The Impact of Inflation: A Cost Analysis in the Spanish Pharmaceutical Sector from 2015 to 2024

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INTRODUCTION

The pharmaceutical sector in Spain faces significant economic challenges due to rising inflation, strict price regulations, and increasing market competition. Over the past decade, consumer prices have surged, raising the costs of raw materials, energy, and logistics needed for drug manufacturing. Since drug prices belong to a regulated pricing system, pharmaceutical companies have limited scope to transfer higher development and production costs on to their sales.

OBJECTIVES

In this context, the study pursues two main objectives:

- To quantify the impact of inflation on the operating costs of Spain's pharmaceutical industry from 2015 to 2024.
- To analyze how inflation, the inability to pass on cost increases to prices, and price changes due to different product contexts, have influenced the performance of three representative case examples in Spain over a ten-year period: Ustekinumab, nivolumab, and daratumumab

These drugs exemplify different market situations and have been selected for their relevance and diversity of indications and competitive dynamics.

METHODS

Covering a 10-year period analysis, the study followed a three-stage framework:

- First, a narrative review described how inflation, competition and regulation shape pharmaceutical pricing.
- Second, macro-economic series (consumer-price indexes, wage, electricity and fuel indices), industry accounts and price volume data were consolidated with national tender records.
- Third, three medicines were selected as case studies to demonstrate how these macroeconomic impacts translate into concrete examples within the sector

RESULTS

To quantify the impact of inflation on the Spanish pharmaceutical industry, we conducted an analysis covering the period from 2015 to 2024. During these years, companies in the sector absorbed cumulative excess costs attributable to inflation totaling €6.5 billion, primarily due to rising prices of goods and services, staff costs, and energy consumption. This figure is equivalent to 52% of the sector's R&D investment over the same period. The most pronounced impact occurred in 2021–2022, when energy and logistics prices surged as a result of the pandemic and geopolitical context, although the effects extended throughout the decade. Purchases of goods and services and staff each accounted for €3.1 billion each, while energy added €0.3 billion. (See Figures 1 and 2)

Figure 1. Impact of inflation in the pharma industry (2015-2024).

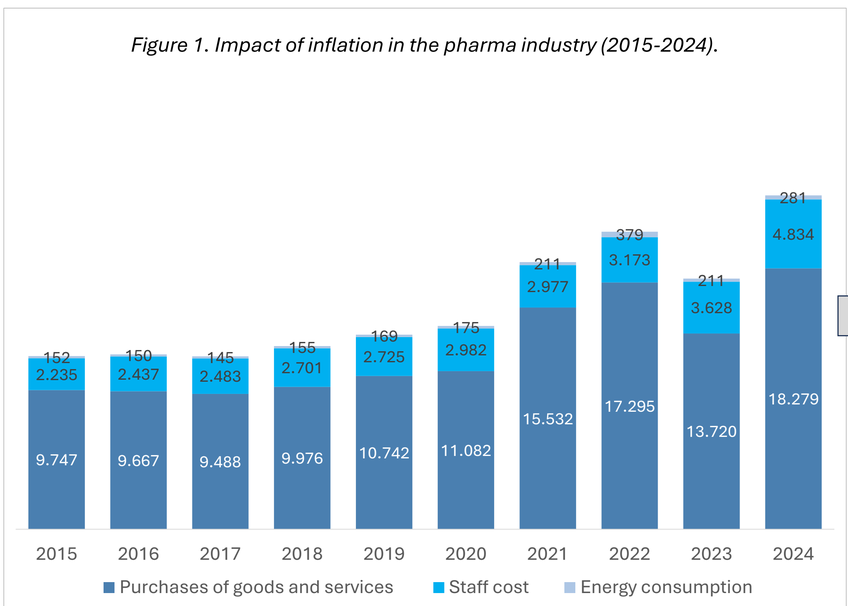
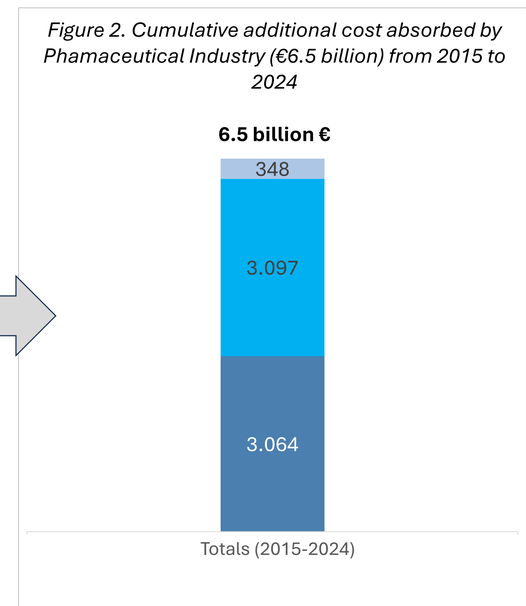


Figure 2. Cumulative additional cost absorbed by Phamaceutical Industry (€6.5 billion) from 2015 to 2024

