Mind the Gap: Understanding the Global Imbalances in Spending for Innovative Medicines

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BACKGROUND

The discovery and development of new medicines relies on a global network of scientific research, manufacturing, and financing. However, the costs of sustaining this innovation are distributed unevenly across countries. Biopharmaceutical research and development demands years of effort, extensive expertise, and substantial financial investment, much of which is recovered only if a new therapy successfully reaches patients. The level of spending on newly launched medicines in each country reflects its share of support for this global innovation cycle.

The United States plays a particularly significant role in this process. It accounts for the largest portion of global spending on new medicines, despite representing less than half of the combined economic output of other high-income nations. American patients and healthcare payers, through higher spending levels and quicker adoption of new treatments, generate much of the revenue that fuels continued research and development. In contrast, many other wealthy countries, where medicine prices and reimbursement policies are more tightly regulated, contribute less relative to their overall incomes. This imbalance raises important questions about the long-term sustainability of pharmaceutical innovation. If only a few markets continue to provide most of the financial support for new medicines, global investment in breakthrough research could slow over time. Understanding how spending on innovative medicines aligns with national income levels is essential to evaluating the equity and resilience of the worldwide biopharmaceutical innovation system.

RESEARCH OBJECTIVES

This analysis seeks to examine how spending on new innovative medicines is distributed among high-income countries and how that spending compares to each nation's relative economic capacity. The goal is to understand whether the financial contributions that support global pharmaceutical research and development are aligned with countries' overall wealth and income levels. The study focuses on new innovative medicines launched globally within the past decade and evaluates per capita spending on these therapies as a share of gross domestic product (GDP) per capita. By comparing this measure across high-income members of the Organization for Economic Co-operation and Development (OECD), the analysis highlights differences in how much each country contributes to the collective funding of biopharmaceutical innovation. The results provide insight into whether current global spending patterns reflect a balanced and sustainable model for supporting the development of new medicines or whether certain markets, particularly the US, are carrying a disproportionate share of that financial responsibility.

METHODS

This analysis focused on high-income OECD countries identified using the World Bank's 2023 income classification. New innovative medicines were defined as all new active substances (NAS) approved by the U.S. Food and Drug Administration (FDA), the European Medicines Agency (EMA), or Japan's Pharmaceuticals and Medical Devices Agency (PMDA), and first launched globally between January 1, 2014, and December 31, 2023.

EY estimated net spending on these medicines to approximate manufacturer sales revenue, the most relevant metric for assessing financial incentives for continued R&D. Gross sales at list prices were derived from data sources including Global Data, NAVLIN, and IQVIA MIDAS®. These values were adjusted downward using publicly available information on country policies regarding rebates, discounts, revenue clawbacks, and paybacks, as reported in official government documents such as the Comité Économique des Produits de Santé (CEPS) Annual Report in France. The analysis converted spending and GDP data to purchasing power parity (PPP) dollars using IMF World Economic Outlook data to enable cross-country comparisons. EY then calculated each country's per capita spending on new innovative medicines as a share of GDP per capita and compared the resulting distribution of net spending on new innovative medicines to the distribution of combined GDP across all high-income OECD countries.

