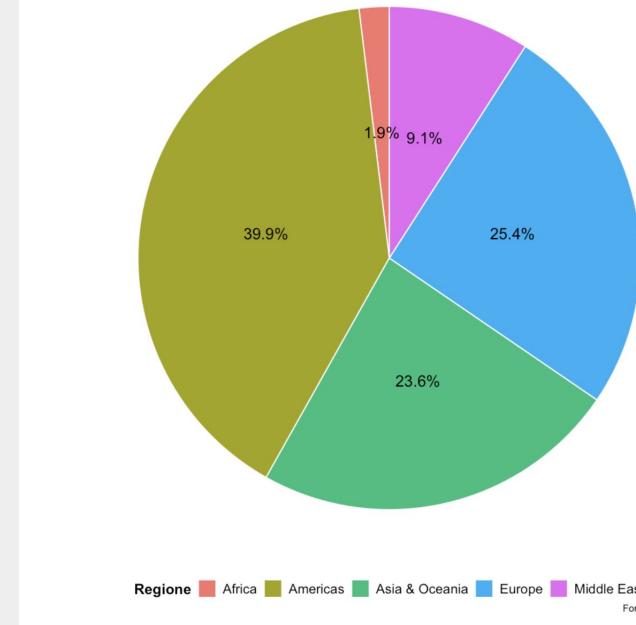
The chart shows the **percentage distribution of global military spending in 2024**, highlighting the **asymmetric weight** of different regions.

- The **Americas**, dominated by the **United States**, account for **nearly 40%** of global spending, maintaining their historic lead despite Asia's rapid growth.
- **Europe** follows with **25%**, rising sharply after the war in Ukraine and new common defense initiatives.
- **Asia & Oceania** represent **23.6%**, driven by **China, India, Japan and Australia**, confirming the region as a **new strategic hub** of global power.
- The **Middle East** contributes about **9%**, maintaining high levels relative to GDP, while **Africa** remains marginal (**less than 2%**) but continues a steady long-term increase.

Overall, the distribution reflects a **multipolar world of security**, where military expenditure is concentrated in **three main blocks**: the **Americas, Europe and Asia-Pacific**.

Spesa militare per regione – 2024

Quote percentuali | Africa, Americas, Asia & Oceania, Europe, Middle East



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Evolution of Italian military spending (1949-2024)

During the analysis, **Italy's military spending from 1949 to 2024** was examined. The overall trend shows **long-term growth**, interrupted only by brief phases of stability or decline. To better illustrate the evolution, the analysis was divided into **two main periods**:

