FISCALIA NACIONAL ECONOMICA

IMPACT ASSESSMENT: FNE INTERVENTION IN THE CELECOXIB MARKET

(EI02-2026)

Antitrust Division

Santiago, Chile, January 2026

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

Impact Assessment: FNE Intervention in the Celecoxib Market

Antitrust Division

January 2026

The Chilean Competition Authority ("**FNE**") is responsible not only for investigating and prosecuting infringements of competition law, but also for fulfilling its legal mandate to promote and spread a pro-competitive culture—an activity commonly known as *advocacy*. A central element of this mandate is to assess, communicate, and strengthen the positive effects that the FNE's interventions generate in markets, thereby contributing to transparency and the continuous improvement of the institution's performance.

In this context, the FNE's intervention in the market for pharmaceuticals containing the active ingredient Celecoxib—primarily indicated for the treatment of inflammation, chronic pain associated with osteoarthritis and rheumatoid arthritis in adults, as well as for the management of acute pain—provides a clear example of the impact of competition policy on consumer welfare and the efficiency of public spending.

The FNE's Investigation N°2305-14, initiated on March 2, 2015, established that G.D. Searle LLC ("**Searle**"), a subsidiary of Pfizer Inc. ("**Pfizer**"), had engaged in a strategic course of conduct aimed at artificially extending its exclusivity over pharmaceuticals containing the active ingredient Celecoxib—marketed primarily under the brand CELEBRA®—beyond the expiration of its original patent in 2014. The company implemented this conduct through the acquisition, maintenance, and enforcement of a secondary patent associated with minor modifications to the product, a practice known as *evergreening*, with the objective of delaying the entry of generic bioequivalent medicines[1] until the year 2029.

On June 8, 2016, the FNE filed a complaint for abuse of dominant position before the Competition Tribunal ("**TDLC**"), which concluded with a settlement agreement with Searle. Under this agreement, the company committed to: (i) grant royalty-free, non-exclusive, and irrevocable licenses to competitors; (ii) refrain from promoting second brands of Celecoxib for a period of two years; (iii) abstain from pursuing any administrative or judicial actions related to the secondary patent, and withdraw the legal actions already filed; (iv) terminate

[1] In Chile, a generic bioequivalent medicine is one that, in addition to holding a valid sanitary registration and a validated manufacturing process, has demonstrated—through a pharmacokinetic comparative bioavailability study or, where applicable, through a biowaiver—that it exhibits the same efficacy and safety as its reference product. This certification ensures its clinical interchangeability. Unlike common practice in the United States, where the concept of a generic drug implicitly assumes bioequivalence, in Chile the designation of generic bioequivalent status is an additional regulatory label that must be demonstrated and formally approved by the health authority.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

all onerous licensing agreements executed up to that point; and (v) inform the general public, pharmaceutical distributors, and pharmacies about the existence of the settlement agreement and its most relevant terms.

These obligations enabled the effective entry of generic bioequivalent medicines containing Celecoxib into both the public institutional market and the retail pharmacy channel, generating greater competitive pressure, direct benefits for consumers, and improved efficiency in public spending.

Nine years after the intervention, the available data allow for a concrete assessment of the benefits obtained by consumers and the Government. The opening of the market facilitated the sustained entry of new laboratories and generic bioequivalent medicines, which resulted in a significant reduction in prices and an expansion of available alternatives, both for patients and for public procurement.

The economic impact of the intervention is highly significant. The estimated benefits for consumers and the Government amount to US$346.6 million for the 2017–2024 period. If the evaluation horizon is extended to 2029 —the year in which the challenged secondary patent would have expired— those benefits increase to US$563.2 million.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

1. Investigation N°2305-14

Following a complaint filed by a private party, the FNE initiated Investigation N°2305-14 ("**Investigation**") on March 2, 2015, against Searle, with the purpose of examining potential anticompetitive practices in the market for pharmaceutical products containing the active ingredient Celecoxib, in which the company participated primarily through its drug CELEBRA®.

The Investigation established that Searle had artificially extended its monopoly over the commercialization of this compound beyond the expiration of its original patent by obtaining, maintaining, and instrumentally enforcing a secondary patent linked to minor product modifications. This strategy—known as evergreening—was intended to restrict and delay the entry of generic bioequivalent medicines until the year 2029.

