Demographic and Socio-Economic Development — Evidence from G7 Countries

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Abstract

**Background:** The Group of Seven Nations (G7) include Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. Of these nations, all seven are top-ranked countries for the highest net wealth per capita, leading export countries, and five are on the list of top 10 countries with the largest gold reserves. Represent over 46% of the gross domestic product globally. These countries represent over 32% of the GDP and advanced in technologies. _**Purpose:**_ This paper aims to discover the development scenario among G7 countries from 2000 to 2020. The paper's second intent is to compare developmental indicators among those groups of seven countries. Finally intent is to find out how these countries are leading economic development and advancing in supplying goods and services. _**Findings:**_ This paper examined the socio-economic and demographical growth and development that have occurred in these two decades, from 2000 to 2020, among G7 countries. The authors explained the various development indicators of seven (G7) countries: demographical variables' population, number of habitats, and fertility rate. The paper analysed socio-economic development variables like life expectancy, employment-population ratio and employment-population ratio among women, youth unemployment rate, gross domestic product (GDP), GDP growth rate, GDP per capita, imports and exports of goods and services, inflation rate. The author has applied the pooled group data (PGD) for individual countries' two decadal growth and development presents.

Keywords: G7 countries, population, socio-economic development

1. Background of Group of Seven (G7) Countries

G7 is a term that is used to describe the "Group of Seven", a coalition of seven countries that have the largest and most advanced economies in the world: the United States, Germany, Japan, the United Kingdom, France, Italy, and Canada, along with the European Union. Based on Nominal Values, the G7 members represent over 46% of the gross domestic product globally. Based on purchasing power parity, these countries represent over 32% of the GDP. In 2018, the countries in this group comprised more than 60% of the global net wealth of $317 trillion, WPR (2023).

The G7 was founded in 1973 (though as only a group of four) in response to the collapse of the exchange rate in the 1970s, the energy crisis, and the recession that followed. The G7 meets at least once yearly to discuss and share solutions to global concerns, including economics, trade, security, and climate change. In its nearly 50-year history, the G7's accomplishments include launching financial initiatives to aid heavily indebted countries, assisting in the fight against HIV/AIDS, and helping enable the 2015 Paris Agreement on climate change. The G7 has also become involved in the Financial Stability Forum.

The initial meetings of the G7 began in 1973 and included only four countries: the United States, the United Kingdom, West Germany, and France. Japan accepted an invitation to join soon after, and Italy was added in time for the first formal meeting of the "G6" in 1975. Canada was added in 1976. Also, the European Economic

Community or the European Union has typically attended G7 meetings since 1981 as a "non-enumerated" member. Russia officially joined the G7 — renamed the G8 — in 1998. However, Russia's annexation of Crimea in 2014 led the other G8 members to suspend Russia's membership and revert to the G7, WPR (2023).

2. Indicators for Measuring the Socio-Economic Development of a Country

Traditionally, it has been believed that a country's per capita gross national product (GNP) is a crucial measure of its economic development and success. Researchers believe that income levels or output growth need more measures of development. We find support for this in several studies, which emphasise the significance of accounting metrics other than per capita GNP. Early studies (Ahluwalia & Chenery, 1974; Bunge, 1981; Drewnowski, 1974; Hicks & Streeten, 1979; Hsiao & Hsiao, 1983; Khan, 1991; McGranahan, 1971; Othick, 1983; Preston, 1975) highlighted the necessity of redefining the framework for assessing the growth of nations by including the welfare aspects that would be general, comparable components across countries over time. For instance, according to McGranahan (1971), reform measures were launched after World War II to improve living and socio-economic advancement as envisioned by the UN. Identifying the indicators connected to the standard of life was a significant area of expertise. They classed the nations according to their GNP and other economic metrics, their standard of life, and other economic aspects.

3. Objectives of the Study

1) To study the development scenario among G7 countries from 2000 to 2020.

2) To compare developmental indicators among those groups of seven countries, and

3) To find out how these countries are leading economic development and advanced in supplying goods and services.

4. Data Sources

The study uses secondary data from various published sources from 2000 to 2020. Data on Demographical aspects were compiled from World Population Review. Life expectancy and population employment were compiled from International Labour Organisation. GDP, GDP Growth, and GDP per capita were compiled from various agencies' reports of Global Economy, World Economics, World Economic Outlook, the Statista. Finally, the author has used percentages and frequency analysis over decadal changes.

5. Results and Discussion

This paper explains the demographic and socio-economic development of seven advanced economies countries. This study covers population, number of habitants, fertility rate, life expectancy, employment-population ratio and employment-population ratio among women, and youth unemployment rate. Gross domestic product (GDP), GDP growth rate, GDP per capita, imports and exports of goods and services and inflation rate.

Population: Between 2000 and 2020, the United States population increased from 282 million to about 335.9 million, making it the largest of the G7 nations. It is also the nation with the third-highest population on the planet. Interestingly, since 2010, Japan's population has decreased from 128 million to 125.2 million. Additionally, the population of Italy has been declining recently. Germany's population declined from 2000 to 2010 and increased in 2020, while France's bit reversed. The United Kingdom and Canada have an increasing trend, as recorded in Figure 1.