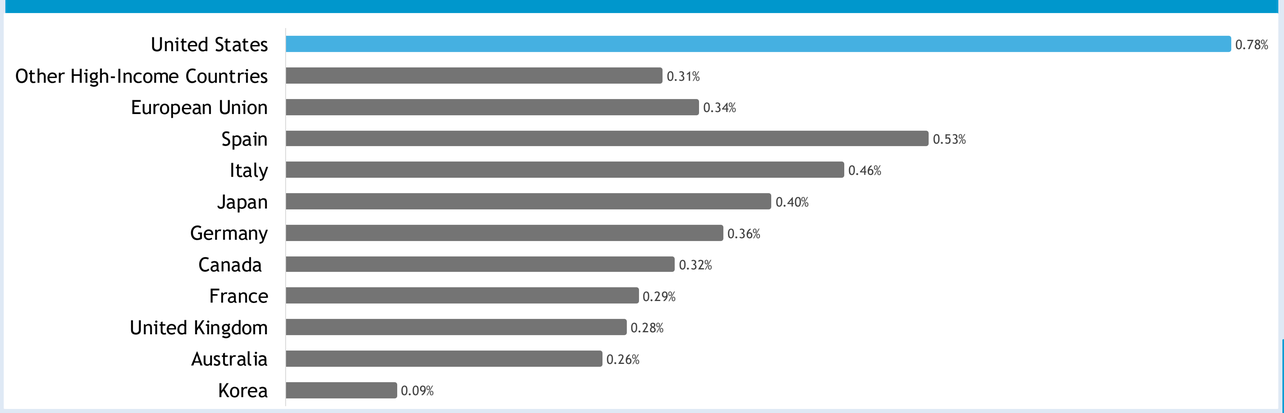
RESULTS

The analysis reveals significant disparities in spending on new innovative medicines across high-income OECD countries when measured relative to their economic capacity. The United States stands out as the largest contributor, spending approximately 0.78 percent of its GDP per capita on medicines launched globally in the past ten years. This level of spending is substantially higher than that of other high-income countries included in the study. For example, countries such as Australia, Canada, France, Germany, Italy, Japan, Korea, Spain, and the United Kingdom spend between 0.09 and 0.53 percent of their GDP per capita on new medicines, with most falling well below the United States' share.

In terms of overall contribution, the United States accounts for 60 percent of total spending on new innovative medicines among high-income OECD countries, despite representing only 38 percent of the combined GDP of these nations. This indicates that other countries contribute a smaller proportion of spending relative to their economic size. For instance, the United Kingdom's share of spending on new innovative medicines is 3%, approximately half of its share of combined GDP (6%), highlighting the uneven financial burden across high-income countries.

These differences in spending patterns are influenced by national healthcare policies on access, pricing and reimbursement. Countries with more stringent price controls and slower adoption of new therapies tend to spend less on innovative medicines relative to their incomes. The findings underscore the disproportionate role played by the United States in financing biopharmaceutical innovation, raising important questions about the sustainability and equity of global funding for new medicine development.

Figure 1: Per Capita Spending on New Innovative Medicines as a Share of GDP Per Capita, 2023



Source: EY estimates of spending on new innovative medicines are based on analysis of Global Data, NAVLIN, IQVIA MIDAS®, country regulatory data, and publicly available information from government reports on discounts, rebates, and revenue clawbacks. GDP (in local currency) data are from Global Data. EU estimate excludes non-OECD members.

Per Capita Spending

Analysis shows that the United States allocates a significantly larger share of its income to new innovative medicines than other high-income OECD countries.

- The United States spends 0.78% of GDP per capita on new innovative medicines.
- By contrast, other countries spend far less: Australia (0.26%), Canada (0.32%), France (0.29%), Germany (0.36%), Italy (0.46%), Japan (0.40%), Korea (0.09%), Spain (0.53%), and the United Kingdom (0.28%).

These findings indicate that even among high-income nations, the financial burden of funding pharmaceutical innovation is unevenly distributed. The United States stands out as contributing disproportionately more to the global R&D ecosystem relative to its GDP per capita.

Contribution to Global Spending vs. GDP

When comparing aggregate contributions, the United States generates 60% of total spending on new innovative medicines among high-income OECD countries, despite accounting for only 38% of combined GDP. In contrast, other high-income countries contribute less than expected based on their economic size.

