Forum: Economic and Social Council

Issue: Discussing the economic and social effect of pharmaceutical cartels

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INTRODUCTION

Pharmaceuticals have become an indispensable part of the international health care system, as their objective is to improve the health status of a nation's citizens through alleviating intractable diseases whenever possible. As of today, the industry has developed treatments for countless life-threatening illnesses, minimizing the need for extended care and preventing premature deaths. Improved access to medicines is likely to enhance the public's quality of life by increasing survival trends, resulting in economic sustainability and development. Especially in times like these, marking two years into the Covid-19 pandemic, the central role of medicine in the well-being of families and individuals could not be more apparent. Hospitals are being strained with an influx of infected patients, placing additional pressure on an already overburdened health care system. On that note, the use of medication may reduce avoidable hospital admissions, while aiding in achieving universal health coverage. Consequently, the pharmaceutical industry holds a substantial social and economic role in the modern world.

Due to the industry's explicit link with societal welfare, it can be said that pharmaceutical multinational enterprises (MNEs) and their decisions can play a major role in forming productive nations globally: it is up to their power to address any issue related to the accessibility, availability, and affordability of pharmaceutical products both in developed as well as in developing nations. Yet, despite all the technological advancements and innovations in the production and distribution of drugs, pharmaceutical MNEs have been a target of considerable criticism, as several countries have stressed the high cost of new pharmaceutical products. The magnitude of price increase is alarming enough to particularly harm consumers and their health status.

The most reasonable explanation behind the inflated prices of healthcare products is the existence of a cartel, a formal and binding agreement designed between firms belonging in the same industry to cooperate and regulate the market according to their common economic interests. More specifically, MNEs, in an attempt to maximize their joint profits, consciously choose to collude with each other, artificially setting pharmaceutical product prices high. Such an agreement can have multiple and differing economic and social implications for the producers and the consumers alike, related to the issue of the right of health.

For delegates to come up with feasible solutions to tackle the societal challenges posed by the creation of a pharmaceutical cartel, it is important for them to acknowledge the motives behind oligopolistic market structures, or in other words the incentives faced by pharmaceutical firms to collude or merge. While a cartel creates favorable conditions for the dominating firms to fulfill their economic interests, high drug prices have a social cost. Delegates should seek for solutions aiming towards the detection and elimination of pharmaceutical cartels, yet while this may prove a lengthy and challenging process, alternative methods to alleviate the economic and societal damage posed by the formation of a cartel are also worth mentioning.

DEFINITION OF KEY-TERMS

Cartel

A formal and binding agreement designed between firms belonging in the same industry to cooperate and regulate the market according to their common economic interests.

Market power

Market power refers to the ability of a firm to influence supply, demand, or both in order to change the price of a product in the market. A corporation with significant market power has the power to manage its profit margin by manipulating the market price. It may also be able to raise barriers for possible new entries into the market.

Oligopoly

An oligopoly is a market structure consisting of a limited number of businesses, none of which can prevent the others from exerting significant influence.

Monopoly

A monopoly is when one business holds a dominant position within an industry or a sector to the point that excludes all other serious competitors.

Price elasticity of demand

Price elasticity of demand is a measurement of the change in the consumption of a product in response to price changes. Expressed mathematically, it is:

Price Elasticity of Demand = Percentage Change in Quantity Demanded / Percentage Change in Price. Economists use price elasticity to understand how supply and demand for a product change when its price changes[1]

Inflation

Inflation is the decline of purchasing power of a given currency over time, leading to an increase in prices. The rise in prices, which is often expressed as a percentage, means that a unit of currency effectively buys less than it did in prior periods.

Generic Drugs

"A generic drug is a medication created to be the same as an already marketed brand-name drug in dosage form, safety, strength, route of administration, quality, performance characteristics, and intended use"[2]

Price wars

[1] Team, The Investopedia. "Price Elasticity of Demand." Investopedia, Investopedia, 7 July 2022, https://www.investopedia.com/terms/p/priceelasticity.asp.

[2] Center for Drug Evaluation and Research. "Generic Drugs: Questions & Answers." U.S. Food and Drug Administration, FDA, https://www.fda.gov/drugs/questions-answers/generic-drugs-questions-answers#q1.

A price war is a competitive exchange between rival businesses that lower the prices of their goods in an effort to strategically undercut one another and get a larger market share. A price war may be implemented as a longer-term strategy or as a short-term tactic to boost sales.

Patents

A patent is an intellectual property right (IPR) granted for the development of a new product or an innovation and it is of particular importance in the pharmaceutical industry.

Fraud

Fraud is an intentional act of deception intended to give the offender an unauthorized benefit or to deny the victim of a right. Fraudulent conduct can be committed by a single person, a group of people, or a company.

BACKGROUND INFORMATION

An introduction to collusive oligopolies and their characteristics

Oligopoly as a market structure

Cartels tend to arise in oligopolistic markets. Thus, to fully grasp the concept of a pharmaceutical cartel, it is essential to comprehend how an oligopolistic market operates.

The term “oligopoly” refers to a market structure where few large firms are dominating an industry. The market has high barriers to entry, meaning that it is too costly or difficult for startup firms to consciously enter the industry, compete with already established businesses, and earn profits. The number of firms controlling the market is small enough to limit competition and give each firm the capacity to partially control and influence the price at which it sells its product. Yet, while oligopolies are given a certain amount of market power, they tend to be interdependent on each other,indicating that each firm has to take into consideration any prospective reactions of their competitors to any change in price, output, product development or advertising. For example, if one firm in an oligopolistic market in an endeavor to maximize its profits decides to boost the intensity of advertising, it will potentially attract more consumersto purchase its products. However, this also implies that rival firms are likely to face a fallin consumer demand for their own goods, as a portion of their customers has been captured by another company. Therefore, a change in behavior of one oligopoly may have a considerable impact on the profits of the competitors. The level of uncertainty and interdependence apparent in an oligopolistic market, incentivizes firms to either collude and form a cartel, or to act independently of rival firms and develop strategic actions to attract consumers (non-collusive oligopoly).

