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PRICE DISCRIMINATION IN PHARMACEUTICAL INDUSTRY

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Abstract

This paper examines the concept of price discrimination in the pharmaceutical industry, with particular emphasis on international price discrimination and its implications for social welfare. Price discrimination occurs when firms charge different prices for the same product to different groups of consumers based on factors other than production costs. Due to the high research and development costs associated with pharmaceuticals, price discrimination has become a common pricing strategy across countries with varying levels of income and demand elasticity. The study reviews theoretical and empirical literature on the relationship between price discrimination, market efficiency, and social welfare. It also analyzes differences in pharmaceutical prices between countries, particularly the United States and Canada, and explores the factors contributing to these disparities. The findings suggest that international price discrimination is largely driven by differences in demand elasticity and countries' economic conditions. While price discrimination can increase output, encourage innovation, and improve access to medicines, it may also raise concerns regarding equity and affordability. The paper concludes that the impact of price discrimination on social welfare depends on market conditions and the balance between efficiency gains and distributional effects.

Keywords: Price Discrimination, Pharmaceutical Industry, International Price Discrimination, Social Welfare, Drug Pricing, Demand Elasticity, Pharmaceutical Markets, Market Efficiency, Research and Development, United States, Canada.

Introduction

In this fast-paced world, when a company charges different prices to various groups of customers for the same commodity or service for reasons other than cost, economists refer to the practice as price discrimination. Price discrimination is one of the microeconomic pricing strategies in a competitive market. It is applied by a majority of spheres, including pharmaceutical manufacturers, telecommunications, textbook

publishers, airlines, etc. Pigou (1920) created classifications for first, second, and third-degree price discrimination, expanding on the theory of price discrimination. However, international price discrimination is the most common sort of price discrimination in the pharmaceutical industry. If the price elasticity of demand differs between groups, price discrimination could be productive. Price discrimination strategies in the pharmaceutical industry in different countries are discussed below. This literature review concentrated on the impact of price discrimination on social welfare, highlighting international price discrimination as well as the comparison of prices in the US and Canada. Along with the analysis, additional observations are carried out in order to categorize a number of studies for and against price discrimination.

Categorization

There have additionally been many theoretical extensions of price discrimination in industries with large research and development costs, like the pharmaceutical industry. Due to the fact that price discrimination has a great impact on social welfare, a number of research studies have been conducted. The studies by Schwartz (1990) and Varian (1985) demonstrated that there is a criterion for welfare to rise when total output with discrimination exceeds total production without discrimination. According to research by Lichtenberg and Waldfogel (2009), the ability to engage in price discrimination is likely to increase the number of new products in addition to raising the output of existing ones. However, Pigou (1920) found that price discrimination would decrease under two conditions. Since prices in the pharmaceutical industry fluctuate frequently, international price discrimination was covered below. For instance, Moore (1994) highlighted the fact that prices in the Canadian pharmaceutical industry cost less compared to those in the US.

Discussion

Price Discrimination and Social Welfare

The question of whether price discrimination diminishes or raises social welfare has been contemplated by economists since 1920. Pigou (1920) illustrated that, under certain suppositions, price discrimination will decrease social welfare. Research he conducted underlined that price discrimination will witness a reduction under these conditions: 1) all markets are served at the same price; 2) surpluses and profits are acquired by all categories of customers and have similar weight in terms of societal wellbeing; and

lastly, all demand functions are linear. In these circumstances, total output under price discrimination is the same as it is under uniform pricing, but output is allotted much less effectively below price discrimination. Schwartz (1990) and Varian (1985) showed that when total output with discrimination exceeds the non-discrimination level, there is a condition for welfare to increase.

Since profits are generally higher under price discrimination than under uniform pricing, the ability to price discriminate is more likely to increase the wellbeing of society as a whole ("social welfare") than it is to increase consumer wellbeing. Cowan (2011) has demonstrated that output can be increased by price discrimination when consumers who pay a lower price increase their consumption more than those who pay a higher price decrease their consumption, and therefore social welfare rises. Moreover, Schmalensee (1981) showed that whereas a single profit-maximizing firm practices price discrimination, social welfare will increase. Separate market price discrimination, on the other hand, focuses on disparities in willingness or ability to pay in each market as well as the positive benefits for social welfare that price discrimination has in this context (Layson 1994).

