Economic Performance and Development of Germany, Japan, and South Korea

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SS164 - Global Development and Applied Economics

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Introduction

Germany, Japan, and South Korea are among the world's most advanced economies (IMF, n.d.). Despite their geographical differences, these nations share many economic similarities: all are high-income countries with significant manufacturing and high-tech industries, and export-driven, strong industrial economies. Germany is the economic center of Europe, while Japan and South Korea are key actors in East Asia. However, they also face comparable structural challenges, including aging populations, labor shortages, and heavy reliance on global trade networks.

This paper assesses the economic status of these three countries by analyzing key indicators such as GDP, GNI, and the Human Development Index (HDI). It then situates their performance within broader economic trends, highlighting the growth slowdown the countries have faced in recent decades. Finally, the paper explores the unique economic challenges each country encounters.

Economic Status of Germany, Japan, and South Korea

Germany and Japan are members of the G7, the seven major industrial countries worldwide, with Germany holding the third-largest GDP and Japan the fourth, while South Korea ranks 14th (World Bank, n.d.). GDP measures a country's total economic output, while Gross National Income (GNI) provides information on the residents' purchasing power, which is more often used to assess the well-being of the people. In Japan, the gap between GDP and GNI is larger than in Germany and South Korea, indicating larger remittances and international income flows (see Figure 1). While Japan and South Korea's data are more up-to-date,

Germany's population record is still in 2011 which might make GDP slightly inaccurate since there are over a million immigrants inflow to Germany after 2011, especially in the years after the Syrian War and Ukrainian-Russian War.

	World's economy rank	Population	GDP (billions) in current USD	GDP per capita in current USD	GNI per capita in current USD
Germany	3	84.5 million	4,525.703	54,343.2	54,800
Japan	4	123.7 million	4,204.494	33,766.5	39,350
South Korea	14	51.7 million	1,712.792	33,121.4	35,490

Figure 1. Economic data of Japan, South Korea (Korea, Republic of), and Germany extracted from World Bank (n.d.).

In addition to monetary measures, the Human Development Index (HDI) provides a broader assessment of resident well-being by incorporating life expectancy, education, and income. Germany ranks 7th globally, excelling in education with an average of 14.3 years of schooling. Japan, ranked 24th, has the world's highest life expectancy at 84.8 years, while South Korea, ranked 19th, with 84.0 years of life expectancy and an average of 12.6 years of schooling (Human Development Reports, n.d.). The three countries' performance indicates that they not only have strong economies but also relatively well-educated and healthy citizens.

Lastly, income inequality can be compared using the Gini coefficient, which measures the proportions of the income distribution between the rich and the poor. The Gini coefficient measured by the World Inequality Database takes into consideration both the country's tax records and adjusts some data from studies. However, Japan has significantly lower data quality

as it used an adjusted data survey while South Korea and Germany's data came from both survey and tax (WID, n.d.). We can still see that Japan has the lowest inequality of the three, with the top 1% holding only 24% of the nation's wealth, compared to 28% in Germany and 35% in the United States (see Figure 2). It's high income and inheritance taxes (45% and 55% respectively) hinder wealth accumulation across generations. Cultural factors also play a role, as Japan's Confucian traditions encourage modest living standards (Yuriko, 2015).

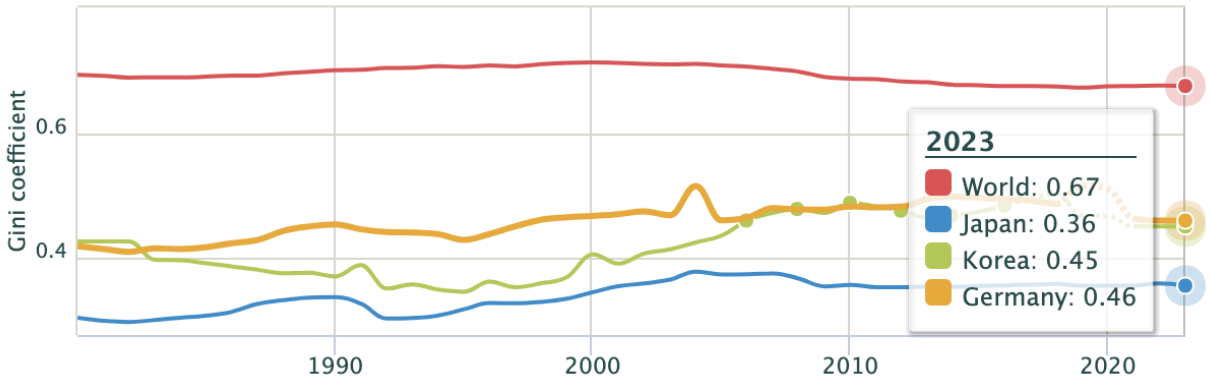

Figure 2. The Gini coefficient of Japan, South Korea, and Germany. Extracted from World Inequality Database (n.d.).