Collusive oligopoly

Collusive oligopoly occurs when rival firms agree to work together, attempting to avoid the aforementioned insecurities that occur within an oligopolistic competing market. Such binding agreements involve price-fixing (agreeing to sell a particular product at a set price that does not resemble market demand) or limiting the quantity ofoutput produced, which according to the forces of the free-market economy will furtherraise prices. Usually, companies form cartels in order to behave as monopolists (single sellers), while disrupting market stability by imposing high prices on consumers through whichever means.

Non-collusive oligopoly

Non-collusive oligopoly refers to the oligopoly where firms compete with each other, developing strategies considering the possible actions of their rivals. While in the case of cartels sellers eliminate competition through formal arrangements, in non-collusive oligopoly producers set their own price and level of output, aiming to increase their individual profits. However, even in instances where there is no cartel detected, prices may still remain high and inflexible. The sole explanation of such a phenomenon is correlated with the idea of a price war. More specifically, one of the most common strategies businesses employ to attract customers is to lower their prices.

Nevertheless, especially in oligopolistic markets, a price cut will undoubtedly result in a matched price decrease by competing firms which will be figuratively forced to follow suit so as to maintain their dominance and market power. As a result, all businesses within the industry are left with lower profits.

Importance of non-price competition

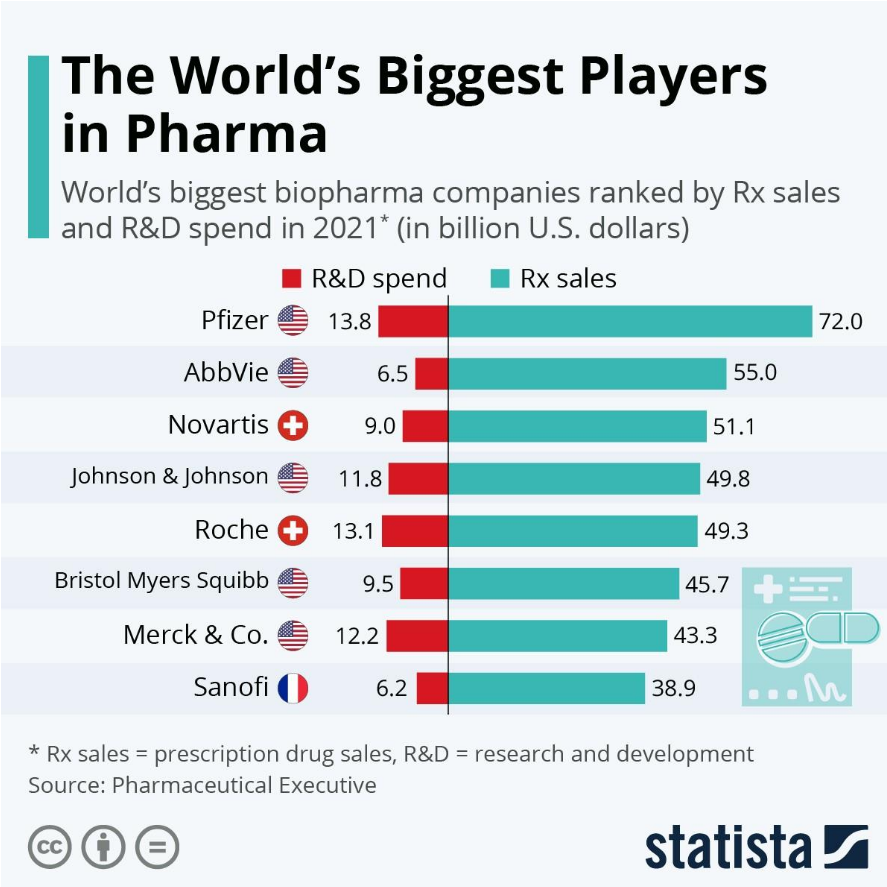
To avoid the possibility of a price war, firms in non-collusive oligopoly tend to employ strategies other than pricing to compete with opponents. These types of policies are referred to as "non-price competition." As the term indicates, non-price competition is a marketing tactic in which companies try to increase sales by distinguishing their products through means such as intense advertising, customization, and product development. A prime example of non-price competition is product bundling by Microsoft. Microsoft developed the "Office," a client service with four software components: Word, PowerPoint, Access, and Excel. Through producing a software package and selling it at a modest price, Microsoft managed to fulfill the wants of consumers and by extension, lead in the Web-browser market. Establishing and sustaining brand recognition is perceived as the ultimate way to increase the value of a product in the eyes of a consumer.

The oligopolistic structure of the pharmaceutical industry

Over the past ten years, the landscape of the pharmaceutical industry has radically changed as it is now destined to function as an oligopoly. Today, developing, creating, marketing, and selling new pharmaceutical products has a cost smaller companies cannot afford, as more powerful firms have come to pioneer in R&D (research and development). "It can cost more than $1 billion to develop a new drug, get it approved by the Food and Drug Administration (FDA) and bring it to market. With those kinds of upfront costs, only a handful ofcompanies including Pfizer, Merck, and Novartis, can afford to create and sell new products"[3].

[3] Zheng, Kathy. "Examples of Oligopoly Markets." Your Business, 21 Nov. 2017, https://yourbusiness.azcentral.com/examples-oligopoly-markets-6720.html.