To reinforce the effectiveness of this strategy, Searle undertook several actions:

- **Sending warning letters**: Once the secondary patent had been granted, Searle sent warning letters to various economic agents across the entire production chain of medicines containing Celecoxib, informing them of its industrial property rights and requesting confirmation that they would refrain from commercializing compositions containing Celecoxib until the patent's expiration date.
- **Pursuing judicial actions**: Searle filed lawsuits against laboratories that launched generic bioequivalent versions of Celecoxib on the market, requesting precautionary measures prohibiting them from entering into acts or contracts related to those medicines, in addition to filing claims for unfair competition and patent infringement. Through these actions, the company signaled that it would take concrete legal steps against any party attempting to enter the market.
- **Entering into private agreements**: In parallel, a senior executive of Pfizer Chile contacted the general managers of laboratories that had already entered the market, offering them the possibility of avoiding litigation in exchange for signing a partial settlement agreement. These contracts allowed the commercialization of products containing Celecoxib but required the payment of royalties based on a percentage of net sales and included a waiver of future legal actions. At least one laboratory accepted these terms.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

Overall, this strategy allowed Searle to extend the effects of the exclusivity derived from the primary or original patent beyond its expiration in 2014, thereby restricting and hindering the entry of competitors into the market for pharmaceuticals containing Celecoxib until the FNE's intervention.

2. Complaint and Settlement Agreement

As a result of the Investigation, on June 8, 2016, the FNE filed a complaint for abuse of dominant position before the TDLC. The proceeding initiated by this action concluded with a settlement agreement, approved by the TDLC on November 10 of the same year, through which a set of remedies intended to restore competition in the market was implemented. Specifically, under the agreement Searle committed to:

i. Granting a royalty-free, non-exclusive, irrevocable, and sublicensable license to any current or potential competitor within the territory of the Republic of Chile for the manufacture, commercialization, distribution, use, offering for sale, sale, or importation of the product, use, and process covered by the secondary patent.
ii. Refraining from conducting promotional activities with medical professionals regarding its pharmaceutical products considered "second brands" of Celecoxib, such as VALDYNE® and CAPSURE®, for a period of two years.
iii. Refraining from pursuing any administrative or judicial action related to the secondary patent.
iv. Withdrawing the judicial actions already filed in connection with the secondary patent.
v. Terminating all onerous licensing agreements concerning the secondary patent executed up to that date.
vi. Informing the general public, pharmaceutical distributors, and pharmacies about the existence of the settlement agreement and its most relevant terms.

In this way, the intervention enabled the effective incorporation of generic bioequivalent medicines containing Celecoxib into both the public institutional market and the private market, thereby consolidating competitive openness and ensuring greater access alternatives for patients.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

3. Benefits of the FNE's Intervention in the Market for Pharmaceuticals Containing Celecoxib

This analysis examines the benefits of the FNE's intervention in the market for pharmaceuticals containing the active ingredient Celecoxib, using information from both the public institutional channel[2] and the retail pharmacy channel[3], which together accounted for approximately 94% of the total market in 2015[4].

To assess the benefits of the intervention, the scenario prior to the FNE's action is compared with the period following the granting of the licenses established in the settlement agreement. The analysis is structured around three key dimensions that allow for an evaluation of the market's competitive performance: (a) the entry of new laboratories and generic bioequivalent pharmaceuticals; (b) the evolution of the medicine's price; and (c) the benefits for consumers in both the retail pharmacy channel and the public institutional channel.

i. Preliminary matter: The period before and after the FNE's intervention

A fundamental element in calculating the benefits of an intervention is to precisely define the inflection point that separates the ex-ante period from the ex-post period, as well as to establish the criteria used to construct the counterfactual scenario—that is, the projection of how the market would have evolved in the absence of such intervention.

In this case, defining the inflection point is a complex exercise, since the FNE's intervention aimed at safeguarding competition consisted of a sequence of milestones, each capable of affecting both the market structure and the behavior of the investigated firm. First, the initiation of the investigation by the FNE could have generated deterrent effects on the investigated company, for example, influencing its decision to enter into partial settlement agreements with generic laboratories and/or to reduce litigation efforts intended to enforce

---

[2] The data used for the public institutional channel come from the portal www.mercadopublico.cl. All awarded public tenders that, in the procurement line and in the "UN Product" field, referenced Celecoxib were considered, restricting the analysis to those items whose pharmaceutical form corresponded to capsules, tablets, and units for the 2009–2024 period.
It is important to note that all analyses presented in this document exclude the private institutional channel, understood as the acquisitions made by clinics, medical centers, and other healthcare entities that are not part of the public network. Consequently, the results presented here do not incorporate the effects or purchase volumes associated with that segment of the market.

[3] The data used for the retail pharmacy channel come from various IQVIA databases (formerly IMS Health). These databases include information on retail sales from the country's three largest pharmacy chains, as well as from independent pharmacies and selected drugstores. For the analysis, five databases were merged using the product's commercial name, its sales format, and its strength (mg) as matching criteria, resulting in a consolidated dataset covering the 2009–2024 period.