General Slowdown of the Economies

Over the past two decades, all three economies have experienced slowing growth. In 2023, Germany's GDP growth fell below 0%. Japan and South Korea's growth rates, while still growing, have declined significantly from earlier decades (see Figure 3). The general trend aligns with the S-shaped wealth accumulation line proposed by Kraay and McKenzie (2014). As shown in Figure 4, the three countries have reached stages around the equilibrium at point *B* on the graph.

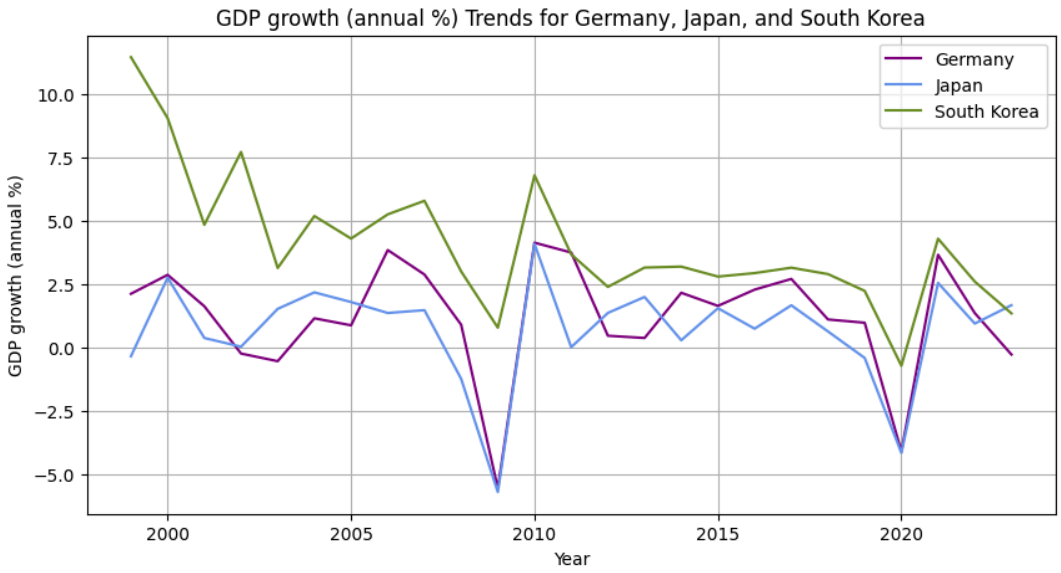

Figure 3. The Gini coefficient of Japan, South Korea, and Germany (self-made). Data extracted from World Bank (n.d.).

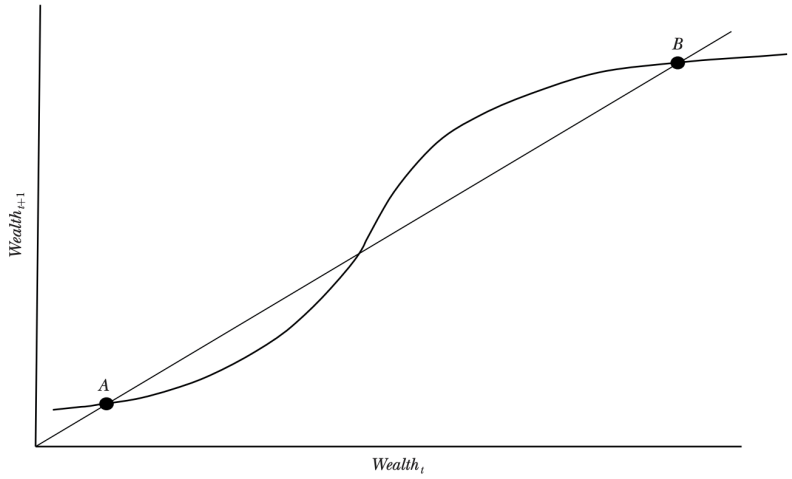

Figure 4. S-shaped wealth accumulation line. Point *A* represents the poverty trap, while point *B* is another equilibrium representing economic slowdown and stagnation when a country becomes very wealthy. Extracted from Kraay and McKenzie (2014, page 139)

