Analysis of world's biggest economies in the world

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Central banks play a pivotal role in shaping and implementing monetary policy within their respective nations. Their decisions have a great impact on national financial stability, particularly during periods of economic uncertainty or sustained growth. This report analyzes the monetary policy, actions taken by the central banks of the world's largest economies: the United States, China, Germany, United Kingdom, Japan, and Canada—over the volatile period from 2019 to 2024. Key economic indicators such as GDP, inflation, net exports, labor force, and unemployment sourced from the Bloomberg terminal helped analyze this time of financial volatility.

Section 1: Central Bank Monetary Policy Mandates

Each central bank operates under a distinct set of monetary policy frameworks and goals, reflecting unique national economic conditions. For example, some focus heavily on inflation targeting with specific numerical targets, while others have broader mandates covering financial stability and growth. Typical goals include controlling inflation, ensuring currency stability, fostering employment, and promoting sustainable economic growth. Understanding these differences provides valuable insight into why central banks choose certain measures to meet their mandates.

United States

- **Central Bank**: The Federal Reserve (The Fed)
- **Mandate:** Dual mandate: "maximum employment" and "price stability." (The Fed and Dual Mandate, n.d.)
- **Analysis:** The Federal Reserve aims to maintain price stability by keeping inflation low (targeting 2%). The second component of its mandate, maximum employment, is not

defined by a fixed target, rather, the Fed tries to keep employment high without triggering high inflation numbers.

- **Mandate Performance:** The 2% inflation the mandate was met once (in 2019).

China

- **Central Bank:** People's Bank of China (PBoC)
- **Mandate:** The PBoC is responsible for formulating and implementing monetary policy, safeguarding financial stability, and providing financial services. Unlike some central banks, its mandate does not emphasize a specific inflation target; rather, it prioritizes broad economic growth and stability. (A brief history of the Peoples bank of China, n.d.)
- **Analysis:** Unlike the Federal Reserve, the PBoC's goals are much broader and do not focus on a single, specific inflation rate target.
- **Mandate Performance:** China's mandate is difficult to score numerically, without an exact figure.

Germany

- **Central Bank:** European Central Bank (ECB)
- **Mandate:** Price Stability, with an inflation target rate of 2% "over the medium term." (Introduction, n.d.)
- **Analysis:** Germany is a member of the Eurozone, meaning its central bank (Deutsche Bundesbank), follows the ECB's mandate. Germany has an inflation rate of 2%, which is the same as the United States, but their goal is "over the medium term." This expression means that the central bank will not rush to bring down inflation if it is elevated. They will be flexible and assess what the circumstances are and take their time to fix it.
- **Mandate Performance:** The 2% inflation the mandate was met twice, in 2019 and 2024.

United Kingdom

- **Central Bank:** Bank of England (BoE)
- **Mandate:** Price stability (2% inflation target). (About Us, n.d.)
- **Analysis:** The UK's main goal is to maintain price stability using its 2% inflation target. Its primary tool is the "Bank Rate," the interest rate paid to commercial banks.
- **Mandate Performance:** The 2% inflation the mandate was met three times (in 2019, 2021, and 2024).