An ageing population is a defining characteristic of Italy and Japan. With a median age of 48.6 in 2020, Japan was second globally, while Italy was fifth. Germany's population is ageing and has a high median age, yet immigration has led to continued population growth. The average median age of g7 countries is 43.4.
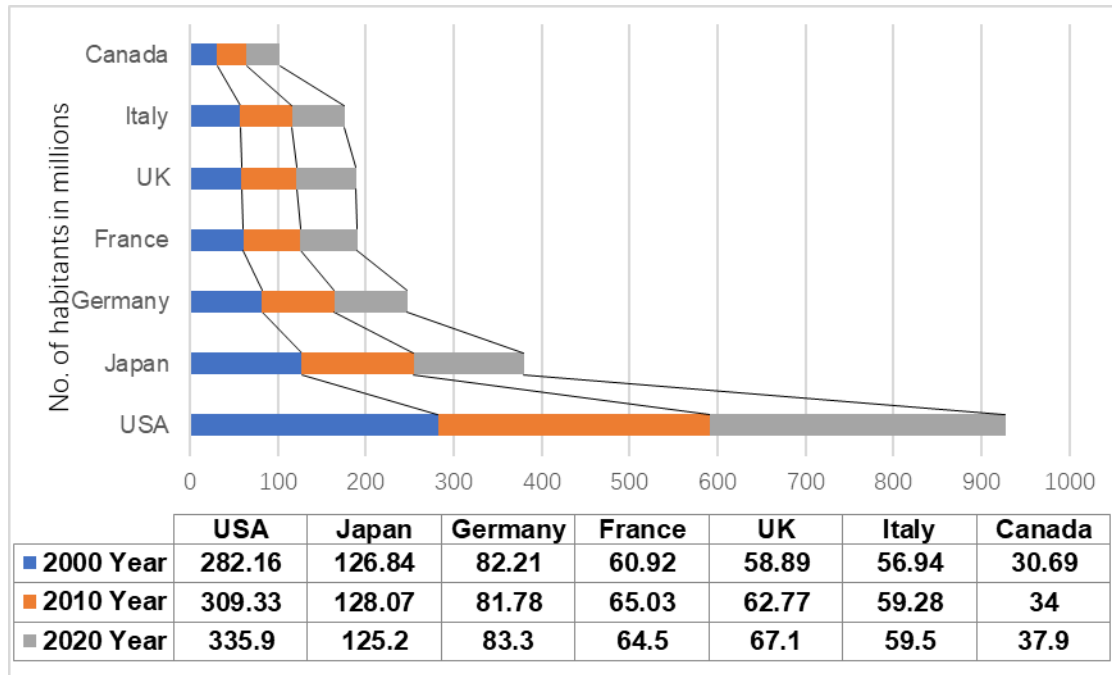
Figure 1. G7 Countries: Number of Habitants
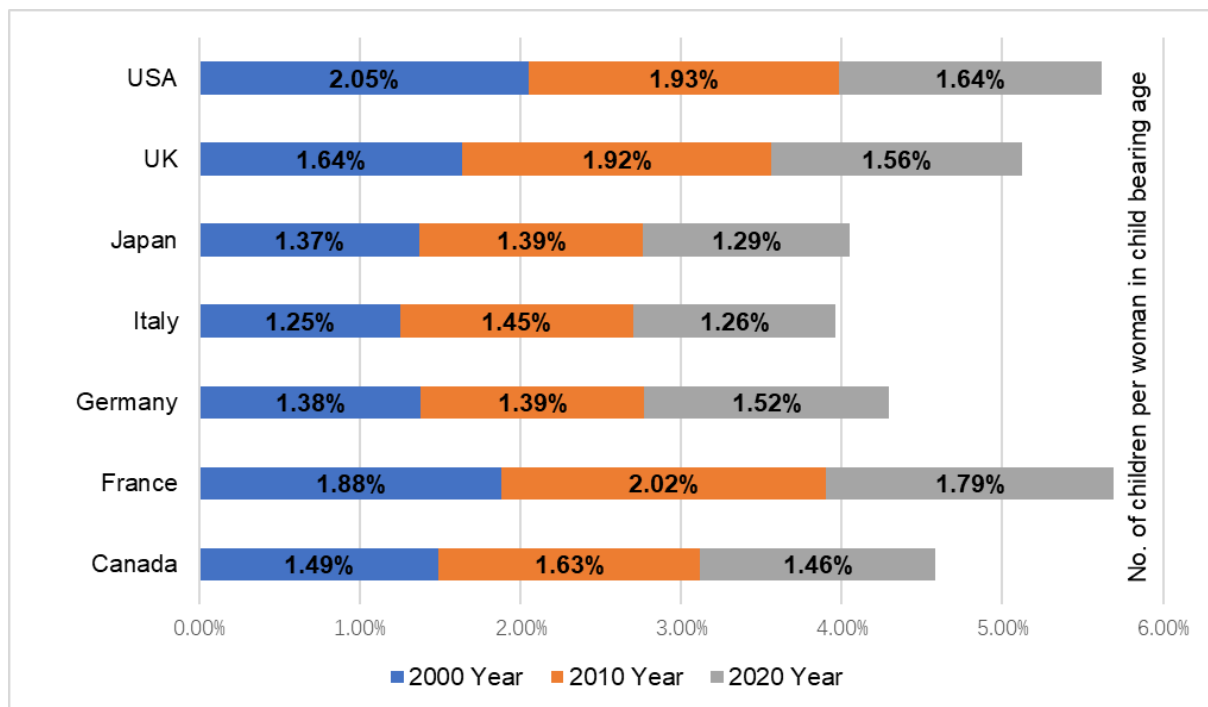
Source: Based on data from https://worldpopulationreview.com World Population Review (2023).

Figure 2. Fertility Rate Among G7 Countries

Source: Based on data from https://worldpopulationreview.com.