South Korea, as the youngest developed economy, has undergone the sharpest

deceleration. It experienced 10% annual growth in 2000 and fell to around 5% by 2005. According to Eichengreen (2012), economies typically experience slowdowns when their GDP per capita reaches approximately $17,000, as structural transformation from agriculture to industry reaches saturation. South Korea crossed this threshold between 2000 and 2005, aligning with its slowdown in economic growth (See Figure 5).

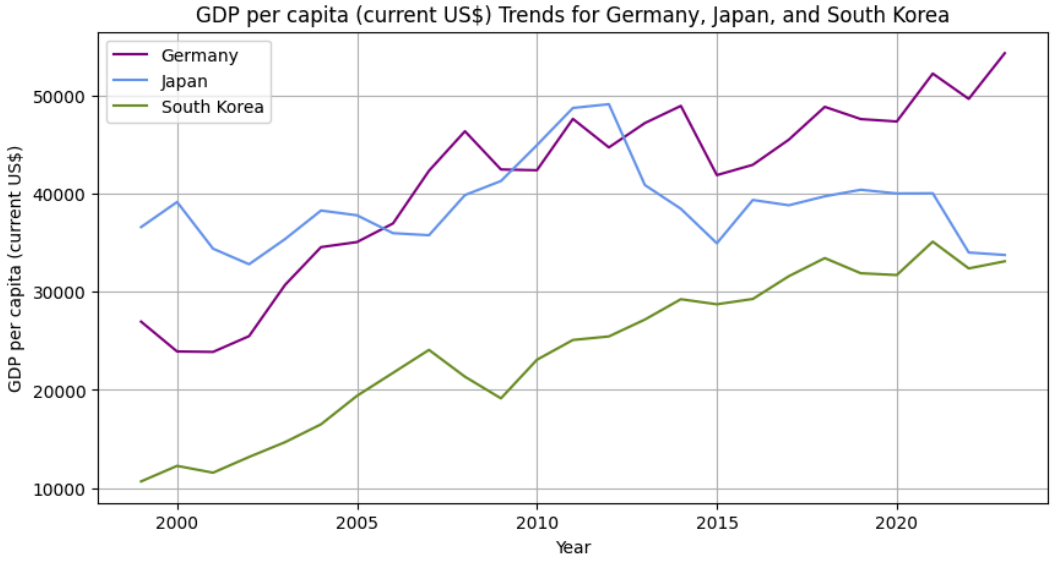

Figure 5. GDP per capita trends for Japan, South Korea, and Germany (self-made). Data extracted from World Bank (n.d.).

The three countries now have similar economic structures: approximately 26–30% industry, 1% agriculture, and 60–70% services (see Figure 6). Their economies depend heavily on high-value manufacturing, particularly in automobiles (BMW, Hyundai, Toyota) and high-tech industries (Siemens, Samsung, Sony) (see Figures 7, 8, and 9). However, they are all facing challenges including aging populations, declining labor force participation, and the shift from manufacturing to high-tech services that constrain economic growth (Lyu & Zhang, 2019; Lucas, 1988).