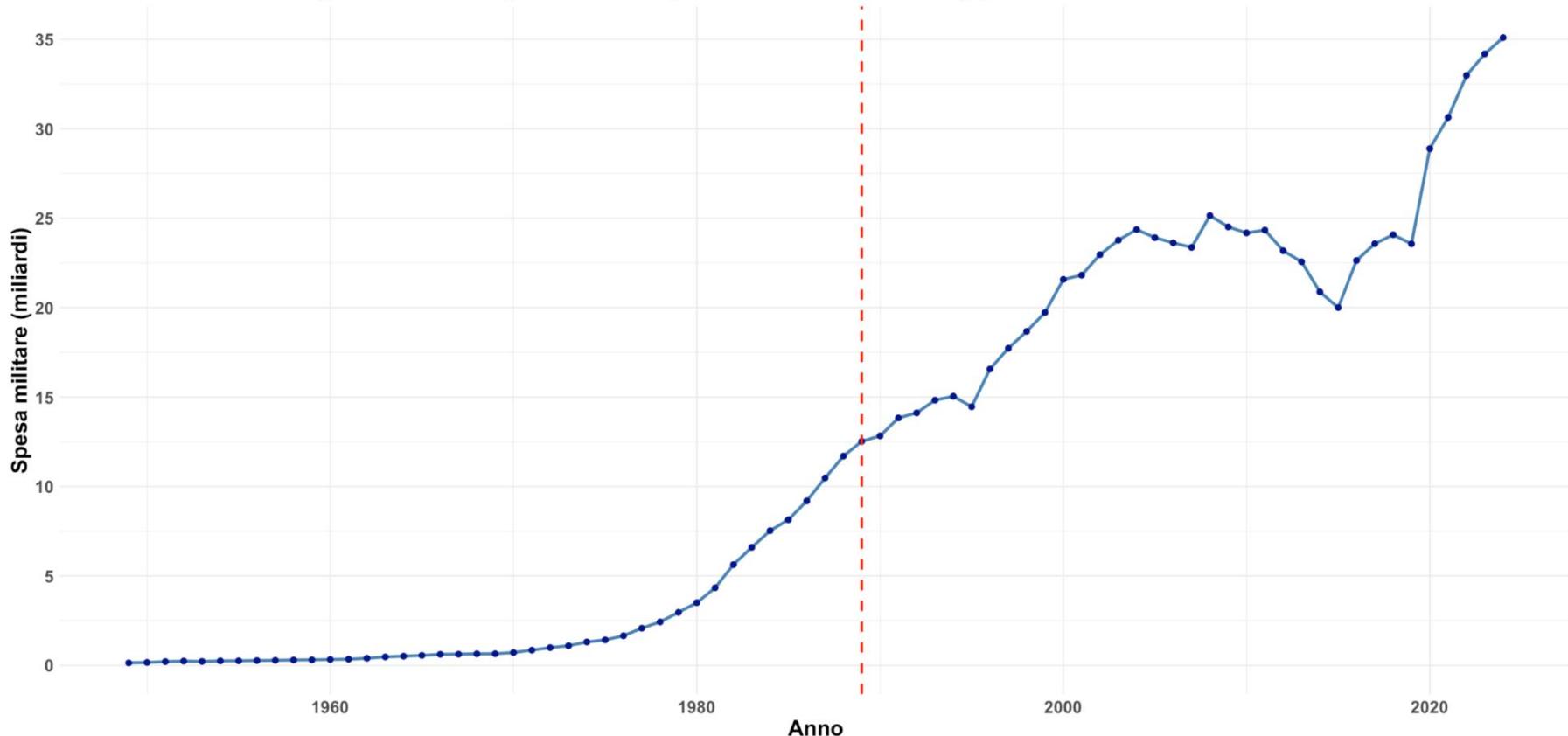
- from **1949 to 1989**, spanning the postwar reconstruction to the fall of the Berlin Wall;
- from **1989 to 2024**, covering the post-Cold War years to the present.

In the first period (1949-1989), spending **rose steadily**, supported by the **modernization of the armed forces** through NATO programs and the growth of Italy's **domestic defense industry**. The **1970s and 1980s** marked a significant increase as Italy became fully integrated into the Western security system.