Figure 2 explains G7 countries' fertility rates, by country, from 2000 to 2020. Fertility rates in all G7 nations have declined recently, changing between 2000 and 2020. According to estimates, Japan and Italy's fertility rates were 1.38 and 1.47 children per woman of childbearing age. However, with 1.8 children, France had the highest rate. Fascinatingly, the fertility rate in Germany was at the same level as Japan's and Italy's in 2012, but it began to rise in 2013 and has stayed somewhat higher ever since. The fertility rate shows how many children, on average, a woman in a nation of childbearing age would have if she lived to the end of her reproductive years.
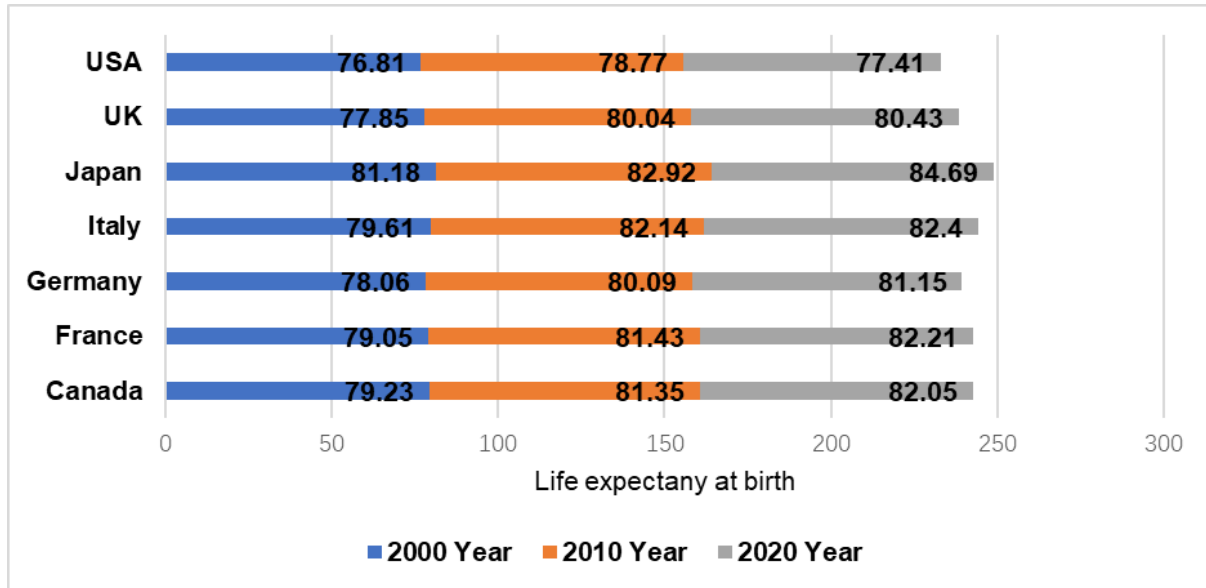
Figure 3. Life Expectancy Among G7 Countries

Source: Based on data from https://ilostat.ilo.org, ILOSTAT, 7 February 2023.

In recent years, life expectancy has increased in different countries due to the development of health services, advanced technologies, and improved living standards. The needs of the population in terms of health care are, therefore, currently increasing, and I have observed that in G7 countries, there is a faster growth in health expenditure compared to income Hitiris, (1999).

Figure 3 reveals each nation's life expectancy in the G7 from 2000 to 2020. Between 2000 and 2020, Japan's birth expectancy, 84.8, was the highest among the G7 nations. Conversely, the United States had a life expectancy below 80 years, 78.2 years. Following the COVID-19 epidemic, life expectancy decreased in all G7 nations except Japan.
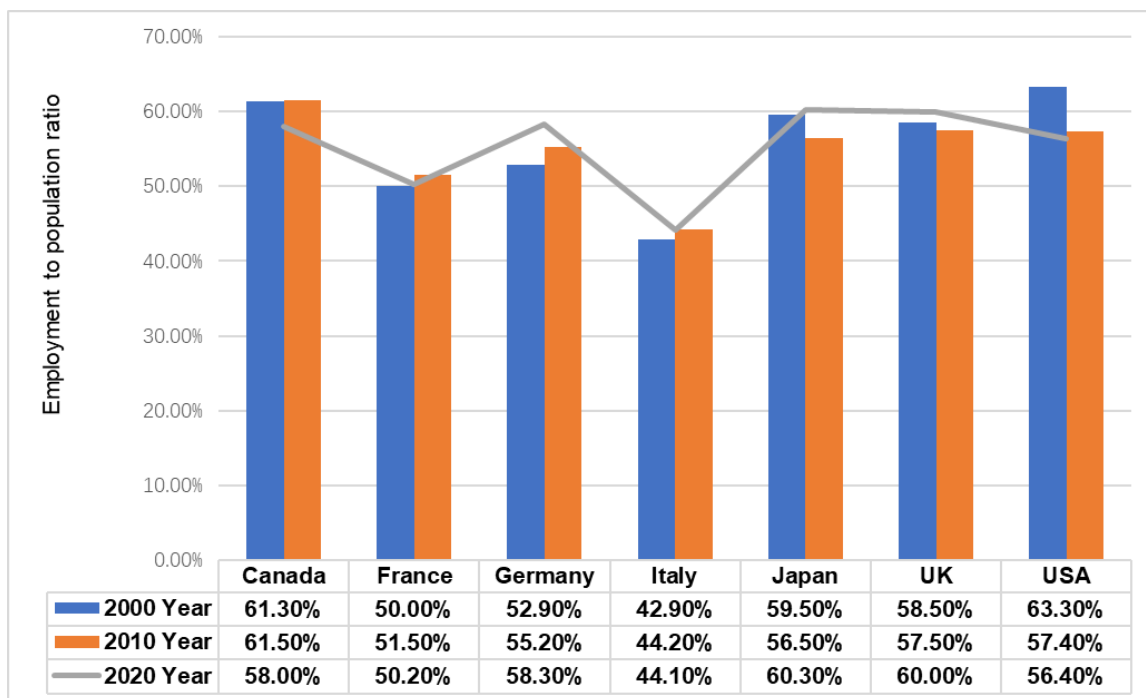