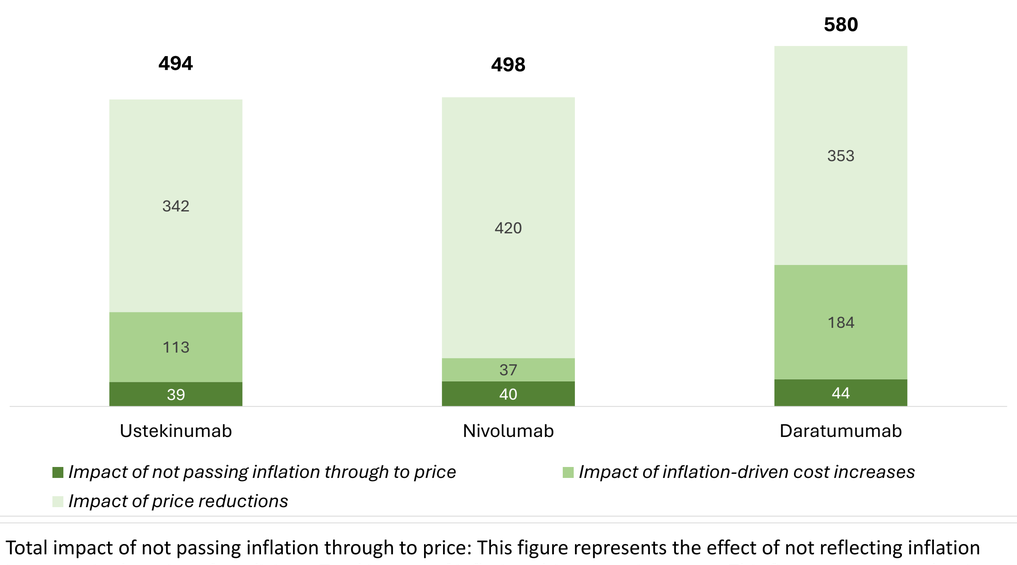


To quantify the impact of inflation at a drug level, 3 key factors have been quantified: The effect of not adjusting medicine prices for inflation; the rise in production costs driven by inflation and the estimated price reductions due to market conditions. These three effects are intrinsic to the pharmaceutical sector. Although they cannot be changed, it is valuable to recognize how they shape the industry's dynamics.

The combined economic impact of unadjusted list prices, inflation-driven production costs and reimbursed-price reductions amounted to €494 million for Ustekinumab; €498 million for nivolumab; and €580 million for daratumumab (Figure 3). Although these three drugs exemplify different market situations, they all share a common denominator: exposure to an inflationary environment within a market with regulated prices.

These figures represent a substantial share of each drug's cumulative sales, highlighting the significant financial pressure caused by inflation and evolving competition.

Figure 3: Estimated economic impact per drug 2015 - 2024 (data in million €)



Total impact of not passing inflation through to price: This figure represents the effect of not reflecting inflation increases in the price of medicines; Total impact of inflation-driven cost increases: This figure represents the rise in production costs due to inflation; Total impact of price reductions: This figure represents the estimated price reductions for medicines based on various market circumstances

Overall, the results clearly demonstrate that inflation and competitive dynamics have a tangible and quantifiable impact on the pharmaceutical sector at the product level, with notable effects across distinct therapeutic areas and market scenarios.

CONCLUSION

Spain's pharmaceutical industry has faced inflation within a closely regulated pricing system. Between 2015 and 2024, Spain's pharmaceutical sector absorbed €6.5 billion in excess operating costs due to economy-wide inflation—almost half the industry's R&D investment. Case studies of Ustekinumab, nivolumab, and daratumumab illustrate how inflation, limited flexibility to adjust regulated prices, and competitive repricing, together compressed margins by €500–600 million per drug. This analysis provides a quantitative overview of the financial effects of inflation and competition on the Spanish pharmaceutical market over the past decade.

LIMITATIONS

Some limitations have been identified in this analysis: the cumulative impact is anchored to a 2014 baseline and includes COVID-19 supply-chain effects, which are not separated from general inflation; certain price reduction estimates rely on French data due to the lack of equivalent Spanish figures, potentially affecting absolute values; potential offsets such as exchange-rate fluctuations, net prices or productivity gains are not considered, as they are considered confidential data.

REFERENCES

Multiple public information sources have been used for all these calculations and analyses, including: 1. INE (Spanish statistical national institute); 2. Local pricing sources (BotPlus); 3. MoH Spanish website; 4. Farmaindustria, AFI. Impacto de la inflación en el sector farmacéutico español. Published online 2023. https://www.farmaindustria.es/web/wp-content/uploads/sites/2/2023/06/Informe-Afi-Impacto-inflacion-industria-farma_13-03-2023.pdf; 5. Michaeli DT, Mills M, Kanavos P. Value and Price of Multi-indication Cancer Drugs in the USA, Germany, France, England, Canada, Australia, and Scotland. Appl Health Econ Health Policy. 2022;20(5):757-768. doi:10.1007/s40258-022-00737-w; 6. Agencia Española de Medicamentos y Productos Sanitarios (AEMPS)