With only a small number of large corporations manufacturing the vast majority of pharmaceuticals, the global market of drugs is developing an increasingly oligopolistic character.



[4]

Figure 1: Largest pharmaceutical companies worldwide according to sales and R&D spending

"In September, during the ongoing discussion about drug prices, the Food and Drug Administration and Congress raised concerns about patents."[5] A patent is an intellectual property right (IPR) granted for the development of a new product or an innovation and it is of particular importance in the pharmaceutical industry. As a legal barrier, a patent excludes othercompanies from manufacturing and offering to the public the new medicinal product for a giventime period. Through such an IPR, the inventor firm has the ability to be the sole seller of the

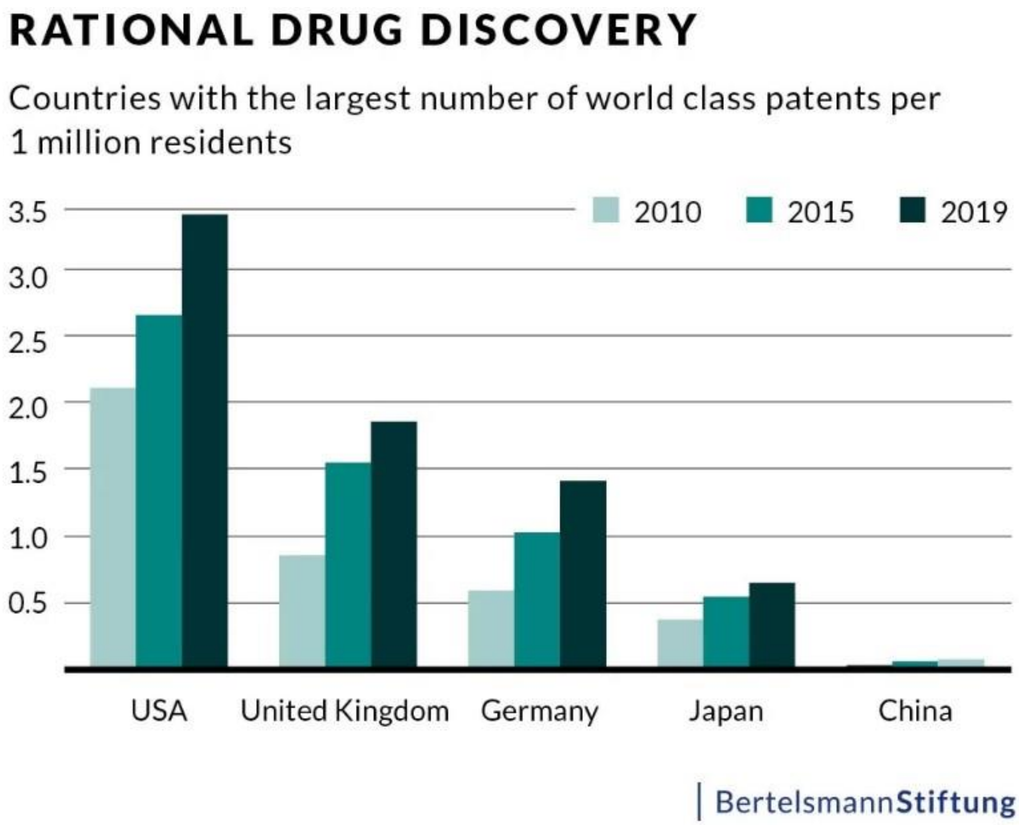
[4] Jesse. "Top 10 Largest Pharmaceutical Companies in the World by Revenue 2020, Pharmaceutical Industry Factsheet." Bizvibe Blog, 20 Aug. 2020, https://blog.bizvibe.com/blog/largest-pharmaceutical-companies.

[5] "Policymakers' Attention Turns to Drug Patents in the Debate on Prices." Commonwealth Fund, 7 Oct. 2021, https://www.commonwealthfund.org/blog/2021/policymakers-attention-turns-drug-patents-debate-prices.

drug and thus, in the absence of any market competition, charge higher-than-competitive prices. While the patent system was created to assist companies to recoup from costs spent in the discovery of the product (research, developing and testing), there is a growing trend that multinational corporations abuse the exclusivity privileges admitted to them. "According to statute, the granting of a pharmaceutical patent includes protection on that patent for a period of 20 years from time of patent filing"[6]. This means that the producer of the drug holds a 20-year-long market monopoly, enabling the company to engage in any pricing policy, as consumers are left without suitable alternatives. Along with patents, the reasons behind the oligopolistic character of the pharmaceutical industry are related to aggressive tactics employed by large corporations, such as the takeover of potential entrants, or smaller firms. "The French giant Sanofi has an annual turnover of more than 40 billion dollars. It too has bought a dozen pharmaceutical laboratories in Europe and North America." [7]

[6] Jan Berger, MD. "How Drug Life-Cycle Management Patent Strategies May Impact Formulary Management." AJMC, MJH Life Sciences, https://www.ajmc.com/view/a636-article.

[7] YouTube, YouTube, 12 Sept. 2021, https://www.youtube.com/watch?v=-z_W3yRA9I8. Accessed 14 July 2022.



[8]

Figure 2: Countries with the largest number of drug patents in medicinal products

The incentive for pharmaceutical oligopolistic firms to form a cartel

As acknowledged above, the pharmaceutical industry has developed an oligopolistic character, implying that firms are left with the choice to either collide with each other and form a cartel, or to engage in non-competition strategies aiming towards product differentiation. Taking into consideration that firms may raise the price of their products substantially if consumer demand is characterized as inelastic (to be explained), drug companies will seek for the option of profit maximization, which is forming a cartel.