	Canada	France	Germany	Italy	Japan	UK	USA
2000 Year	61.30%	50.00%	52.90%	42.90%	59.50%	58.50%	63.30%
2010 Year	61.50%	51.50%	55.20%	44.20%	56.50%	57.50%	57.40%
2020 Year	58.00%	50.20%	58.30%	44.10%	60.30%	60.00%	56.40%

Figure 4. G7 Countries Employment to Population Ratio

Source: Based on data from www.worldbank.org World Development Indicators, October 2023.

Figure 4 provides information on G7 employment-to-population ratio, 2000–2020, by nation: With only 45% of the people over 15 years old employed, Italy had the lowest employment-to-population ratio among the G7 nations in 2020. With slightly around 50%, France had the second-lowest percentage. The employment-to-population ratio in every other G7 nation was over 60%.
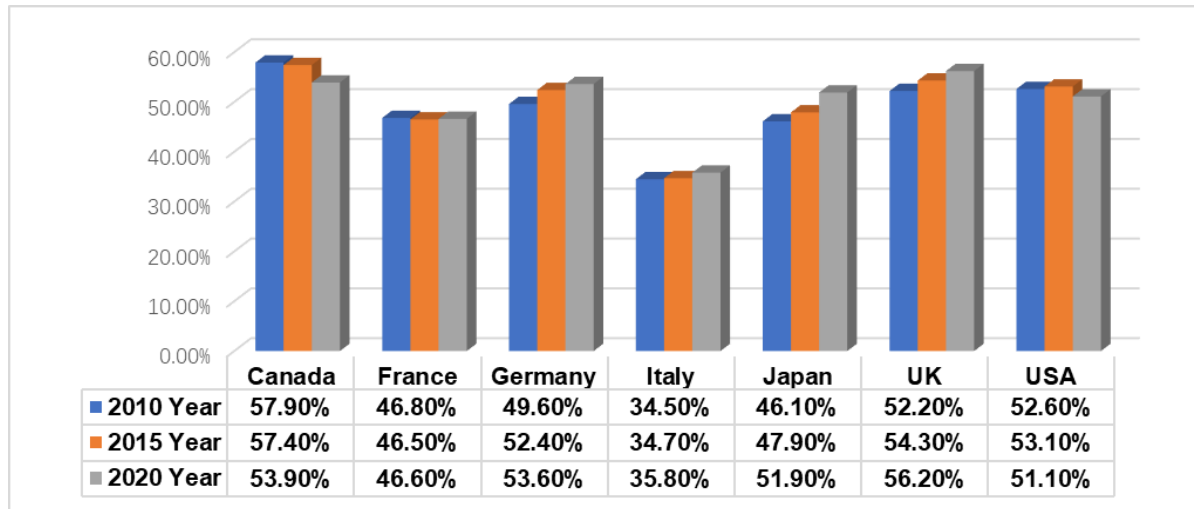

	Canada	France	Germany	Italy	Japan	UK	USA
2010 Year	57.90%	46.80%	49.60%	34.50%	46.10%	52.20%	52.60%
2015 Year	57.40%	46.50%	52.40%	34.70%	47.90%	54.30%	53.10%
2020 Year	53.90%	46.60%	53.60%	35.80%	51.90%	56.20%	51.10%

Figure 5. G7 Countries Employment to Population Ratio Among Women

Source: Based on data from www.worldbank.org World Development Indicators, October 2023.