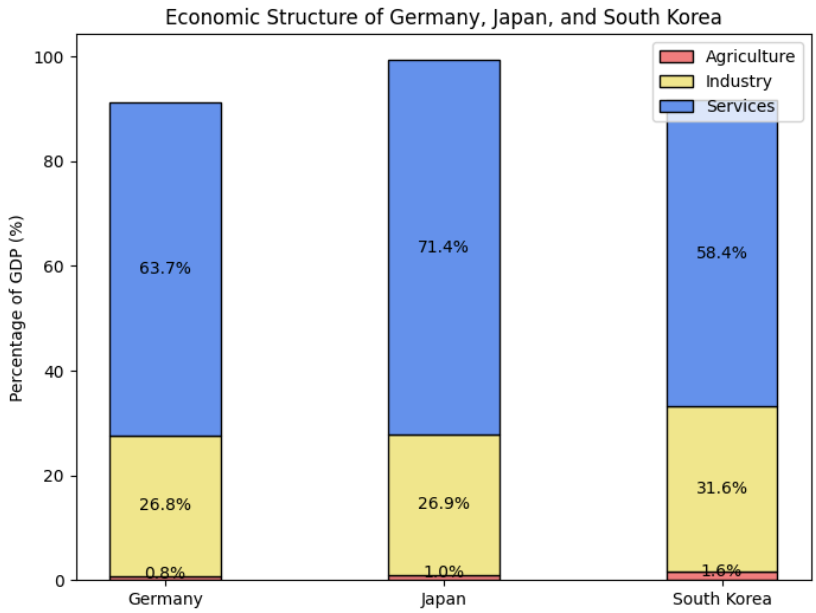

Figure 6. Economic Structure of Germany, Japan, and South Korea (self-made). Data extracted from World Bank (n.d.).

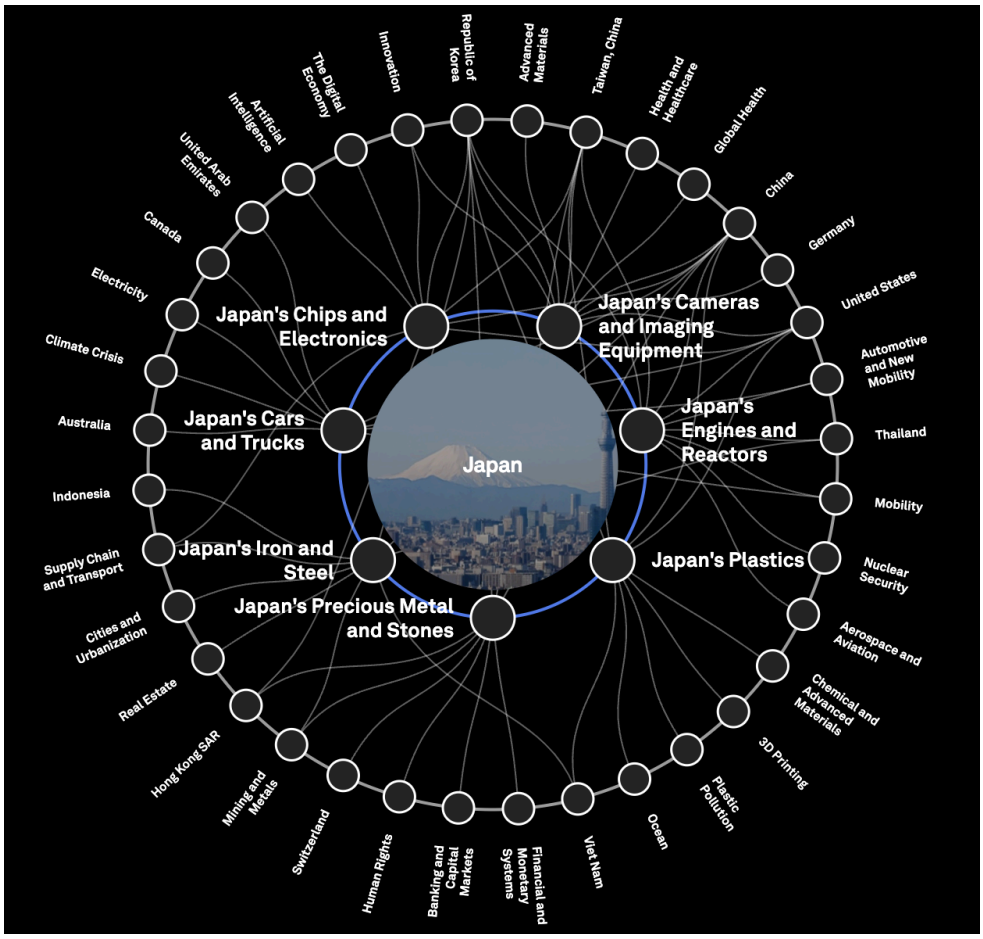

Figure 7. Economic profile of Japan. Extracted from World Economic Forum (n.d.)