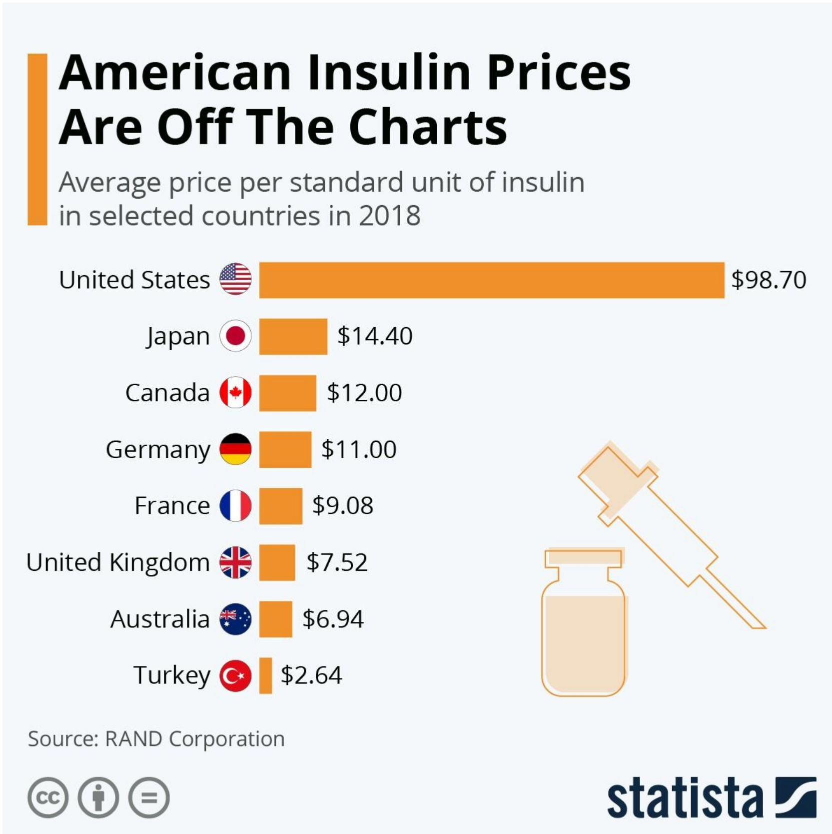
Medicine treatments consist of a necessity for consumers, as their use may treat temporary illnesses and help control chronic diseases by lessening any intense symptoms. As pharmaceutical products are interrelated with long-term well-being, consumers are most likely

[8] "Startseite." Startseite: Bertelsmann Stiftung, 25 July 2022, https://www.bertelsmann-stiftung.de/de/startseite.

to be willing to pay a slightly higher price for a drug in order to fulfil their health needs. In economic terms, when a change in price for a good does not result in a change of quantity demanded, then demand is referred to as price inelastic. It might prove helpful to think of price inelasticity as a synonym for price insensitivity.

In a market economy, prices are partially determined by consumer willingness to engage in buying a specific product. However, this is not the case with the pharmaceutical market, especially when a cartel is established. To be more concise, the formation of a cartel on medicinal products would allow firms to follow strictly price-maximizing patterns of behavior, enabling them to reap huge profits at the expense of consumers in need. In the aftermath, patients would be left with no other option but to pay the higher price. A current-day example of a pharmaceutical cartel is the insulin one, where three companies controlling approximately 90%[9] of global insulin supply, namely Eli Lilly, Novo Nordisk, and Sanofi were accused of collusion. Insulin is a hormone regulating blood sugar levels, widely used as a diabetes treatment. While insulin therapy is considered as lifesaving, its price is absurdly high, keeping a much-needed drug out of reach of many people with diabetes who need it.

[9] "Investigate Insulin Now." *Investigate Insulin Now*, https://investigateinsulinnow.com/.



[10]

Figure 3: Average price of insulin as per 2018 in member states worldwide

The economic and social implications of a pharmaceutical cartel

The implications for the industry

The parties of a pharmaceutical cartel have much to obtain from collusion with other firms, as they can use their monopoly power to charge as high a price as the consumers will tolerate for their product. Repetitive drug price increases inevitably result in persistently higher revenues. "By 2024, worldwide sales of prescription drugs are predicted to reach $1.18 trillion"[11]. Yet, high prices for medicinal products do not

[10] McCarthy, Niall, and Felix Richter. "Infographic: American Insulin Prices Are off the Charts." Statista Infographics, 7 Oct. 2020, https://www.statista.com/chart/23127/average-price-per-standard-unit-of-insulin/.

[11] Hawley, Julia. "How Pharmaceutical Companies Price Their Drugs." Investopedia, Investopedia, 22 Mar. 2022, https://www.investopedia.com/articles/investing/020316/how-pharmaceutical-companies-price-their-drugs.asp.

generate just profits; they also turn into an essential funding source for the company's continuing research of new drug discoveries. Thus, the value of a pharmaceutical product cannot be measured solely by its direct benefits to patients. Before a drug is deemed safe and proper to be released in the market, rigorous testing has to be undertaken. Drug development is a largely empirical and expensive process. Therefore, high profits earned from overpriced drugs can motivate pharmaceutical companies to invest in Research and Development (R&D). However, the argument is not entirelycredible, as seen through the example of the insulin cartel. In 1923, after insulin was discovered, its inventors sold its patent for just 1 dollar, in hope of making this life-altering drug affordable to diabetic patients. Instead, today, the medicinal product issold at a sky-rocketing price, despite the fact that companies do not have drug development expenses. Such a case raises the claim that prices have dramatically increased even for products that have been on the market for decades.