[4] Prepared by the authors based on information from FNE Investigation N°2305-14.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

industrial property rights associated with the secondary patent. Second, the filing of the FNE's complaint against Searle before the TDLC represents a concrete action by the authority that could reinforce the initial deterrent effects. Finally, the settlement reached constitutes the milestone that brought the litigation to an end and permanently removed the artificial barriers to entry in the Celecoxib market, providing certainty that the conduct of Searle's competitor laboratories complied with the law.

In light of the above, the years 2015 and 2016 (during which the milestones of the case unfolded, culminating in the approval of the settlement agreement) have been considered as the period in which the FNE's intervention took place, and they are therefore entirely excluded from the quantification of the benefits of the intervention[5]. Accordingly, the following scenarios are defined:

- **Pre-Intervention Period (2009–2014):** Stage during which Pfizer maintained a monopolistic position in the Celecoxib market.
- **Post-Intervention Period (2017–2024):** Stage following the approval of the settlement agreement entered into by the FNE and Searle, characterized by the entry of new laboratories and the resulting increase in competition.

ii. Effects and benefits generated by the intervention

a) Entry of new laboratories and generic bioequivalent medicines

In accordance with industrial property regulations, an invention patent grants its holder exclusivity to produce, sell, or commercialize, in any form, the protected product or process and, more generally, to carry out any other type of commercial exploitation thereof until its expiration date.

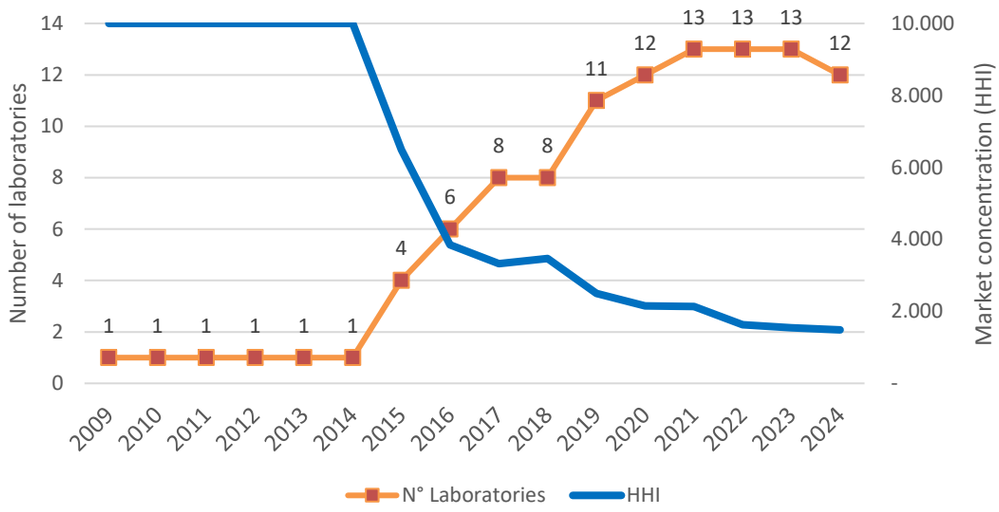
In the case under analysis, Pfizer's product CELEBRA® maintained its monopolistic position in Chile until 2014 in the market for medicines containing the active ingredient Celecoxib. Subsequently, once the secondary patent was granted, the laboratories Saval, Synthon, and Grunenthal entered the market—Saval through the execution of an onerous licensing agreement with Pfizer, and Synthon and Grunenthal by challenging the validity of that patent.

[5] It should be noted that, previously, the FNE presented preliminary results exclusively for the institutional channel, which were included in the contribution submitted on the OECD Latin American and Caribbean Competition Forum held in Asunción, Paraguay, in October 2025, titled "*Competition in the Healthcare Sector – Note by Chile*". These results correspond to an alternative benefits-calculation scenario that takes 2016 as the inflection point, coinciding with the FNE's filing of the complaint and the approval of the settlement agreement by the TDLC.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

However, following the FNE's intervention, there is a significant increase in the entry of new laboratories, accompanied by a greater reduction in market concentration. Figure N°1 illustrates this evolution, showing the transition from a monopolistic market with a single supplier until 2014 to a competitive market with 12 laboratories in 2024—a direct result of the FNE's enforcement.

Figure N° 1: Number of laboratories and market concentration in the retail pharmacy channel



Source: Own elaboration based on IQVIA data.