Japan

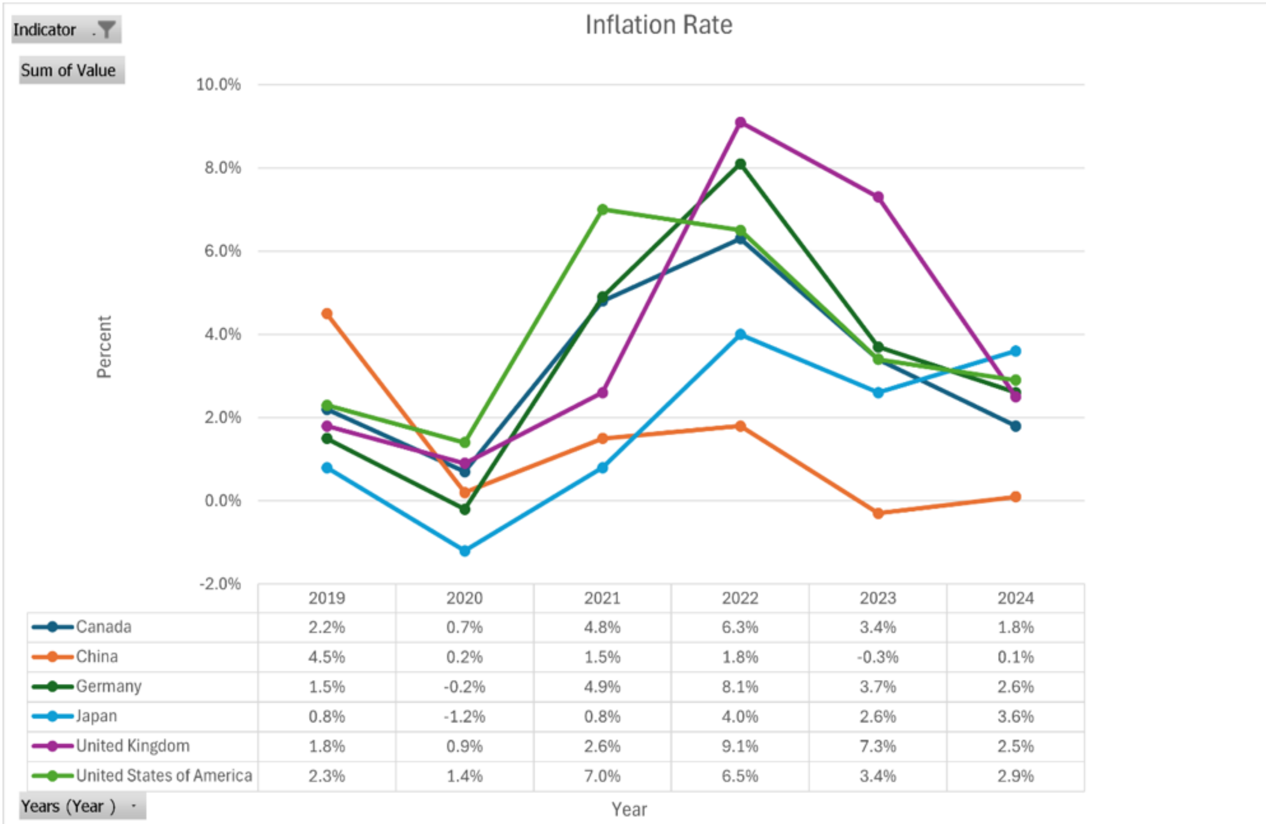
- **Central Bank:** Bank of Japan (BoJ)
- **Mandate:** Price stability (2% inflation target). (Outline of Monetary Policy , n.d.)
- **Analysis:** Japan suffered decades of deflation, so it views 2% inflation as an optimal way to revive its economy.
- **Mandate Performance:** The mandate was achieved in 2022 and 2023.

Canada

- **Central Bank:** Bank of Canada (BoC)
- **Mandate:** Promote the economic and financial welfare of Canada through a 2% midpoint inflation target within a 1% to 3% range. (Mandate and planning framework, n.d.)
- **Analysis:** The BoC's framework is both symmetric (concerned about inflation being too high or too low) and flexible (looking 6-8 quarters ahead). The BoC's framework allows it to maximize employment, much like the USA.
- **Mandate Performance:** The inflation mandate was met twice in 2019 and 2024.