The implications for consumers

It goes without saying that firm profiteering comes at the expense of consumers. New pharmaceutical products are now expected to be exorbitantly expensive, and consumers are called to bear with the price increases. The most prominent issue of such a pricing policy though is that it disproportionally affects patients in need of medication. As price rates rise in unsustainable levels, low-income populations are forced to make impracticable choices between their health care and other basic needs. Thus, augmented drug prices can reinforce structural discrimination. As it seems, individuals who are more likely to require medical treatment due to unsafe and unhealthy living conditions (food, shelter, clean water and air, necessary vaccines) are the ones strugglingthe most to afford it. Pharmacy abandonment rates (when a prescription is written by a doctor but never picked up at the pharmacy)[12] increase as some patients choose to skip doses or delay prescription refills as ways to endure the drug costs.

[12] "Is Your Patient Abandonment Rate What You Think It Is?" Truveris, 12 Aug. 2021, https://truveris.com/is-your-patient-abandonment-rate-really-what-you-think-it-is/.

	Disease	Number of deaths per year
1	HIV/AIDS	1 108 000
2	Lower respiratory tract infections (target lungs and airways)	1 101 000
3	Diarrheal diseases	644 000
4	Malaria	568 000
5	Stroke	427 000
6	Preterm birth complications	393 000
7	Birth asphyxiation and trauma	356 000
8	Malnutrition	307 000
9	Coronary heart disease	293 000
10	Meningitis	260 000

[13]

Figure 4: Leading causes of death in Africa according to findings of the World Health Organization

The alternative option of purchasing generic drugs

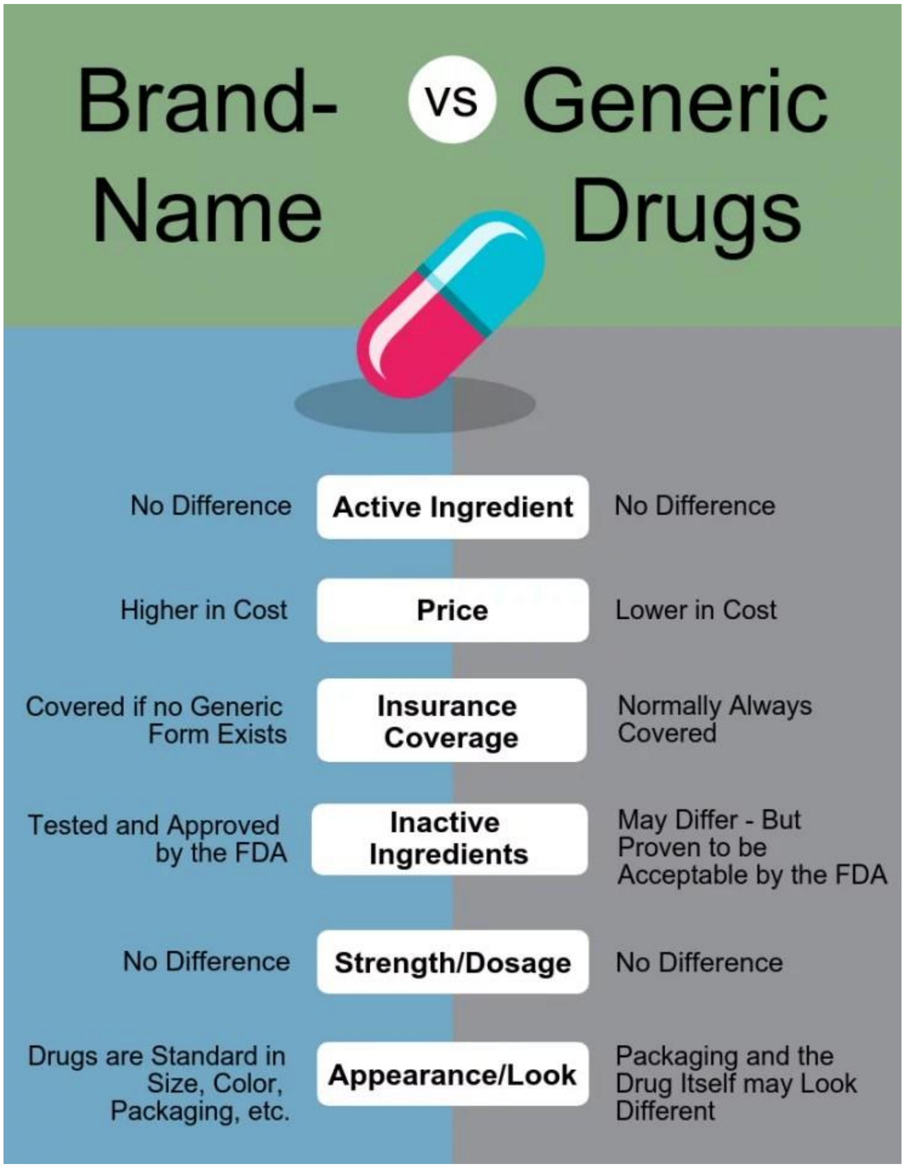
In response to the artificially inflated drug prices, consumers are looking for a substitute, cheaper option. Generic drugs, copies of branded medication, offer low-cost access to millions of patients worldwide. When a biopharmaceutical company develops and releases a new drug after years of extended testing and research, it holds monopoly power as it has granted patent protection. Prices at that time will be increasingly high. Following 20 years of the patent application, generic drug companies are allowed to manufacture and sell the pharmaceutical product, using the scientific research and chemical recipe of the firm that developed the original drug. Since generic companies do

[13] "Find and Share Research." *ResearchGate*, https://www.researchgate.net/.

not need to incur any investigation expenses, their medicinal products may be offered at low costs (60-70% lower than the branded drugs)[14]

According to the Food and Drug Administration (FDA), generic products are a safe and effective alternative, as generic companies are required to use the same active ingredients as brand-named companies. However, when it comes to inactive ingredients such as fillers, binders or preservatives, generics have no restrictions. While these components of a drug are not considered to have an effect on patients, there have been reports regarding performance differences. In light of these facts, some patients are concerned that generics may not provide the same clinical benefits as the branded ones, even if they have received a stamp of approval by the FDA.