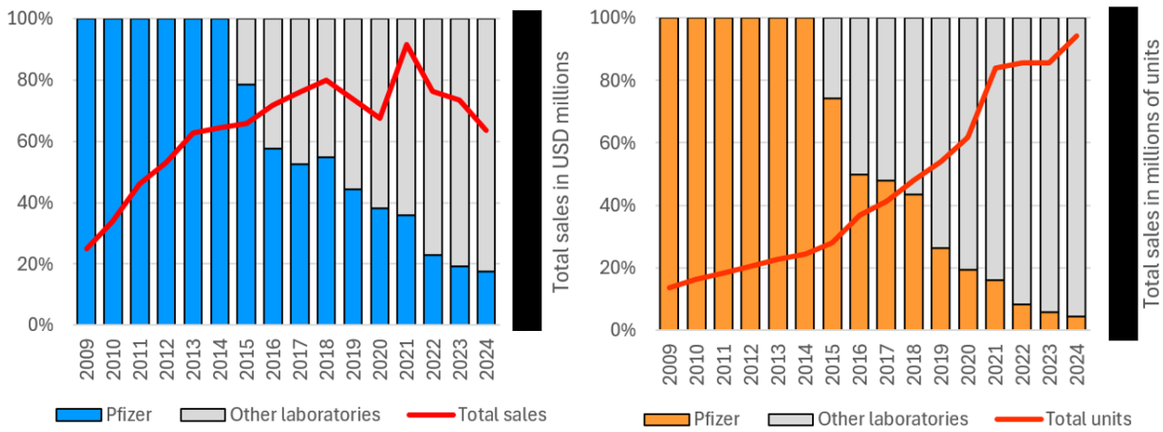
The Herfindahl–Hirschman Index ("**HHI**") shows a substantive transformation in the competitive structure of the market for pharmaceutical products containing the active ingredient Celecoxib. During the 2009–2014 period, the market exhibited a monopolistic configuration, with a single supplier. Subsequently, by 2017, the market became classified as highly concentrated and, finally, reached a concentration level below 1,500 points in the HHI, reflecting a market with low concentration[6].

The authority's intervention not only enabled the entry of new players into the market for generic bioequivalent medicines of the brand CELEBRA®, but also strengthened effective competition, allowing these new suppliers to challenge Pfizer's market position, as illustrated in Figure N°2.

[6] The classification of HHI thresholds is based on the Guidelines for the Analysis of Horizontal Merger Operations issued by the National Economic Prosecutor's Office (FNE), available at: https://www.fne.gob.cl/wp-content/uploads/2022/05/20220531.-Guia-para-el-Analisis-de-Operaciones-de-Concentracion-Horizontales-version-final-en-castellano.pdf

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

Figure N° 2: Pfizer's market share and sales in the retail pharmacy channel (left: millions of dollars; right: millions of units)



Source: Own elaboration based on IQVIA data.

As a result of the market opening, the new laboratories captured market share primarily through the diversion of demand away from the incumbent supplier, Pfizer, offering generic bioequivalent alternatives at more competitive prices and generating incentives for buyers to opt for these versions of the active ingredient. In other words, the entry of new players increased the availability of options for consumers, which translated into a substantial rise in the number of units purchased and, as will be analyzed in the following section, exerted downward pressure on prices. This process fostered greater efficiency in the allocation of resources and contributed to the market operating in a more competitive manner, benefiting both patients and the healthcare system as a whole.

b) Significant reduction in Celecoxib prices

The following section presents the variations in Celecoxib prices in both the retail pharmacy channel and the public institutional channel. It is important to note that there are significant differences in the purchasing modalities between these two channels. The retail pharmacy channel corresponds to retail sales to the final consumer, generally in packages containing between 10 and 30 tablets. In contrast, the public institutional channel comprises higher-volume purchases, carried out mainly through public tenders by the Supply Center of the National Health Services System ("**CENABAST**"), public healthcare centers, and municipalities. In this channel, transaction volumes can reach very high levels, in some cases exceeding 100 million tablets.