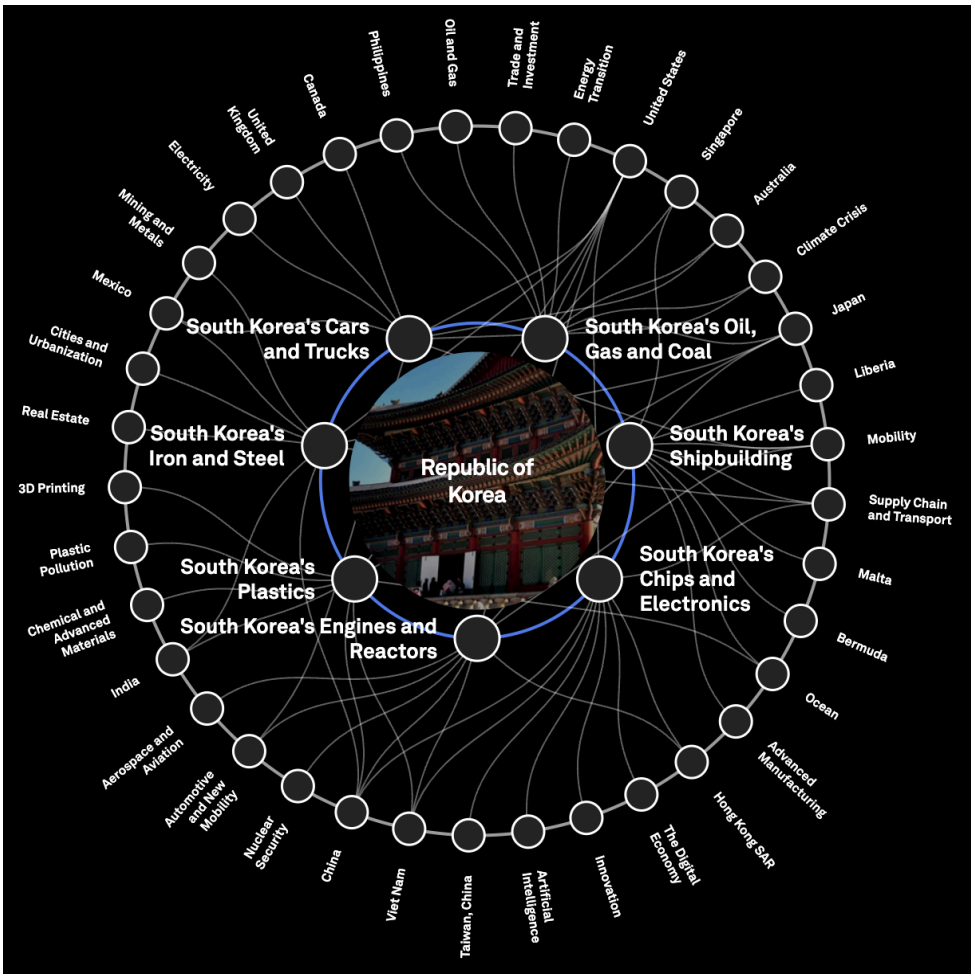

Figure 8. Economic profile of South Korea. Extracted from World Economic Forum (n.d.)