[14] New Generics Are Less Available in Medicare than Commercial Plans. https://accessiblemeds.org/sites/default/files/2021-07/AAM-New-Generics-Are-Less-Available-in-Medicare-2021.pdf.



[15]

Figure 5: Understanding the difference between branded and generic drugs

The implications for the society and the economy as a whole

With the pharmaceutical industry being monopolized by pharmaceutical cartels, and the companies hiking the prices of drugs, patients have limited access to treatment, inevitably resulting in lower efficiency levels. From an economic perspective, a country with unaffordable drug prices is a burden for the government, as proper use of drugs

[15] "Brand Name vs. Generic Drugs: Understanding the Difference." *Northwest Family Clinics*, https://www.northwestfamilyclinics.com/blog/brand-name-vs-generic-drugs-understanding-difference.

can reduce the amount of money spent on hospitalizations. For member states with universal health care, a cartel on pharmaceutical products can increase government expenditure, as there will be more patients to be cured in hospitals. Further, through a macroeconomic lens, a population with a lower health status is likely to be less productive in terms of labor (strength, endurance, cognitive functioning). The correlationbetween economic growth and health is evident.

Lastly, while the anti-competitive nature of a cartel can help the participating firms gain huge profits to invest in new scientific research, the truth is that pharmaceutical MNEs face no competition whatsoever. Cartels disadvantage other participating firms in the industry as they cannot enter or compete within the market, given the high barriers to entry. This indicates that big pharmaceutical corporations don't have the incentive to attract consumers through product development. For all the above reasons, collusive oligopoly is considered as an illegal practice in most member states.

MAJOR COUNTRIES AND ORGANIZATIONS INVOLVED

United States of America

Undoubtedly, the United States of America is the nation with the most involvement in the issue of pharmaceutical cartels, as it "accounts for about 45% of the global pharmaceutical market and 22% of global production"[16]. The US, having the largest drug market in the world, operates under a free-market system, enabling the private pharmaceutical industry to gain increasing market power and control over the pricing of medicinal products. As per the 2019 Medicine Price Index, the US, closely followed by Japan, ranked as the country with the most

[16] "ATRADIUS Collections." Atradius, https://atradiuscollections.com/global/reports/industry-trends-pharmaceuticals-united-states-2022.html.

expensive drugs in the world. “U.S. prices 3.44 times more than those in the other countries”[17]. Despite the fact that large pharmaceutical companies have a big presence in the country, access to much-needed medication is considered a privilege. The 2020 insulin crisis in the US highlighted the magnitude of the issue of augmented drug prices. Along with the spread of the Covid-19 pandemic, millions of diabetic patients were struggling to afford the soaring prices of insulin, resulting in the death of more than 100,000 Americans.

China

Over the course of the past decades, China has managed to establish an effective and consistent pharmaceutical industry that is resilient to attempts of cartel formation. The country’s rapid healthcare industry rise has helped it transition into a R&D hub, cementing itself as a strategic player in the global pharmaceutical market, possessing 11% of it. An advantage of China’s industry in terms of its resilience to cartels is the level of fragmentation existing in the pharmaceutical market, reaching 5000 manufacturers that base their companies on generic drugs, overall accounting to 90% of all drugs registered in the country.[18] Such fragmentation leads to relatively low-price levels in pharmaceutical goods, which are going to further stabilize given China’s willingness to increase the average size of firms in the industry.

Yet, despite the country’s resilient system, there are companies that still heavily influence and dominate the market. Novartis, AstraZeneca, Novo Nordisk and Pfizer are a few MultiNational Corporations that each possess 8-10% of the country’s market, leading to continuous fears for the formation of a collusive oligopoly despite China’s solid pharmaceutical market structure.

United Arab Emirates

[17] Doheny, Kathleen. “U.S. Drug Prices Much Higher than in Other Nations.” WebMD, WebMD, 29 Jan. 2021, https://www.webmd.com/health-insurance/news/20210129/us-drug-prices-much-higher-than-in-other-nations.

[18] “China - Pharmaceuticalschina – Pharmaceuticals.” China - Pharmaceuticals | Privacy Shield, https://www.privacyshield.gov/article?id=China-Pharmaceuticals.

The UAE has a distinct regulatory system when it comes to the pharmaceutical industry. UAE's pricing policy on pharmaceutical products revolves around a Ministerial Resolution of 2013 provided by the national Ministry of Health. In the country, a pricing legislation is in place, providing fixed prices for distributors, producers and pharmacies depending on the products available to sell to interested consumers. According to Article 65 of UAE Federal Law No. 4 of 1983, all pharmaceutical goods imported in the country are to be registered to the Ministry of Health, which is going to review and evaluate the good, finally placing a fixed price on it, or rather a 'CIF' price of Cost, Insurance and Freight. Once the 'CIF' price has been placed, distributors and companies are paid a fixed percentage of the 'CIF' price, which will finally be added to the initial 'CIF' price to reach the final price the goods will be sold in the market for. In such fashion, UAE officials are able to consistently monitor and control the pharmaceutical market, thus limiting the possibility of encountering collusive oligopolies.