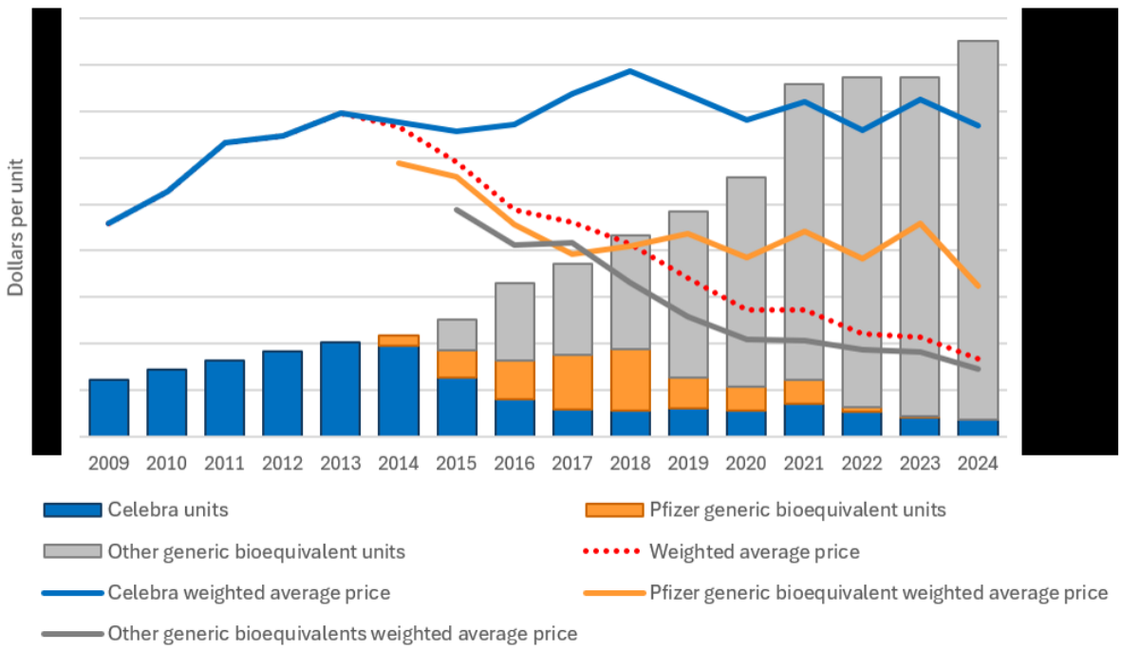
In 2024, the retail pharmacy channel accounted for approximately 12% of the units sold (15.2 million units), while the public institutional channel represented around 88% (116.9 million units). However, in terms of the value transacted, the retail pharmacy channel

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

contributed roughly 94%, compared with 6% from the public institutional channel. These figures help to illustrate the relevance of each channel and to properly contextualize the subsequent analyses.

Figure N°3 shows the evolution of weighted average prices and units sold in the retail pharmacy channel between 2009 and 2024, distinguishing among the original product CELEBRA®, Pfizer's generic bioequivalents, and other generic bioequivalents. During the 2009–2014 period, when CELEBRA® held exclusivity, the weighted average price showed a sustained increase, reaching USD $[1–2] per tablet.

Figure N° 3: Weighted average prices of Celecoxib and units sold in the retail pharmacy channel



Source: Own elaboration based on IQVIA data.

Following the initiation of the investigation and the FNE's intervention, weighted average prices began to decline steadily, while the total volume of sales increased significantly. Indeed, the weighted average price of Celecoxib fell by 56%, from US$1.24 to US$0.54 per tablet, when comparing the Pre-Intervention period with the Post-Intervention period, with more pronounced decreases among generic bioequivalents other than Pfizer's, whose weighted average price dropped from [0.5–1] to [0–0.5] dollars per tablet between 2017 and 2024. It is worth noting that, after losing exclusivity, Pfizer attempted to maintain its market share by introducing its own generic bioequivalents (such as VALDYNE® and CAPSURE®). However, this strategy did not prevent the loss of market share, as the new entrants offered significantly lower prices and captured an increasingly larger portion of demand. This outcome confirms that the competitive pressure generated by the opening of the market was

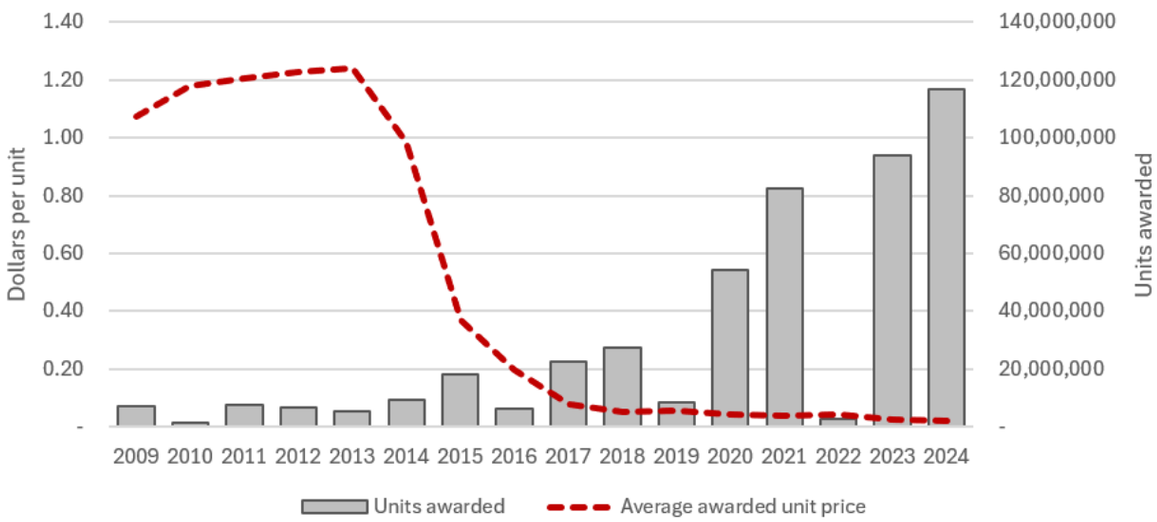
Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

sufficient to limit Pfizer's market power and consolidate a scenario of greater competition and price efficiency.