Between 2010 and 2020, Italy had the lowest employment-to-population ratio for women among the G7 nations. Only 37% of women over 15 who resided in the nation in 2020 had jobs. That year, Canada had the most significant ratio of female employment to population—58 per cent. Women had poorer employment-to-population ratios than males across the board in the G7 countries, as presented in Figure 5.
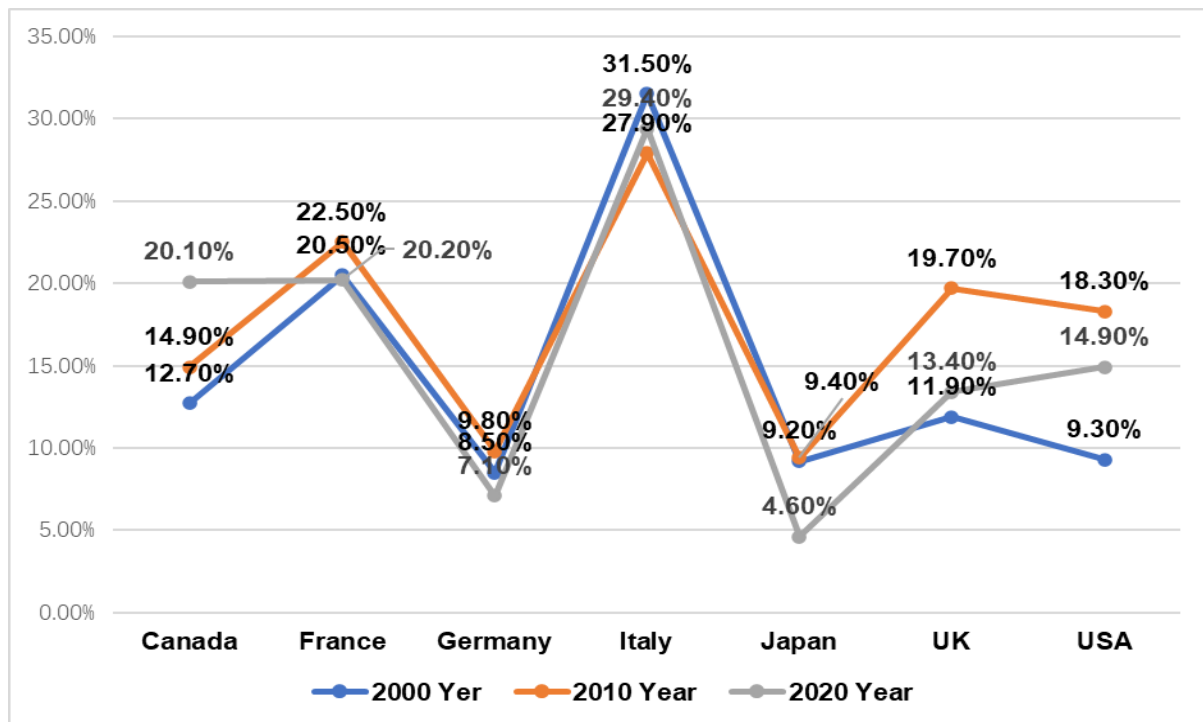

Figure 6. G7 Countries Youth Un-Employment Rate

Source: Based on data from https://ilostat.ilo.org, ILOSTAT, 7 February 2023.

Figure 6 explains G7 countries' youth unemployment rates, by country, from 2000 to 2020. Between 2000 and 2020, Italy had the highest young unemployment rate among the G7 nations. The years following the euro crisis were exceptionally high when it exceeded 40%. It had decreased to 24 per cent by 2020. On the other hand, Japan had the lowest young unemployment rate, at just 4 per cent.
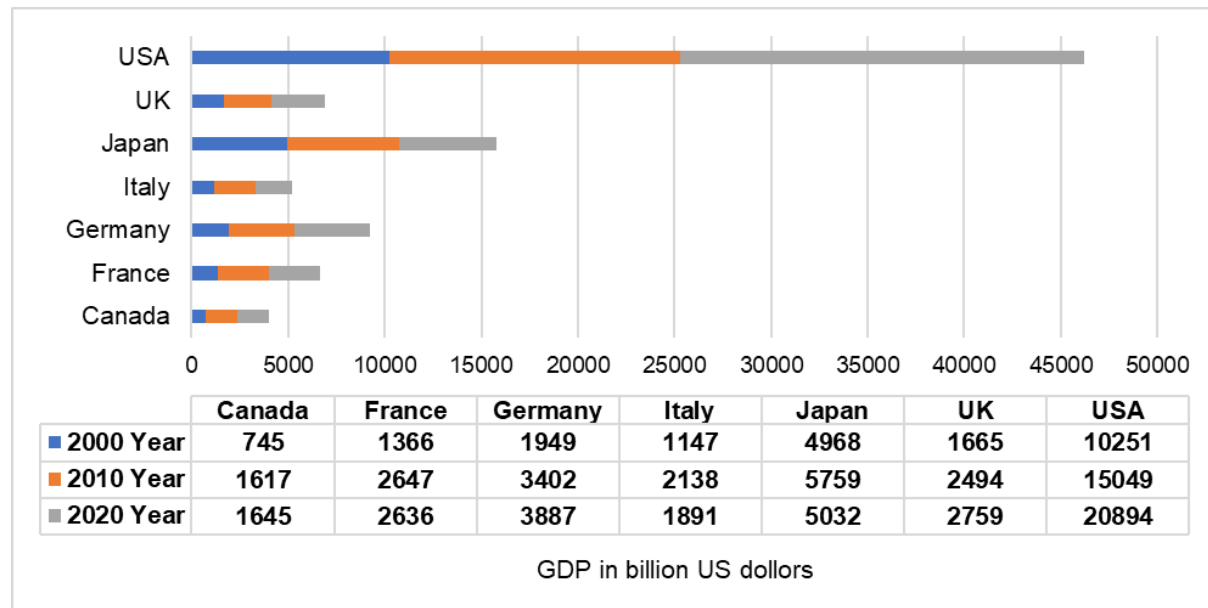

	Canada	France	Germany	Italy	Japan	UK	USA
■ 2000 Year	745	1366	1949	1147	4968	1665	10251
■ 2010 Year	1617	2647	3402	2138	5759	2494	15049
■ 2020 Year	1645	2636	3887	1891	5032	2759	20894

GDP in billion US dollors

Figure 7. G7 Countries Gross Domestic Product

Source: Based on data from www.worldeconomics.com and World Bank Report- 2020.

Compared to the other G7 nations, the United States has the highest GDP. Additionally, between 2000 and 2020, the GDP of the other six nations varied, although the US increased practically continuously, reaching an estimated 25 trillion US dollars in 2020. In addition, the United States has a larger economy than China. At almost 4.2 trillion dollars, Japan's GDP was the second biggest of the G7 nations.