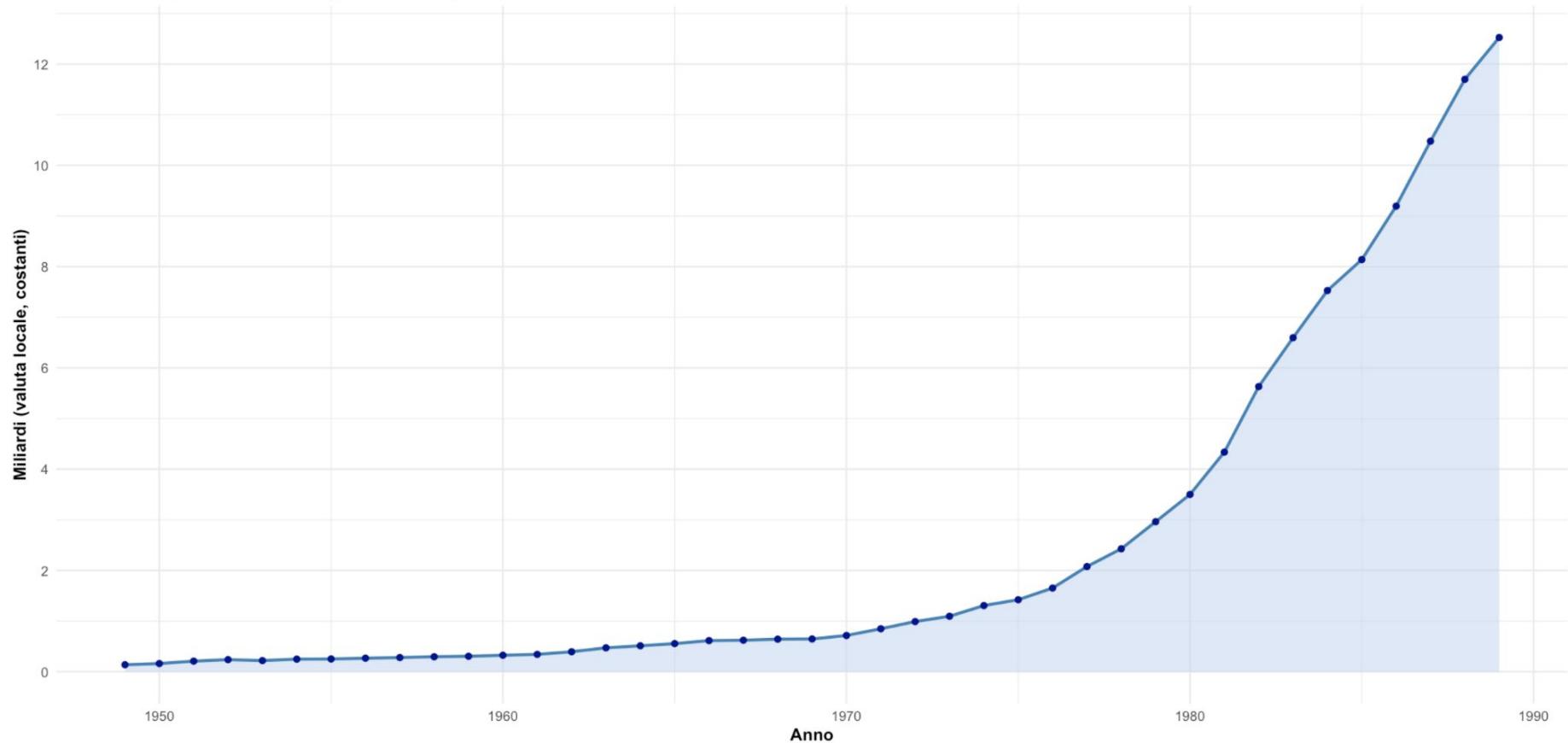
After 1989, with the end of bipolarity, Italy experienced only **mild stabilization**, without a true "**peace dividend**" like other European countries. The trend reversed after **2001**, with the **War on Terror**, the **professionalization of the armed forces** and, more recently, the **Russian invasion of Ukraine (2022)**, which pushed defense spending to its **highest levels in decades**.