India

India's pharmaceutical market structure is almost a perfect example of how to prevent collusive oligopolies forming in the pharmaceutical sector. National companies face low production costs, resulting in financial capabilities to research & develop products to later sell to the market or as exports in other countries. India's pharmaceutical industry is valued at approximately $42 billion, supplying an excess of 200 countries with pharmaceutical goods, including COVID-19 vaccines. The country ranks 3rd worldwide for production by volume, consisting of 60,000 generic brands across 60 therapeutic categories.

The Indian market is characterized by high levels of price and quality competitiveness, limiting the formation of cartels in the market given the extensive number of firms in the industry. Foreign Direct Investment (FDI) is a major contributor to such resilience, having provided the Indian pharmaceutical market with numerous corporations looking to expand in Asia. Given the low production costs discussed above, the burden for consumers in the Indian pharmaceutical industry is relatively low or even free, proving to be essential for local citizens. Yet, there is always danger for the formation of a cartel, as the recent increased involvement of the US in the Indian market might have increased risks for national and international corporations.

Patients for affordable drugs

Patients For Affordable Drugs is an independent national patient organization focused exclusively on completing policy changes, aiming to lower the price of prescription drugs. Set in the United States, the organization claims to have understood what their mission is in the pharmaceutical market, that being limiting the ability of dominant firms to control pricing policies and development in the industry. As it states, in order to remove pricing power from themain drug corporations, a certain level of transparency should be met by companies and patients, ensuring that patients will always be able to afford prices of products.

Such an initiative results in positive change in the market, awakening people to see the corrupt nature of the pharmaceutical industry in the process. The organization aims to limit the influence of monopolies and oligopolies on the market, in the meantime ensuring that no cartel may be formed under the inspection of the organization. The single issue with the specific organization comes in the form of a lackluster audience, as is the case for several non-profit and non-governmental organizations. While there have been several attempts in favor of restoring lower prices in pharmaceutical goods, the results have yet to show.

TIMELINE OF EVENTS

DATE	DESCRIPTION OF EVENT
1849	Pfizer, one of the world's most powerful pharmaceutical company is founded by Charles Pfizer and Charles Erhart
July 2, 1890	The Sherman Anti-Trust Act get approved

September 26, 1914	The Federal Trade Commission is established to protect America's consumers from fraudulent activities evident in the market
1914	The Clayton Antitrust Act strengthens prior antitrust legislation
1923	Insulin is discovered
April 7, 1948	The World Health Organization is founded
25-28 September 2000	The Fourth United Nations Conference takes place, where all aspects and principles of the UN Set were discussed
13 - 18 November 2005	The Fifth United Nations Conference takes place in Antalya, Turkey, where member states were called to review the UN set
8 - 12 November 2010	The Sixth United Nations Conference takes place in Geneva, Switzerland
2010-2014	Pharmaceutical spending sharply rises
6 - 10 July 2015	The Seventh United Nations Conference takes place in Geneva, Switzerland
2018	The non-profit organization Patients For Affordable Drugs is founded by David Mitchell

19 - 23 October 2020	The Eighth United Nations Conference on Competition and Consumer Protection takes place in Geneva, Switzerland
2020	The World Health Organization guideline on country pharmaceutical pricing policies is published
2020	Insulin crisis in the USA
November 19, 2021	The Build Back Better Bill is enacted by the 117th United States Congress

RELEVANT UN RESOLUTIONS, TREATIES AND EVENTS

THE UN SET[19]

In 1980, the United Nations Conference on Restrictive Business Practices approved the Set of Multilaterally Agreed Equitable Principles and Rules for the Control of Restrictive Business Practices for adoption as a resolution in the General Assembly. The UN Set, as it is otherwise called, aims to control anti-competitive behavior in the market economy, providing a clear framework in favor of fair and better practices between firms. It provides technical assistance and guidance for interested Member States, and it also applies for pharmaceutical cartels given the companies' anti-competitive spirit in favor of profit maximization. The UN Set has since followed a repeating pattern concerning the organization of Special Conferences every five years on the topic, with the most recent conference having taken place from the 19th to the 23rd of March 2020 in Geneva, Switzerland. Despite being non-binding, based on the nature of the General Assembly, the UN Set has actively encouraged competitive practices in markets,

[19] The link for the document: https://unctad.org/system/files/official-document/tdrbpconf10r2.en.pdf#:~:text=Accordingly%2Cthe%20General%20Assembly%2Cat%20its%20thirty-fifth%20session%20in%20itsresolution.by%20the%20United%20Nations%20Conference%20onRestrictive%20Business%20Practices

limiting the ability of any set of companies - including pharmaceutical ones - to form a collusive oligopoly. The agreement, however, in the case of pharmaceutical goods, has proved to be insufficient, as there is an ongoing problem with pharmaceutical drug prices based on cartels that have been formed.

World Health Organization guideline on country pharmaceutical pricing policies[20]

According to the official website of the World Health Organization, "Pharmaceutical pricing policies need to be carefully planned, carried out, and regularly checked and revised according to changing conditions. Strong, well-thought-out policies can guide well-informed and balanced decisions to achieve affordable access to essential health products"[21]. Such is the aim of this 2020 guideline published by the organization, replacing the pre-existing 2015 and 2010 guidelines on the given topic, each updated according to the methods and procedures outlined in WHO Handbook for Guideline Development. Through this guideline, the WHO advised nations to develop and implement policies relevant to the price management of pharmaceuticalitems and access to them, including price referencing, value-based pricing, and regulatory measures along the pharmaceutical supply chain among other recommendations. The formation of such a blueprint would ensure that governments are aware of all operations in the pharmaceutical industry, thus being able to encounter collusive oligopolies and their drive for financial manipulation of consumers.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Anti-monopoly and anti-trust legislation