The COVID-19 pandemic and the financial crisis caused significant drops in the gross domestic product (GDP) for all G7 nations in 2009 and 2020, respectively. Following the COVID-19 pandemic, the growth decrease exceeded the financial crisis. In addition, Italy saw negative GDP growth in 2012 and 2013 due to the euro crisis. According to estimates, the seven nations' GDPs will increase by 1.1% to 4% in 2020, as presented in Figure 7.

In nominal terms, the combined gross domestic product (GDP) of the G7 member states accounts for around 44% of the world economy, down from almost 70% thirty years ago. In 1970, 62% in 1980, 66% in 1990, 65% in 2000, 50% in 2010, and 46% in 2020, the share of GDP was 67%. (World Bank Report- 2020).

Table 1. G7 Countries: Gross Domestic Product Per Capita

G7 Countries	The 2000 Year	The 2010 Year	The 2020 Year
USA	50145	54437	60158
Germany	43572	48148	51840
Canada	41650	45206	46181
France	41321	43802	42233
UK	39060	42305	41741
Japan	36231	38111	39989
Italy	43279	42577	39091

Source: Based on data from https://www.theglobaleconomy.com.

Table 1 reveals that GDP per capita, Purchasing Power Parity, 2020 - Country rankings: The average for 2020

based on seven countries was 45890.88 USD. The highest value was in the USA: 60158.91 USD, and the lowest value was in Italy: 39091.41 USD, and Germany had the second-highest GDP per capita, at 51840 USD. The indicator is presented from 2000 to 2020.
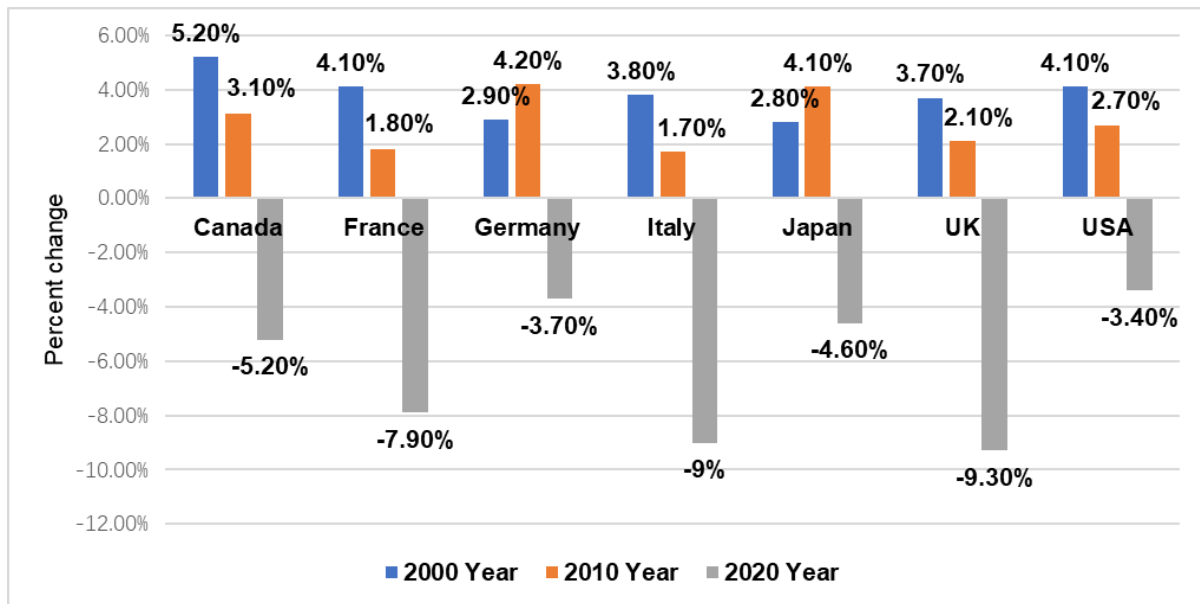

Figure 8. G7 Countries Gross Domestic Product Growth Rate

Sources: IMF (2023). Major advanced economies(G7), World Economic Outlook (April 2023).

The economic growth model of Robert Solow, developed in (1956), dominated during the postwar period and served as the primary tool for studying the problems of long-term economic growth almost to the 1980s. The central place in this model has been given to the capital dynamics and the description of economic growth in the adjustment process to balanced growth.

Figure 8 depicts that the COVID-19 pandemic and the financial crisis caused significant drops in the gross domestic product (GDP) for all G7 nations in 2009 and 2020, respectively. Following the COVID-19 pandemic, the growth decrease exceeded the financial crisis. In addition, Italy saw negative GDP growth in 2012 and 2013 due to the euro crisis. The GDP of the seven nations was projected to increase by 1.1 to 4% in 2020 and subsequent years.
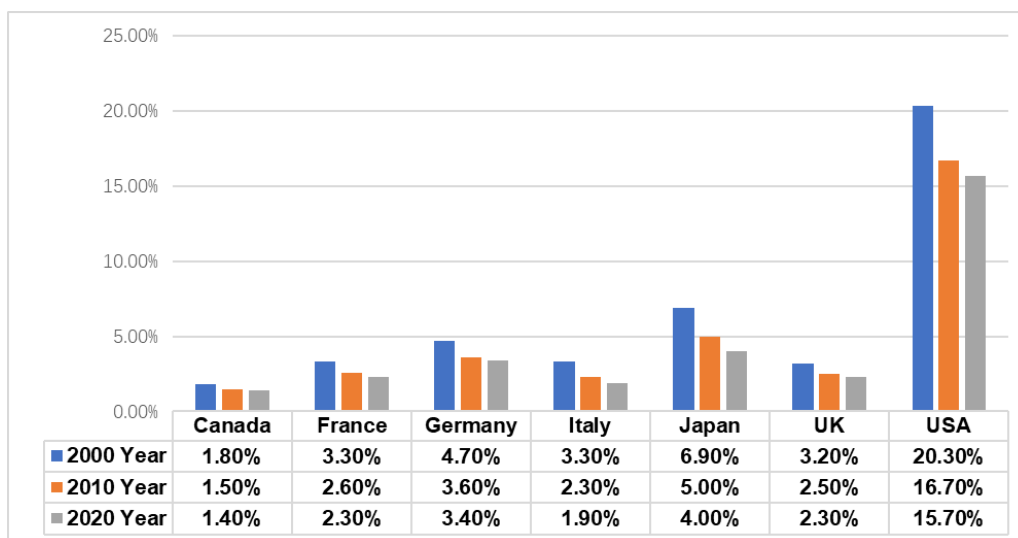