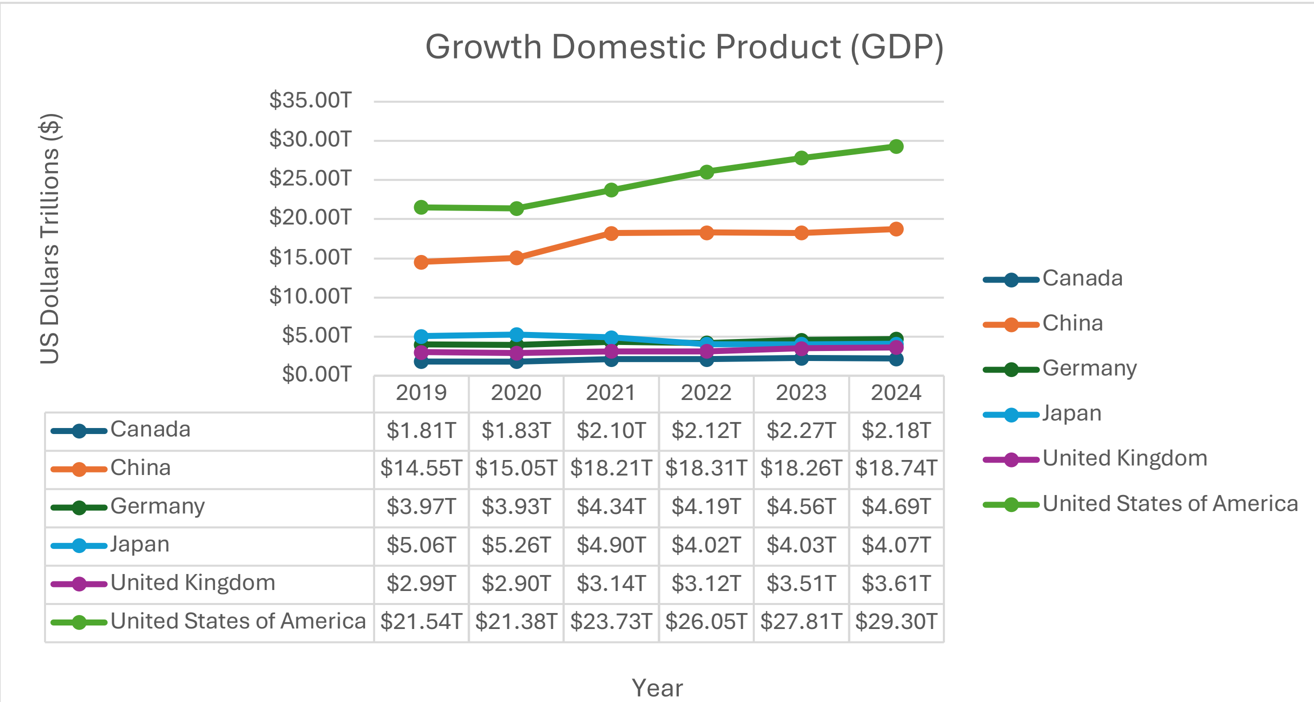
Section 3: Comparative Economic Analysis

Inflation



Throughout the five-year period, inflation fluctuated severely. In 2019, most Western nations were near their 2% mandate. while China (4.5%) and Japan (0.8%) were significant outliers. China's spike was driven by an African swine fever outbreak that destroyed pork supplies,

while Japan's low rate was normal for its deflationary economy. In 2020, Inflation collapsed globally due to the pandemic. Non-essential businesses were forced to shut down, forcing consumers to stay home and not spend any money. This was followed by the peak inflation period of 2021-2022, where the US (7.0%), the UK (9.1%), and Germany (8.1%) saw massive spikes driven by high demand and supply chain disruptions. One of the most notable examples was the shortage of chips used in most electronics. The chip shortage prevented businesses across multiple industries from meeting consumer demands. Add in the government relief packages like stimulus checks, which added money into consumers' pockets. China and Japan remained outliers, with policies focused on domestic deflation and stagnation, respectively. Japan's central bank welcomed inflation because it had dealt with deflation for multiple decades. The BoJ wanted people to spend money rather than save.