International Price Discrimination

The cost of the drugs varies greatly between and within countries. Pharmaceutical businesses in low-income countries charge lower prices on average than in developed countries. The ability of manufacturers to price products differently for several markets—a process known as "price discrimination"—boosts their overall profitability. However, it is expected to result in increased research and development spending and, hence, more new pharmaceuticals on the market. Limiting price discrimination to save money may benefit consumers in the near term, but it will harm them in the long run by reducing the number of new drugs created. Hausman et al. (1988) found that pharmaceutical companies can earn from rich countries while preserving access to poor countries by using price discrimination. Scherer (2004) compared the welfare implications of universal patent protection to the welfare impacts of a market condition in which poor countries were given access to generic versions of patented medications that were unavailable in rich countries. Because the marginal value of income is greater in impoverished nations than in affluent countries, Scherer (2004) discovered that in the latter conditions, there would be a negative welfare effect in rich countries but a positive

rise in global welfare. According to Danzon et al. (2011), price discrimination between the US and other countries is broadly in line with income and is smaller for pharmaceuticals than for other medical services. Moreover, the enormous expense of drug research and development is one of the key reasons for price discrimination. As Danzon (2011) stated, the long-term advantages of continuing innovation exceed the short-term advantages of more consistent pricing. Lichtenberg (2009) pointed out that drug prices in the top five countries are about five times higher than those in the bottom five. According to the drug price index, the price of drugs in Mexico (the country with the second-highest drug prices) is 24% more than in the United States (which ranks sixth out of 38 countries). Lichtenberg and Waldfogel (2009) found that increasing prescription medication use leads to better health outcomes, or that reduced drug use leads to worse health outcomes, such as increased hospitalization and death risk. The ability to engage in price discrimination is likely to increase the number of new products in addition to raising the output of existing ones.

Price Discrimination in the US Compared to Canada

As Wagner (2004) and McCarthy (2004) state, one explanation for the high cost of prescription drugs is that the pharmaceutical industry invests heavily in research and development. According to Khosravi (2003), the pharmaceutical business has been the most profitable in the United States for each of the last ten years. The pricing differential between the United States and several other countries is not attributable to price sensitivity or elasticity. The underlying cause of unnecessarily high medication prices in the United States is a corrupt system of kickbacks, middlemen, perverse incentives, and anticompetitive collusion involving bribes, intermediaries, and anticompetitive collusion, as mentioned by Lichtenberg (2009). Proponents of the pharmaceutical industry in the United States point out that, despite their huge profit margins, brand-name medication makers pay higher taxes than most other businesses, Bondi (2010). According to Rosenfield (2004), the General Accounting Office concluded that prescription medications in Canada are significantly less expensive than in the United States. Another factor in lower medicine prices in Canada is that Americans are still financially better off than Canadians. Additionally, with government pricing controls in Canada and a better standard of living in the US, there is another element that contributes to the price disparity between the two countries.

Khosravi (2003) mentioned that the United States is a more litigious country than Canada, and its higher prices reflect the higher cost of legal responsibility. Pharmaceutical producers in the United States face a higher risk of product liability litigation as a result of many federal and state regulatory regulations for the healthcare business. As a result, part of the price differential in pharmaceuticals between the two nations is due to the increased liability risks in the US.

Conclusion

From all the data given above, it leads to the conclusion that price discrimination can be the cause of the difference in prices in the pharmaceutical industry, according to Ellison and Snyder (2010) pricing based on the elasticity of demand. While Bondi (2013) states that the differences in the pricing of drugs depend on the financial strength of the nations, which is considered the international price discrimination in the pharmaceutical industry. In addition, price discrimination can be minimized by setting the same price in the market when surplus as well as profit are acquired by all categories of customers and have similar weight in terms of social being (Pigou 1920). All this research was carried out to understand the price discrimination in the production of medicine and described the same main reasons that cause the discrimination in the price.

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