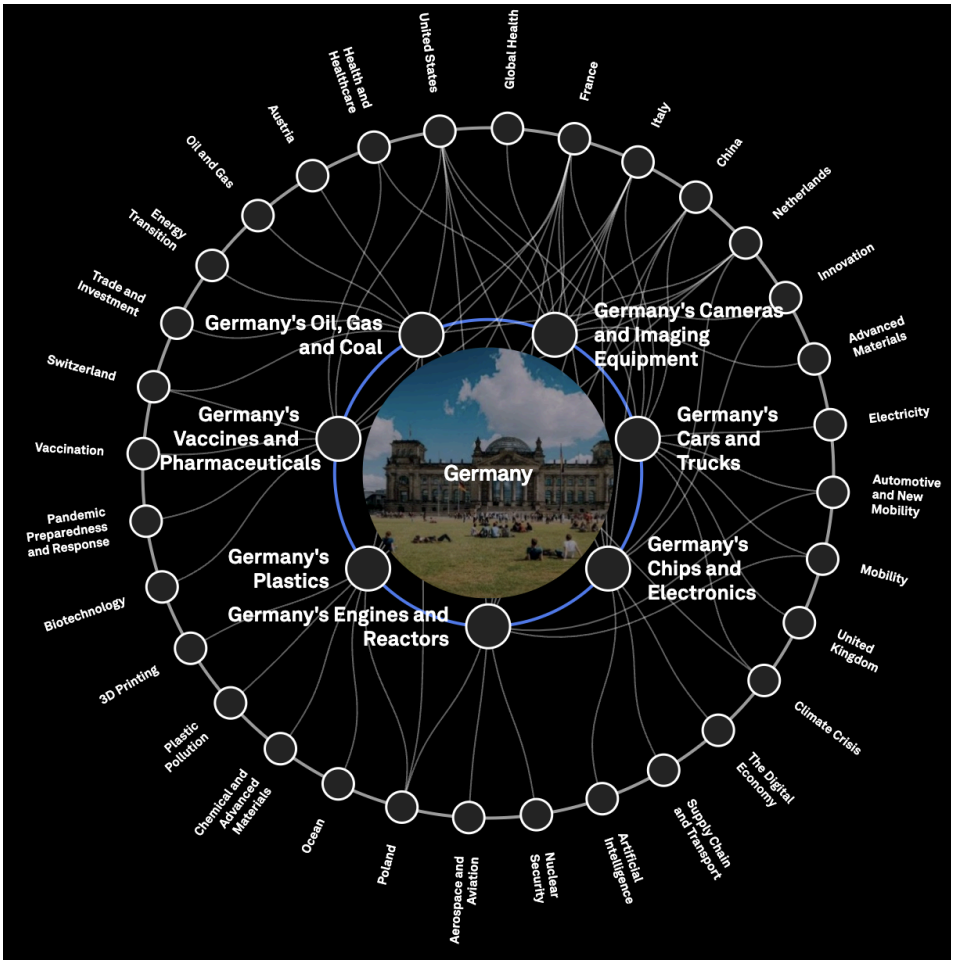

Figure 9. Economic profile of Germany. Extracted from World Economic Forum (n.d.)

Socio-economic Challenges in Each Country

Japan's economic slowdown stems from labor decline and rigid corporate traditions. Its fast-aging population reduces labor supply and increases fiscal pressures due to rising social security costs (Shirakawa, 2011). Structurally, Japan's economy prioritizes long-term corporate relationships over high-tech entrepreneurship. Unlike the U.S., where around 70% of venture capital goes to startups, only 20% of Japan's venture funding supports high-tech firms, with most of them over 10 years old (Rtischev & Calen, 2003). Additionally, the *keiretsu* business

networks[1] reinforce cultural protectionism and hinder foreign competition and adjustability to rapid changes (Langley Esquire, 2018; Liberto, 2024). Despite expansionary monetary policies, including prolonged low interest rates and government stimulus, growth remains slow due to structural inefficiencies (Hoshi & Kashyap, 2004).

South Korea's challenges arise from its reliance on chaebols—large family-controlled conglomerates like Samsung and Hyundai, which account for over 40% of its annual GDP (The Korea Times, 2024). While chaebols once drove South Korea's rapid industrialization and fostered heavy industries like ship-making, their concentrated economic power suffocates competition and limits small business growth and innovation (Gjoni, 2022). Additionally, South Korea has one of the lowest fertility rates globally. This threatens the labor supply and increases social welfare burdens (Kwon, Dong, & Moon, 2010). Furthermore, its historical growth model, fueled by high capital investment, has reached diminishing returns, necessitating a transition toward innovation-driven growth (Krugman, 1994).

External shocks, trade dependence, and fiscal constraints have been contributing to Germany's economic slowdown. The nation's reliance on exports makes it vulnerable to global disruptions, such as the U.S.-China trade war, Brexit, and the energy crisis after Russia invaded Ukraine (Boysen-Hogrefe et al., 2019). Inflation and supply chain disruptions during the COVID-19 pandemic have also weakened industrial output, particularly in the automobile sector (Grebe, Kandemir, & Tillmann, 2023). Domestically, Germany's strict fiscal policies, such as the "debt brake," which limits government borrowing—have constrained public investment in

[1] Keiretsu is a Japanese term referring to a business network made up of different companies, including manufacturers, supply chain partners, distributors, and occasionally financiers. They work together, have close relationships, and sometimes take small equity stakes in each other, all the while remaining operationally independent. Translated literally, keiretsu means "headless combine." (Liberto, 2024)

infrastructure and technology (Storm & Naastepad, 2015). Addressing these issues will require fiscal policy adjustments and reduce reliance on exports.