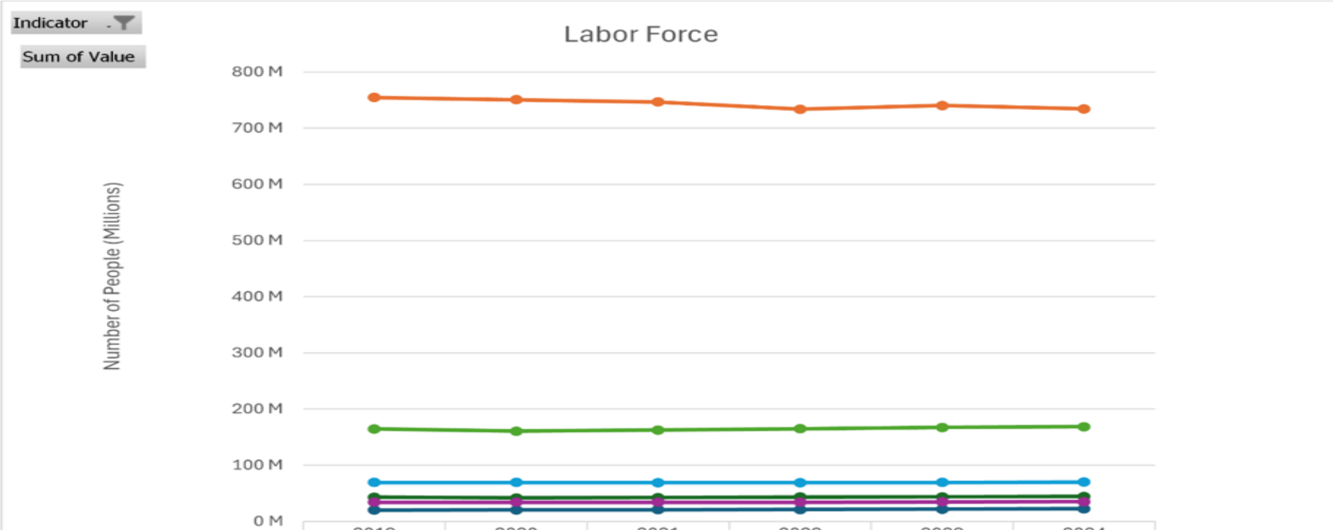


	2019	2020	2021	2022	2023	2024
Canada	$1.81T	$1.83T	$2.10T	$2.12T	$2.27T	$2.18T
China	$14.55T	$15.05T	$18.21T	$18.31T	$18.26T	$18.74T
Germany	$3.97T	$3.93T	$4.34T	$4.19T	$4.56T	$4.69T
Japan	$5.06T	$5.26T	$4.90T	$4.02T	$4.03T	$4.07T
United Kingdom	$2.99T	$2.90T	$3.14T	$3.12T	$3.51T	$3.61T
United States of America	$21.54T	$21.38T	$23.73T	$26.05T	$27.81T	$29.30T

Gross Domestic Product (GDP)

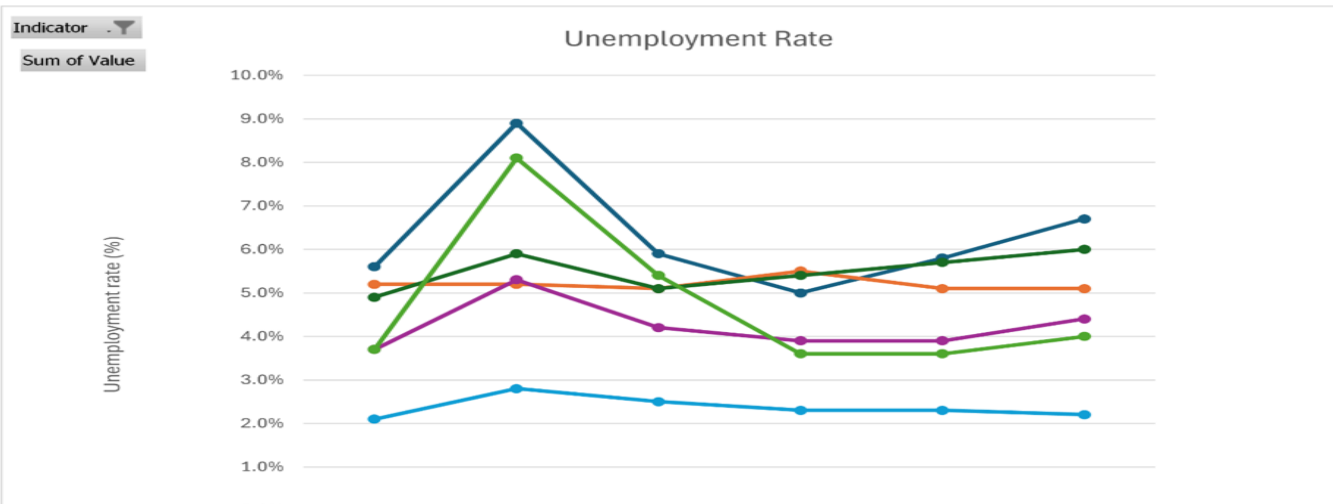
Gross Domestic Product (GDP), a key indicator of economic performance. The United States and China are in a league of their own, demonstrating continuous growth. Despite a brief, global slowdown in 2020, due to the pandemic, the US economy expanded from $21.5T to $29.3T by 2024, while China's grew from $14.6T to $18.7T. In contrast, the United Kingdom, Canada, and Germany experienced only marginal growth. Japan stood out. As the sole economy whose nominal GDP shrank (from $5.1T to $4.1T), this highlights the weakening economy of Japan.