The recognition of the challenges posed by cartel behavior has almost reached international consensus. In an attempt to protect consumers and economies from market manipulation and power abuse by firm collusion and monopolies, anti-trust laws have been

[20] "WHO Guideline on Country Pharmaceutical Pricing Policies." World Health Organization, World Health Organization, https://www.who.int/publications/i/item/9789240011878.
[21] "WHO Guideline on Country Pharmaceutical Pricing Policies." World Health Organization, World Health Organization, https://www.who.int/publications/i/item/9789240011878.

applied in several member states. In the United States, antitrust legislation exists in three main laws, namely the Sherman Act of 1890, the Clayton Act of 1914, and the Federal Trade Commission Act of 1914. The European Union (EU) has established its own competition laws, them being tailored to the EU's founding treaty and enforced by the European Commission. Other countries such as China, Japan, Brazil, and Australia have their own anti-competition policies as well. The objective of such statutes is to ensure fair competition within a free-market-economy and detect unlawful acts such as price-fixing. As violations against anti-monopoly legislation include fines up to 100 million dollars and 10-year prison terms, monopolies and cartels may be regulated and controlled so that no company has the opportunity to grow to an extent where it dominates an entire industry.

Build Back Better Bill

The Build Back Better Bill is proposed legislation in review of Joe Biden’s Build Back Better agenda, a quite ambitious framework set to alleviate social, economic, and environmental issues that had overshadowed the nation the past years. More specifically,regarding the concern of high prescription drug prices, the act included several government suggestions to reduce the immense costs. Some of the recommendations were direct negotiations between the secretary of the U.S. Department of Health and Human Services, Medicare- a federal health insurance- and drug manufacturers to limit price increases of pharmaceutical products only up to the rates of inflation (given that drug prices are surging at arate faster than inflation). If firms do not comply with such negotiations, they would have to paya rebate to the federal government.

While both previous attempts have the potential to tackle the social and economic implications of pharmaceutical cartels directly (anti-monopoly legislation) and indirectly (Build Back Better Bill), they are not deemed sufficient enough so as to efficiently mitigate all the issues arising from the collusion of firms in the drug industry. This means that there are difficulties in their enforcement. Indeed, detecting collusion among firms is one of the most complicated areas of competition policy, as cartel arrangements are secretive. Moreover, there are uncertainties related to the formation of antitrust policies. For example, it is a difficult task for legislatures to determine the extent to which market power of a firm is desired. Lastly, there is an increasing concern that corporations may be better off by abusing their monopolistic character to obtain high profits and then pay any fines related to the formation of a cartel.

POSSIBLE SOLUTIONS

Improvement of supervision and cartel investigations

As emphasized above, there are difficulties in detecting the existence of a cartel within an industry, as any arrangements made for collusion between two or more firms are made entirely through closed doors. Thus, the procedure of identifying cartels in the pharmaceutical market may be enhanced through the establishment of a warning sign check list detectors may use so as to recognize any abnormal behavior in a more effective manner. A warning check list could include similar pricing between companies, simultaneous price rises, or trade associations. Yet, there is still a concern: Usually, the detection of collusion within a market is aneconomist's job. However, along with the evolution of digitalization and technology, data sets tobe examined have grown immensely in number. On that note, screening methods for cartel investigation may be improved through digital intelligence, data mining and algorithms. To elaborate further on the idea, there could be a universal machine algorithm trained to recognizeif the prices a firm charges are responsive to its manufacturing costs, or if prices become similaracross the drug market.

Establishment of a whistleblowing platform/hotline

Greatly aware of the fact that cartels are considered an illegal and unlawful practice, cartelists will always take extra steps so as to ensure that their actions are concealed. If this is the case, the only way to detect collusion would be by obtaining an insider's information, also known as whistleblower. A whistleblower is a person who openly reveals classified information related to a firm, to report its wrongdoings or fraudulent activity for the sake of justice and integrity. Therefore, a solution may be to set up a platform whereby whistleblowers can anonymously and securely expose to a centralized body the anticompetitive practice of a company. When forming clauses, delegates should consider that the platform needs to be well-designed, and the whistleblower has enough financial incentives to uncover market collusion, given that reporting a firm's illegal activity can potentially lead to loss of career.

Ensuring equivalence of generic drugs

Pharmaceutical cartels inflict enormous harm on consumers and although the elimination of collusion is facing the issue, delegates should also focus on solutions that make pharmaceutical products affordable to patients. Ensuring the bioequivalence of generic drugs with branded ones is one way of pursuing such a goal. For example, generic manufacturing firmsshould be assessed on their facilities and production methods (not only the ingredients they use to produce pharmaceutical products) and should be certified after successful inspection immediately, ensuring that the drug is both safe and released in the market rapidly (perhaps if more experts were involved in the intense assessment process). Moving on, there could be a product safety reporting program solely for generics, where patients, supervised by medical professionals, are given the opportunity to report any unexpected side effects that came up during a generic drug treatment. This could further help the FDA to identify any quality or performance issues.

Preventing patent abuses that block price competition

Pharmaceutical companies have found ways to enforce their monopolies and keep drug prices artificially high by abusing the patent system and creating barriers to generic competition. There is a growing trend that firms seek for Intellectual Property Rights (IPR) even if their discovery was not innovative. For example, sometimes firms try to extend their protection patents by making small changes to drugs that don't really have a therapeutic effect on patients, such as changing the drug's color. In order to avoid unmerited patents, bodies like the World Trade Organization (WTO) can ensure that only genuine innovation is rewarded by setting a document of conditions to be met for patent granting. As aforementioned, generic drug companies can only start manufacturing only after the patent has elapsed, implying that exclusivity protection has to be legally and scientifically correct at all times.

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