For instance:

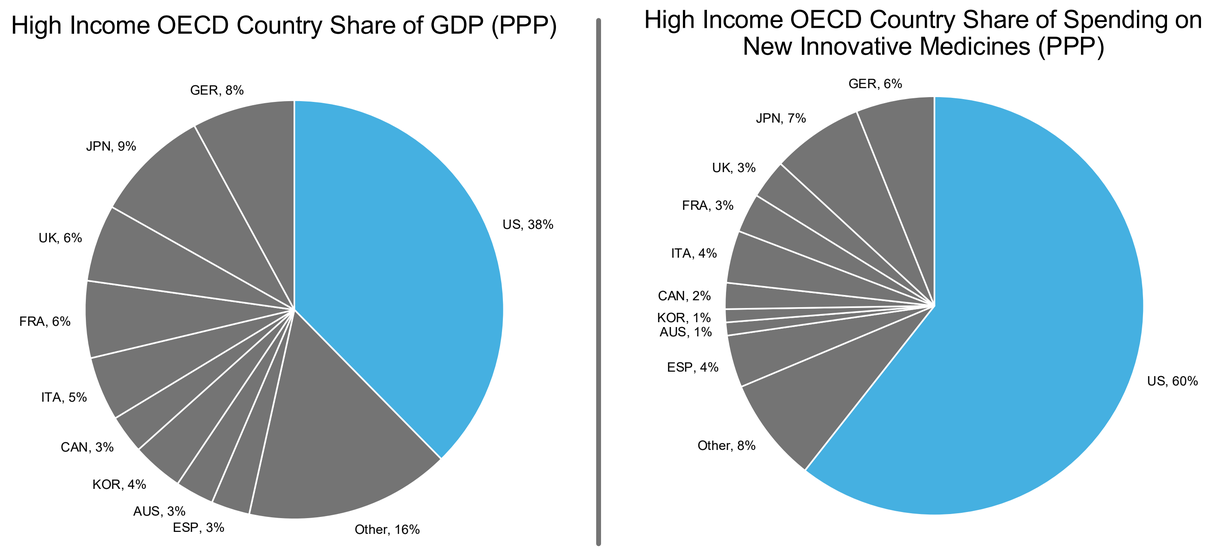
- The United Kingdom represents 6% of combined GDP but contributes only 3% of total spending.
- Similarly, Germany and Japan contribute 8% and 9% of combined GDP but only 6% and 7% of spending, respectively.

This disparity underscores how differences in national healthcare systems, pricing policies, and reimbursement structures lead to substantial imbalances in global funding for biopharmaceutical innovation.

Limitations

This analysis has several important limitations that should be considered when interpreting the results. Estimates of net spending are based on modeled adjustments for confidential rebates and discounts, which vary across countries and are not fully transparent. Because of this, the data may not capture the full extent of price concessions or cost-containment measures that influence manufacturer revenues. The study also focuses on medicines launched between 2014 and 2023, which represents a specific period of analysis. Results could differ if a longer or shorter timeframe were examined. In addition, the scope of the study includes only high-income members of the Organisation for Economic Co-operation and Development, excluding emerging economies that may contribute increasingly to global pharmaceutical sales.

Figure 2: Share of High-Income OECD Country GDP and Spending on New Innovative Medicines, 2023 in PPP dollars



Source: EY estimates of spending on new innovative medicines are based on analysis of Global Data, NAVLIN, IQVIA MIDAS®, country regulatory data, and publicly available information from government reports on discounts, rebates, and revenue clawbacks. International Monetary Fund World Economic Outlook data on purchasing power parities (PPP) are used to calculate combined country spending on new innovative medicines and GDP.

CONCLUSION

The findings of this analysis highlight a clear imbalance in how high-income countries contribute to the funding of global pharmaceutical innovation. The United States accounts for a much larger share of spending on new innovative medicines than its share of total economic output, while many other high-income countries contribute less relative to their income. These differences appear to stem largely from variations in national healthcare systems, particularly in how new medicines are priced, reimbursed, and made available to patients.

This unequal distribution of spending has important implications for the long-term sustainability of biopharmaceutical research and development. When a small number of markets bear most of the financial responsibility for supporting innovation, the overall system becomes more vulnerable to policy changes, market pressures, and shifts in public spending priorities. Ensuring that the benefits and costs of innovation are more evenly shared among high-income countries would strengthen the global framework that supports continued medical progress. A balanced approach to pricing and reimbursement can help sustain the flow of new medicines to patients worldwide while maintaining the incentives necessary to drive ongoing investment in research and discovery.

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