Labor Market (Unemployment and Workforce)



	2019	2020	2021	2022	2023	2024
Canada	20 M	20 M	21 M	21 M	22 M	22 M
China	754 M	751 M	747 M	734 M	740 M	734 M
Germany	43 M	42 M	43 M	43 M	44 M	44 M
Japan	69 M	69 M	69 M	69 M	69 M	70 M
United Kingdom	34 M	34 M	34 M	34 M	35 M	35 M
United States of America	165 M	161 M	162 M	165 M	167 M	169 M

Years (Year) Year

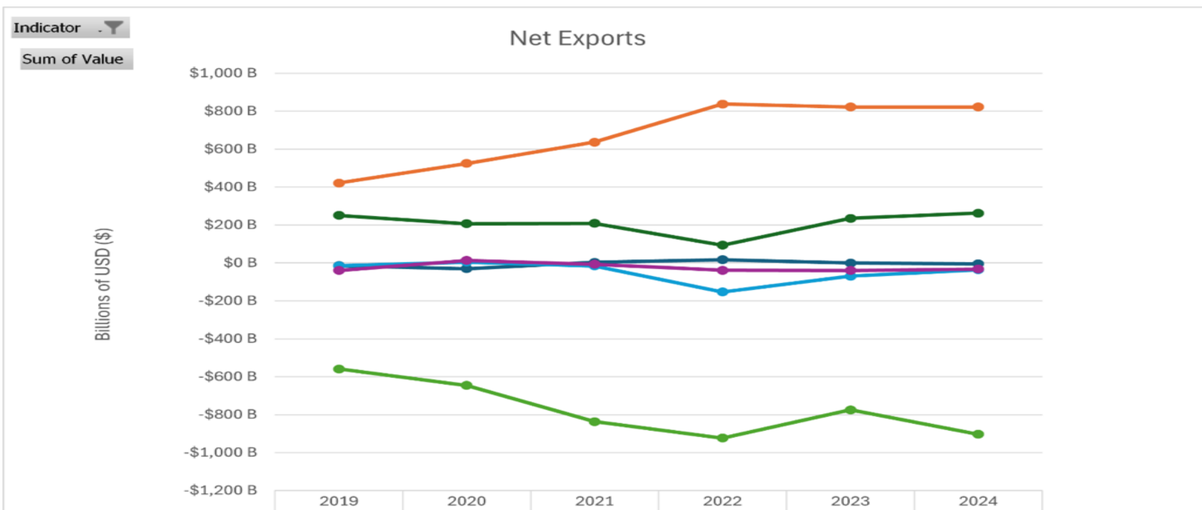


	2019	2020	2021	2022	2023	2024
Canada	5.6%	8.9%	5.9%	5.0%	5.8%	6.7%
China	5.2%	5.2%	5.1%	5.5%	5.1%	5.1%
Germany	4.9%	5.9%	5.1%	5.4%	5.7%	6.0%
Japan	2.1%	2.8%	2.5%	2.3%	2.3%	2.2%
United Kingdom	3.7%	5.3%	4.2%	3.9%	3.9%	4.4%
United States of America	3.7%	8.1%	5.4%	3.6%	3.6%	4.0%