In the case of the public institutional channel, the suppliers include not only laboratories but also wholesale distributors that participate in these public tenders. For this reason, in this channel it is not possible to differentiate prices by laboratory or brand, as the main indicator is a single weighted average price of the awarded tenders.

Figure N°4 shows two clearly differentiated stages: the Pre-Intervention Period, characterized by high prices and low competitive intensity, with average unit values of US$1.13 per tablet; and the Post-Intervention Period, marked by an abrupt and sustained reduction in prices following the entry of multiple generic bioequivalent suppliers, made possible by the removal of legal barriers derived from the secondary patent.

Gráfico N° 4: Weighted prices of Celecoxib and units sold in the public institutional channel.



Source: Own elaboration based on Mercado Público[7].

The FNE's intervention brought an end to the anticompetitive practices and, consequently, opened the market. As a result, the award prices of Celecoxib dropped significantly, stabilizing at around four cents per tablet, representing a 97% reduction between the two evaluation periods.

In summary, the diversification of supply generated positive effects on the industry's competitiveness, exerting sustained downward pressure on Celecoxib sales prices in both

[7] It should be noted that the reference year is assigned according to the closing date of each tender. Consequently, intertemporal differences may arise depending on the contract's start date and its duration, which can result in periods with low award levels.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

the retail pharmacy channel and the public institutional channel. These results suggest that the greater variety of available alternatives strengthened the competitive process, contributing to a more efficient price-setting process that benefits both consumers and the public purchasing agencies.

Finally, it is worth highlighting the difference in the speed of price adjustment between the two channels following the intervention. These divergences reflect the differentiation strategies implemented by the original laboratories and the new entrants, with a more pronounced effect in the retail pharmacy channel, where consumers face products with brands, presentations, and attributes perceived as distinct. By contrast, in the public institutional channel, competition takes place primarily around a homogeneous product based on the active ingredient, which facilitates a faster and more direct convergence of prices toward a competitive equilibrium once new suppliers enter the market.

c) Quantification of the Benefits of the FNE's Intervention in the Celecoxib Market

In line with the above, Table N°1 presents the main performance indicators for the retail pharmacy channel and the public institutional channel across the different scenarios, including total amounts transacted, units sold or awarded, average prices, and—specifically for the public institutional channel—the number of tenders included in the assessment.

Table N° 1: Sales Channels and Evaluation Periods

		Pre-Intervention 2009–2014	Post-Intervention 2017–2024
Retail pharmacy channel	Total sales (USD)	57,152,541	120,415,807
	Units sold	46,147,318	222,024,088
	Average price (USD)	1.24	0.54
Public institutional channel	Total sales (USD)	42,187,975	14,356,708
	Units sold	37,290,653	409,092,227
	Average price (USD)	1.13	0.04
	Number of tenders	3,024	1,550

Source: Own elaboration.

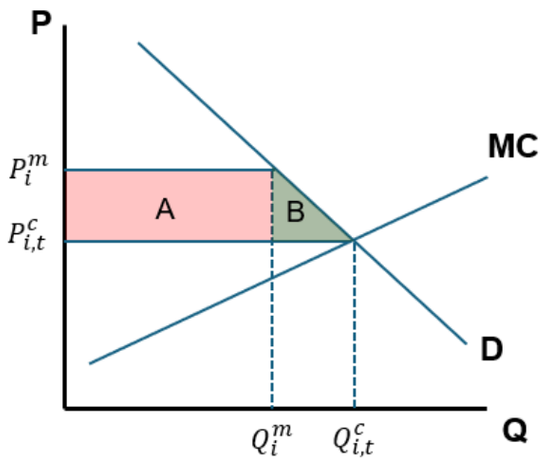
As noted earlier, the construction of the counterfactual scenario is essential because it allows for describing the hypothetical evolution of the market in the absence of the authority's intervention—that is, how prices and quantities would have evolved had such action not taken place.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

This exercise is particularly relevant in the context of transition from a monopolistic structure toward a competitive scenario. Under monopoly conditions, the firm maximizes its profits by choosing the level of output at which marginal revenue equals marginal cost, resulting in higher prices, lower quantities traded, and an irrecoverable loss of efficiency (or "deadweight loss"). In contrast, within a competitive framework, the ability to exert market power diminishes, leading to prices that converge toward marginal cost and an efficient increase in output—generating greater social benefits and improved access for consumers.