	Canada	France	Germany	Italy	Japan	UK	USA
2000 Year	1.80%	3.30%	4.70%	3.30%	6.90%	3.20%	20.30%
2010 Year	1.50%	2.60%	3.60%	2.30%	5.00%	2.50%	16.70%
2020 Year	1.40%	2.30%	3.40%	1.90%	4.00%	2.30%	15.70%

Figure 9. G7 Countries' Share of the World's Gross Domestic Product

Source: Based on data from https://www.theglobaleconomy.com.

Figure 9 presents the Global GDP as a percentage of the G7 nations 2000–2020. Since 2000, the G7 nations' global gross domestic product (GDP) percentage has decreased. In 2000, China accounted for more than 40% of the global GDP; by 2020, this had decreased to around 30%, a trend that must be viewed in the context of China's long-term economic growth. Regarding purchasing-power-parity (PPP), the United States owned the greatest per cent of the global GDP of the G7 nations at 15.5 per cent.
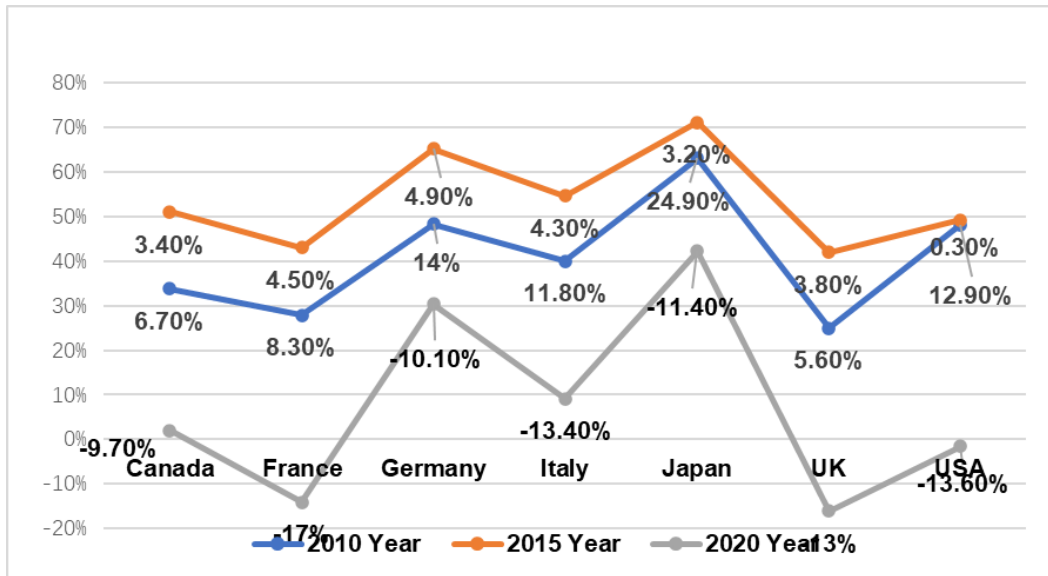

Figure 10. G7 Countries Exports of Goods and Services

Source: Based on data from www.statista.com Volume of exports of goods and services of G7 countries, October 2022

Figure 10 depicts the Change in the G7 countries' exports of products and services from 2010 to 2020. Due to the COVID-19 pandemic, the export volumes of all G7 nations were negative in 2020, with France seeing the worst decline at minus 17% from 2019. Except for the United Kingdom, export volumes were positive again in 2020, which is predicted to continue into 2022.
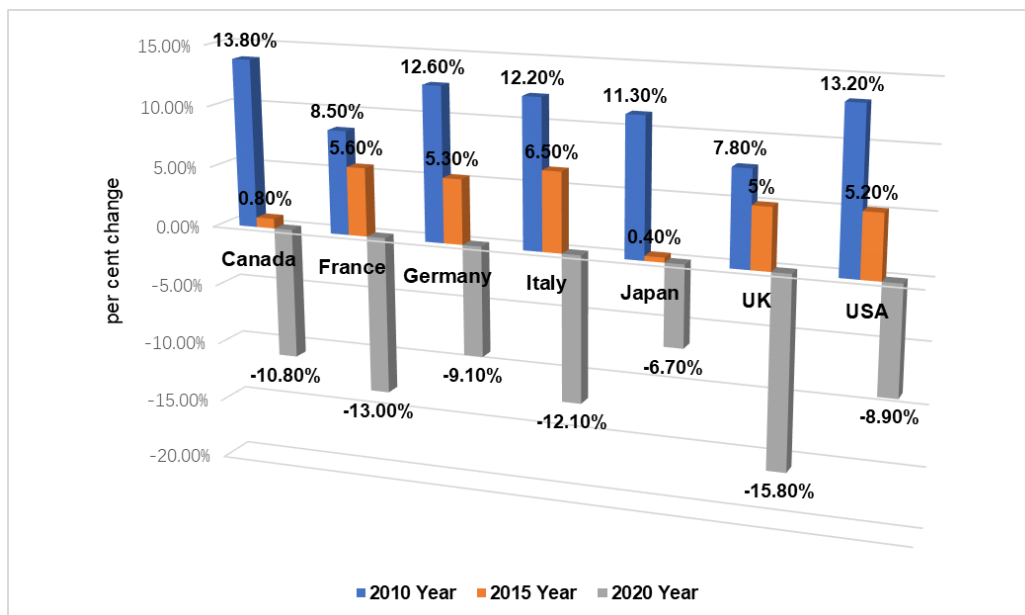