Years (Year) Year

The labor market data reveal a dramatic divergence in economic models. The 2020 pandemic exposed a structural difference between North American and European/Asian economies. The US and Canada experienced severe unemployment spikes (to 8.1% and 8.9%, respectively). while Germany, Japan, and the UK’s rates remained stable due to the government's preventing massive layoffs. This was followed by a rapid recovery in the U.S. and Canada. With unemployment falling to historic lows by 2022-2023. The Total Labor Force data (Figure 4) showed modest growth for most nations, with the significant exception of China, whose workforce declined from 787 million to 734 million, reflecting long-term demographic challenges.

Net Exports



	2019	2020	2021	2022	2023	2024
Canada	-$14 B	-$30 B	$3 B	$17 B	-$1 B	-$5 B
China	$421 B	$524 B	$637 B	$838 B	$822 B	$822 B
Germany	$251 B	$207 B	$209 B	$94 B	$235 B	$263 B
Japan	-$15 B	$4 B	-$16 B	-$153 B	-$70 B	-$37 B
United Kingdom	-$40 B	$14 B	-$7 B	-$39 B	-$40 B	-$32 B
United States of America	-$559 B	-$646 B	-$837 B	-$924 B	-$774 B	-$904 B

Years (Year)
Year

The data for net exports highlights the most significant structural difference in this study: the divide between import-driven and export-driven nations. The United States consistently ran the largest trade deficit, which widened to a massive -$924 billion by 2022. The United Kingdom showed a similar, smaller deficit. In stark contrast, China and Germany ran massive trade surpluses. China’s surplus grew to an enormous $838. billion in 2022. Japan, historically an exporter, saw its trade balance flip to a massive deficit of -$153B in 2022, a direct consequence of the global energy crisis was a spike in its import costs.

Section 4: Policy Impact & Correlations

The inflation spike in 2022 was the defining economic event of this period. For more than two years, the central banks of the United States, the United Kingdom, Germany, and Canada failed to meet their 2% mandate. In response, they implemented aggressive monetary tightening policies, primarily by raising interest rates. The objective was clear: make borrowing more expensive to prevent consumer spending, cool demand, and reduce the money supply. As a result, households became less inclined to finance purchases like homes and vehicles, opting instead to save. This strategy, , came with a trade-off. Higher interest rates constrained business access to capital, leading to widespread layoffs and a cooling of the previously overheated labor market. While inflation fell—dropping to 2.9% in the U.S. by 2024—unemployment rose to 4%, illustrating the direct link between tighter monetary policy and reduced hiring capacity.

Although this report does not include a direct graph for productivity, it is evident that productivity slowed during the period. A key driver was the aggressive interest rate hikes implemented by central banks to combat inflation. Higher interest rates made borrowing more expensive, which led to reduced business investment and increased unemployment. This rise in unemployment, in turn, dampened overall economic output and slowed GDP growth. Importantly, these measures were intentional—central banks prioritized curbing inflation over sustaining rapid economic expansion, aiming to stabilize prices rather than stimulate growth.

Conclusion

The 2019-2024 period demonstrated a stress test for global central banks. The data shows they were largely successful in using their primary tool—raising interest rates—to combat the worst inflation spike in decades, bringing it back toward their 2% mandate by 2024. However, this success was not shared by all countries, as China and Japan suffered from deflation.

Furthermore, this policy came at a clear and measurable cost: a slowdown in GDP growth and a rise in unemployment, perfectly illustrating the difficult trade-offs central banks must make to manage the economic and financial welfare of their nations.

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