In the case of Celecoxib, the quantification of surpluses requires distinguishing between the natural evolution of the market and the effects attributable to the increased competition triggered by the intervention. In particular, the entry of new laboratories—an outcome that would have been unlikely in the absence of such action—reduced the rents associated with the previous market power and corrected the inefficiencies deriving from lower monopolistic production. Accordingly, the measurement of changes in surpluses aims to reasonably reflect the welfare gains attributable to the intervention, taking into account the market's underlying dynamics, as illustrated in the figure below.

Figure N° 5: Conceptual representation of the benefits captured by consumers



Source: Own elaboration.

The quantification of the benefits derived from the intervention is carried out by calculating the change in consumer surplus—including the Government—which can be decomposed into two main components:

- Surplus transfer (Area A): When a market transitions from a monopolistic situation to a more competitive environment, a significant portion of the benefit to consumers arises from a transfer of rents from producers to consumers. This transfer corresponds to the difference between the monopolistic price and the competitive price, evaluated at the monopolistic quantity. It is a redistributive benefit, rather than

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

an additional efficiency gain, reflecting the loss of market power by the monopolistic firm in favor of consumers.

- Deadweight loss (Area B): It represents the social welfare loss that occurs when the quantity traded in the market falls below the socially efficient level. It reflects the value of transactions that would have generated benefits for both consumers and producers but do not occur due to market distortion, such as monopolistic power. The intervention corrects this inefficiency, allowing the capture of that additional welfare.

Overall, the approximation of the benefits of the intervention was carried out using the following formulas[8]:

When $Q_{i,t}^{c} > Q_{i}^{m}$

$$\mathrm{A} = \sum_{i \in \{Channel\}} \sum_{t=2017}^{2024} [(P_{i}^{m} - P_{i,t}^{c}) * Q_{i}^{m}]$$

$$\mathrm{B} = \sum_{i \in \{Channel\}} \sum_{t=2017}^{2024} \frac{(P_{i}^{m} - P_{i,t}^{c}) * (Q_{i,t}^{c} - Q_{i}^{m})}{2}$$

When $Q_{i,t}^{c} < Q_{i}^{m}$

$$\mathrm{A} = \sum_{i \in \{Channel\}} \sum_{t=2017}^{2024} [(P_{i}^{m} - P_{i,t}^{c}) * Q_{i,t}^{c}]$$

$$\mathrm{B} = 0$$

Where:

- *Channel* refers to: (i) the retail pharmacy channel; and (ii) the public institutional channel.
- P_{i}^{m} refers to the monopolistic price, calculated as the weighted average price of Celecoxib during the Pre-Intervention period for channel i.
- $P_{i,t}^{c}$ refers to the competitive price, calculated as the weighted average price of Celecoxib in channel i for the year *t*.
- Q_{i}^{m} refers to the units sold or awarded under monopolistic conditions, calculated as the average number of units in the Pre-Intervention period for channel i.
- $Q_{i,t}^{c}$ refers to the units sold or awarded under competitive conditions in channel i for the year *t*.

[8] The condition $Q_{i,t}^{c} < Q_{i}^{m}$ is verified only once, in the year 2022, corresponding to the public institutional channel.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

Additionally, given the trend observed in the demand of the retail pharmacy channel, a complementary scenario is incorporated into the estimation of the deadweight loss, denoted as $\hat{B}$.This scenario uses a hypothetical demand for the period between 2015 and 2024, projected from the average annual growth rate of units sold during the Pre-Intervention period, using the following formula:

$$\hat{B} = \sum_{i \in \{Channel\}} \sum_{t=2017}^{2024} \frac{\left(P_i^m - P_{i,t}^c\right) * [(Q_{t-1}^c * (1 + \Delta Q) - Q_i^m]}{2}$$

Where:

- ΔQ refers to the average annual growth rate of units sold during the Pre-Intervention period (12% per year).
- Q_{t-1}^c refers to the estimated number of units sold or awarded in the previous period when applying ΔQ.

Based on the previously defined components of consumer surplus, Table N°2 summarizes the benefits attributable to the FNE's intervention for the Post-Intervention period.

Table N° 2: Estimated Benefits in Millions of USD

	Period 2017–2024 (MM USD)				
	A	B	B^	A+B	A+B^
Retail pharmacy channel	39.8	57.4	38.1	97.2	77.9
Public institutional channel	50.4	199.0	-	249.4	-
Total benefits				**346.6**	

Source: Own elaboration.