Conclusion

Despite being wealthy and developed economies, Germany, Japan, and South Korea face challenges that constrain future growth. As rapid expansion is no longer feasible, the need to shift toward productivity and innovation-driven growth became increasingly crucial. Japan must address demographic decline and corporate rigidity, South Korea must reform its chaebol-dominated economy and support innovation, and Germany must reduce its trade reliance and invest in domestic spending. The policy responses of each country will determine their long-term economic resilience in an increasingly interconnected global economy.

Word Count: 1,134

Reference

Boysen-Hogrefe, J., Fiedler, S., Groll, D., Jannsen, N., Kooths, S., Mösle, S., & Stolzenburg, U. (2019). German Economy Winter 2019- German economy overcomes slowdown only gradually.

Daniel Liberto. (2024, August 31). *What Is Keiretsu? Definition, How It Works in Business, and Types,* Investopedia. https://www.investopedia.com/terms/k/keiretsu.asp

Eichengreen, B., Park, D., & Shin, K. (2012). When fast-growing economies slow down: International evidence and implications for China. Asian Economic Papers, 11(1), 42-87.

Gjoni, F. (2022). The Impact of Chaebol on the South Korean Economy and Prospects for Future Development (Doctoral dissertation).

Grebe, M., Kandemir, S., & Tillmann, P. (2024). Uncertainty about the war in Ukraine: Measurement and effects on the German economy. *Journal of Economic Behavior & Organization*, 217, 493-506.

Hoshi, T., & Kashyap, A. K. (2004). Japan's financial crisis and economic stagnation. *Journal of Economic perspectives*, 18(1), 3-26.

Human Development Reports. (n.d.). *Human Development Insights*. Retrieved February 20, 2025, from https://hdr.undp.org/data-center/country-insights#/ranks

Korea's top 4 conglomerates take up 40% of GDP in 2023 (2024, October 9th). *The Korean Times*, https://www.koreatimes.co.kr/www/biz/2025/02/602_383889.html

Krugman, P. (1994). The myth of Asia's miracle. *Foreign affairs*, 62-78.

Kwon, H. J., Dong, G., & Moon, H. G. (2010). Economic crises and the welfare state in Korea: Reforms and future challenges. *Korean Journal of Policy Studies*, 25(1), 175-192.

International Monetary Fund. (n.d.). *Country Composition of WEO Groups*. Retrieved February

20, 2025, from https://www.imf.org/en/Publications/WEO/weo-database/2023/April/groups-and-aggregates

Langley Esquire. (2018, June 13). *Keiretsu: Why foreign companies struggle in Japan*. Langley Esquire Government Relations & Public Affairs. https://langleyesquire.com/keiretsu-why-foreign-companies-struggle-in-japan/

Lucas, R. E. (2002). The industrial revolution: Past and future. *Lectures on economic growth*, 109, 188.

Lyu, Y., & Zhang, C. (2019). Slowing economic growth around the world in the 21st century. *Open Journal of Business and Management*, 7(4), 1926-1935.

Kraay, A., & McKenzie, D. (2014). Do poverty traps exist? Assessing the evidence. *Journal of Economic Perspectives*, 28(3), 127-148.

Rtischev, D., & Calen, R. (2003). Social and structural barriers to the IT revolution in high-tech industries. *"Roadblocks on the Information Highway: The IT Revolution in Japanese Education" (Studies of Modern Japan)*, Lexington Books, Oxford, 127-153.

Shirakawa, M. (2011). Globalization and population aging: challenges facing Japan. Speech to the Board of Councillors of Nippon Keidanren, *Bank of Japan*, December, 22, 1-18.

Storm, S., & Naastepad, C. W. M. (2015). Crisis and recovery in the German economy: The real lessons. *Structural change and economic dynamics*, 32, 11-24.

World Bank Group. (n.d.). *DataBank | World Development Indicators*. Retrieved February 20, 2025, from https://databank.worldbank.org/reports.aspx?source=2&series=NY.GDP.PCAP.CD&country=#

World Inequality Database. (n.d.). *World View*. Retrieved February 20, 2025, from https://wid.world/

World Economic Forum. (n.d.). *Countries and Regions*. Retrieved February 20, 2025, from https://intelligence.weforum.org/collection/c879216c-32b9-4498-ae97-4e3c2d8d1e0e

Yuriko, K. (2015, March 2). *Why inequality is different in Japan*. World Economic Forum. https://www.weforum.org/stories/2015/03/why-inequality-is-different-in-japan/