ITALIA - Military Italian expenditure, in local currency, 1949-2024

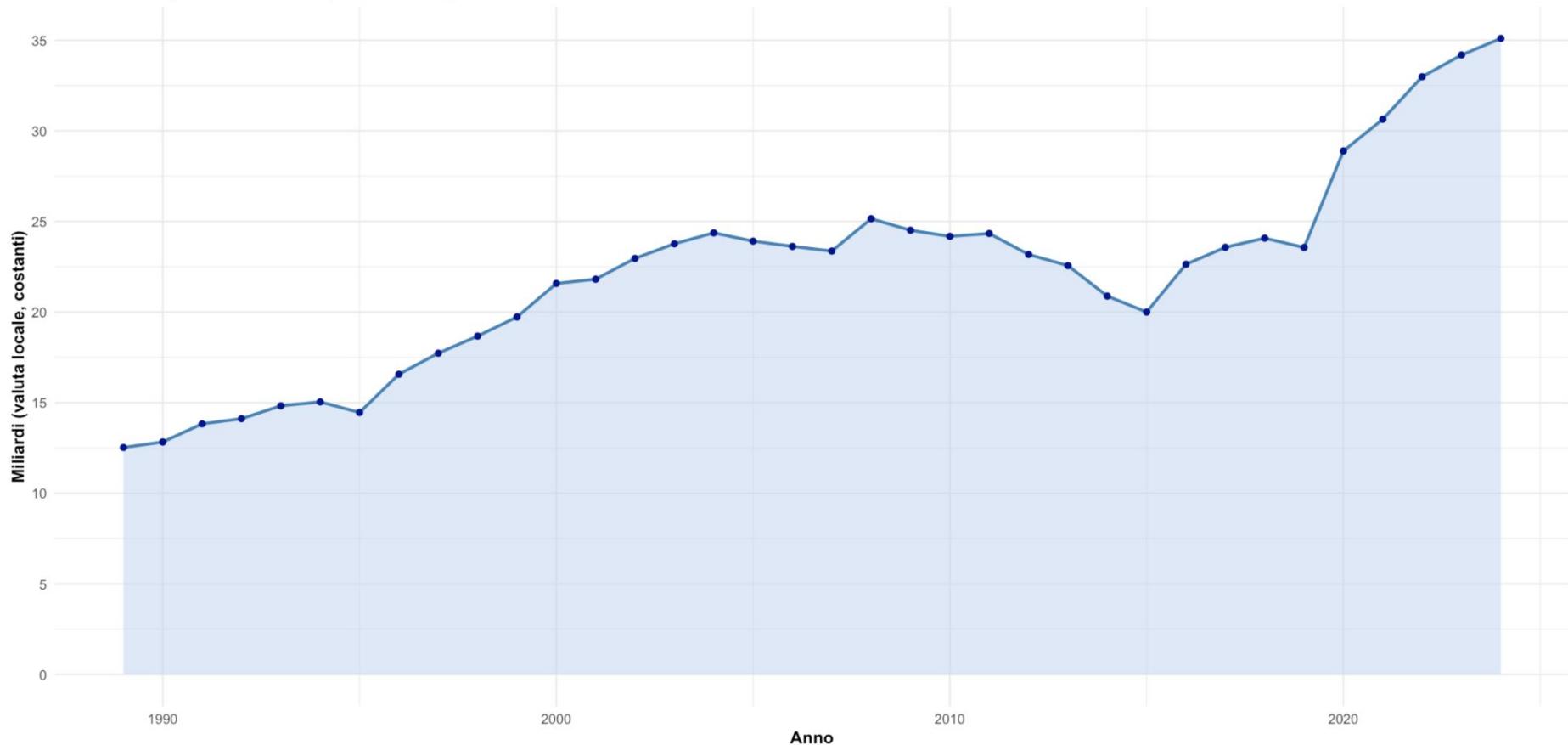
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ITALIA - Spesa militare (1949-1989) • Fonte: SIPRI



ITALIA - Spesa militare (1989-2024) • Fonte: SIPRI



SIPRI Military Expenditure Database

The SIPRI Military Expenditure Database contains consistent time series on the military spending of countries for the period 1949–2024. The database is updated annually, which may include updates to data for any of the years included in the database.

Military expenditure in local currency at current prices is presented according to both the financial year of each country and according to calendar year, calculated on the assumption that, where financial years do not correspond to calendar years, spending is distributed evenly through the year. Figures in constant (2023) and current US dollars, as a share of gross domestic product (GDP) and per capita are presented according to calendar year. Figures given as a share of government expenditure are presented according to financial year.

The availability of data varies considerably by country, but for a majority of countries that were independent at the time, data is available from at least the late 1950s. Estimates for regional military expenditure have been extended backwards depending on availability of data for countries in the region, but no estimates for total world military expenditure are available before 1988 due to the lack of data for the Soviet Union.

SIPRI military expenditure data is based on open sources only.

Access the SIPRI Military Expenditure Database directly at mlex.sipri.org/sipri.

Download the SIPRI Military Expenditure Database (Excel)

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"From the Peace Dividend to Global Rearmament: Analysis of Global Military Spending Trends (1988-2024)"

by Luigi Marsero

Developed using data from the **SIPRI Military Expenditure Database**, with charts and analyses produced in R.

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Data source: Stockholm International Peace Research Institute (SIPRI), Military Expenditure Database, 2024.