The results show that, in the case of the retail pharmacy channel, the estimated benefits for the 2017–2024 period associated with the transfer of surplus from producers to consumers amount to US$39.8 million. Added to this are the benefits derived from the reduction in deadweight loss, which are estimated to range between US$38.1 million and US$57.4 million, depending on the demand function used for the Post-Intervention period. Taken together, the total benefits for this period fall within a range of US$77.9 million to US$97.2 million, equivalent to an annual savings for individual consumers of US$9.7 million to US$12.1 million, respectively.

In the public institutional channel, the benefits associated with surplus transfers amount to US$50.4 million, while the consumer-surplus gains derived from the reduction in deadweight loss reach US$199 million. Altogether, the benefits for the Post-Intervention period total US$249.4 million, which corresponds to an annual savings for the Government of US$31.2 million.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

When jointly considering the retail pharmacy channel and the public institutional channel, the total benefits derived from the FNE's intervention—stemming both from surplus transfers and from reductions in deadweight loss—amount to US$346.6 million during the 2017–2024 period. This figure corresponds to an average annual savings of US$43.3 million. Moreover, if the evaluation horizon is extended to 2029, the year in which the challenged secondary patent would have expired, the projected savings for both channels would reach US$563.2 million[9]. It should be noted that these estimates do not include the potential benefits in the private institutional channel, for which complete information is not available.

Overall, it is important to highlight the role that information plays in consumers' purchasing decisions. In the retail pharmacy channel, the evidence shows that—even after the FNE's intervention—a significant share of consumers continue to choose the original product or a branded generic bioequivalent instead of the lowest-priced generic bioequivalent available. This behavior reflects the persistence of information asymmetries and behavioral biases that limit consumers' ability to fully capture the benefits of a more competitive market.

Consistent with the recommendation put forward by the FNE in the Medicines Market Study—namely, the obligation to dispense or provide consumers by default with the lowest-priced generic bioequivalent within the category of prescribed clinical medicines[10]—it is possible to estimate the benefits not internalized by consumers in the retail pharmacy channel. These benefits are calculated based on the difference between the price of each product (original or generic bioequivalent) and the price of the cheapest generic bioequivalent available during the period analyzed. In this particular case, the systematic dispensing of the lowest-priced generic bioequivalent would have generated additional savings of US$98.5 million for consumers during the 2017–2024 period.

[9] Based on the average annual savings estimated in Table No. 2, multiplied by 13 years of evaluation.
[10] FNE (2020). Medicines Market Study (pp. 238 and following). Available at: https://www.fne.gob.cl/wp-content/uploads/2020/01/Informe-Final.pdf.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl

4. Conclusion

The comparative analysis between the pre- and post-intervention scenarios of the FNE shows a substantive shift in the competitive dynamics of the Celecoxib market, both in the retail pharmacy channel and in the public institutional channel. The Chilean Competition Authority's actions had significant effects on prices and the structure of supply, contributing to a sustained reduction in unit values and an expansion in access to generic bioequivalent medicines.

Taken together, across both channels, it is estimated that the FNE's intervention generated total benefits amounting to US$346.6 million for the 2017–2024 period, equivalent to average annual benefits of US$43.3 million. If the evaluation horizon were extended to 2029—the year in which the secondary patent would have expired—the projected total benefits would reach US$563.2 million.

The analysis also confirms the importance of the level of information in consumers' purchasing decisions. Consistent with the findings of the FNE's Medicines Market Study, information asymmetries and behavioral biases persist, limiting the full capture of benefits by consumers. In the retail segment, approximately 5% of consumers continue to purchase the original product or the branded generic bioequivalent instead of the lowest-priced generic bioequivalent available, resulting in non-internalized benefits estimated at US$98.5 million for the 2017–2024 period.

The ex-post evaluation of the Celecoxib case demonstrates how competition policy protects users and enhances efficiency, both in private consumption and in public expenditure. This outcome underscores the importance of having an independent, technical, and proactive competition authority capable of correcting distortions generated by anticompetitive practices, to the immediate and measurable benefit of consumers and the Government.

Finally, this experience highlights the relevance of inter-institutional collaboration. The investigation carried out by the FNE posed a technical challenge, requiring detailed analysis of substantive industrial property issues debated during the processing of the secondary patent. This outcome was made possible, to a significant extent, thanks to the support of the National Institute of Industrial Property (**INAPI**), enabling a virtuous and beneficial result for both consumers and the Government.

Huérfanos N°670.
Pisos 8, 9 y 10.
Santiago de Chile
Tel. (56 2) 27 535 600
www.fne.gob.cl