Figure 11. G7 Countries Imports of Goods and Services

Source: Based on data from www.statista.com Volume of imports of goods and services of G7 countries, October 2022.

Figure 11 reveals the Change in the number of G7 nations' imports of products and services from 2010 to 2020. Due to the COVID-19 pandemic, the import volume of all G7 nations was negative in 2020, with the United Kingdom seeing the most significant decline with a minus 15.8 per cent fall from 2019. However, import volumes again turned positive in 2021 across the board and were forecast to do so again in 2022.
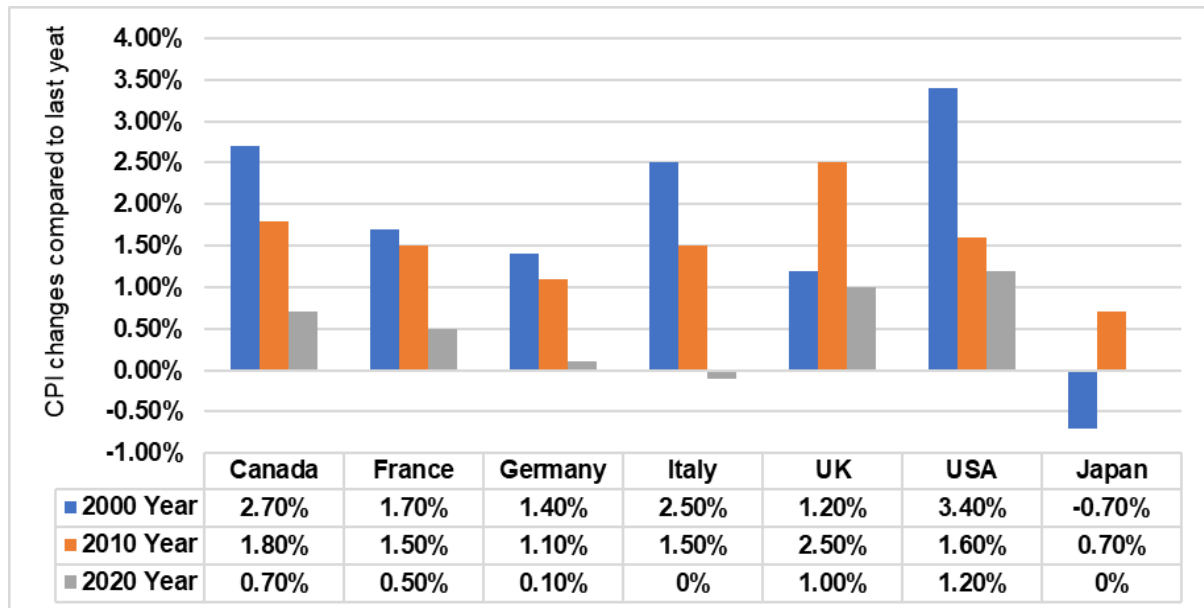

	Canada	France	Germany	Italy	UK	USA	Japan
■ 2000 Year	2.70%	1.70%	1.40%	2.50%	1.20%	3.40%	-0.70%
■ 2010 Year	1.80%	1.50%	1.10%	1.50%	2.50%	1.60%	0.70%
■ 2020 Year	0.70%	0.50%	0.10%	0%	1.00%	1.20%	0%

Figure 12. G7 Countries Inflation Rate

Source: Based on data from https://www.theglobaleconomy.com.

Figure 12 shows that 2020 inflation rates increased worldwide, including in the G7 nations, ranging from 2.5% in Japan to over 8% in Italy. Since 2000 all groups of seven nations faced inflation hit from 2.7 per cent to least 0.50 per cent. However, global inflation rates will rapidly rise due to Russia's invasion of Ukraine; prices will be increased significantly, particularly gas and electricity.

6. Conclusion

This paper analysed various development indicators of a group of seven countries. The unemployment rate in G7 countries decreased to 4 per cent in 2020, down from 4.3 per cent in 2019. The youth unemployment rate (aged 15-24) decreased to 9.3 per cent in 2020. Currently, 10.2 per cent of young men and 8.2 per cent of young women in G7 countries are unemployed. The gender gap in the labour force participation rate remained at 13.8 percentage points in 2020, with no change compared pre-Covid time. The share of youth not in employment, education or training (NEET) of men was estimated at 12.3 per cent in 2020. For women, the NEET rate was 12.3 per cent in 2020. An estimated 7.8 per cent of the adult (25+) and 18.1 per cent of the youth (15-24) extended labour force was underutilised in 2020, meaning that they were either unemployed, underemployed or in the potential labour force, ILO (2023).

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