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Ethical Price for Essential Pharmaceuticals?

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Azidothymidine or AZT is an antiretroviral medication used to prevent and treat HIV/AIDS. AZT was initially developed for cancer treatment in the 1960s; however, AZT failed to combat with cancer, and it was abandoned. 20 years later, when HIV globally emerged as an incurable and deadly disease, Burroughs Wellcome, a pharmaceutical company, ran a massive screening with the hope of finding a potential treatment for HIV. When AZT was randomly injected into a Petri dish with animal cells infected by the HIV virus, it seems to suppress the activity of the virus. After more than 300 clinical trials and countless debate around the effectiveness of this medication, on March 19, 1987, the U.S. Food and Drug Administration (FDA) finally approved AZT (Park, 2017). Nowadays, AZT remains to be the primary active drug that can elongate the life of infected patients. Without treatment, patients can live for 5 to 10 years after infected. With the treatment, their life expectancy approaches the norm.

However, it is important to note that AZT is a life-saver for HIV patients only if they can afford it. An HIV patient needs to spend about $17,000 for AZT every year until the end of his life. Therefore, the estimated lifetime cost of HIV will be $600,000. This premium cost creates an invisible barrier for many patients to access AZT, particularly those without adequate insurance coverage. AZT is not the only medication that has a prohibitively high price. In fact, the price of the drug in the U.S is significantly higher than any other country in the world. For example, the price of Roche's product Valium is $9.1in the U.S but $3.6 elsewhere. Because the drug companies usually do not explicitly report the price determining process, critics claim that the price of many essential pharmaceuticals, such as AZT, is unreasonably and unethical high (Spinello, 1992).

Defending for their position, many pharmaceutical companies argue that charging a premium price is necessary to motivate scientific innovation. When a new drug is discovered, a pharmaceutical company can cover that drug under patent protection, meaning that only the company that holds the patent is allowed to manufacture and market the drug. For example, with AZT patent, Burroughs Wellcome becomes the only legal supplier for AZT and, therefore, possesses the entire power to determine the price of this medication. The price of patent drug includes several components: production cost, research and development (R&D) cost, other additional costs (such as marketing), and net profit. After the patent expires, due to the competition of generic drug, the sale could drop by more than 90% and the firm will not be able to incorporate R&D cost into drug's price anymore. Many companies explain that R&D is extremely expensive, and to keep their companies functioning, they need to recoup the R&D cost before their patents expire. Therefore, they have no choice but charging a premium price on their pharmaceuticals. Lena Chatterjee in her essay named "Is U.S. Pharmaceutical Pricing Justified?" provides several arguments to support the premium price of medicine in the U.S. She claims that focusing on maximizing profit and treating essential drugs as other normal goods are the way pharmaceutical companies should operate because the benefit of pharmaceutical to the consumer does not generate any financial value to the shareholders. Based on the cost-benefit analysis, Chatterjee concluded that the capitalist market system in the U.S provides a benefit that is worth the premium cost and that the pharmaceutical price in the U.S is just.

The premium price of essential pharmaceuticals prevents some patients to have their fulfilled life and, sometimes, indirectly force them to give up their lives. These painful facts raise four main questions that will be addressed in this essay:

(i) Who deserves essential drugs?

(ii) Is it necessary for pharmaceutical firms to charge premium prices for essential drugs to keep companies functioning?

(iii) Is it just for pharmaceutical firms to charge premium prices for essential drugs?

(iv) Should someone try to reduce the premium price of essential drugs? If yes, who should do it?

Based on "The Theory of Justice" by John Rawls, Richard Spinello's framework, and accounting data about some World's largest pharmaceutical companies in the U.S, I believe that it is not only unnecessary but also unjust to charge a premium price on essential pharmaceuticals. I also believe that government should have the responsibility to ensure that patients can have access to essential medications as they need.

Before discussing the supply side of essential pharmaceuticals, it is worth to understand the demand side of them. Who deserves essential pharmaceuticals? Should it be given to the ones who can financially afford it, or should it be given to the ones who need it? Understanding distributive justice is crucial to answer these questions. "The Theory of Justice" is an attempt by John Rawls to address distributive justice problem. The Theory of Justice, which relies on the idea about human personhood developed by Kant, emphasizes that every person has an equal right to become a full human being by having access to abstract rights (such as freedom) and essential materials. Considering the crucial importance of medications such as AZT for any human being who needs it to achieve his best life, pharmaceuticals are essential materials and everyone should have equal access to those drugs as he needs, regardless his financial background. Like how crucial other essential goods are, such as oxygen to breathe, clean water to drink, or food to eat, essential pharmaceuticals are crucial to patients' life. Like the fact that we should have a secured access to oxygen because we need it to survive, patients should have a secure access to essential pharmaceuticals because they need them to survive. Like preventing other people to breathe by any mean is against humanity, preventing patients to access their needed pharmaceuticals by any mean is against humanity.

With the understanding of demand side, we are now focusing on the supply side. Is it necessary for pharmaceutical companies to charge premium prices for essential drugs? To answer this question, it is helpful to look at some accounting data from some World's largest pharmaceutical companies in the U.S. For any company, revenue is what it receives from sale or service activity. Revenue is the sum of profit and expense, and expense covers every cost for operation, including R&D. *Operating profit margin* is the ratio of profit to revenue. Average operating profit margin across different industries is 11% (Damodaran, 2018), meaning that, on average, 11% of what a typical company receives *goes to directly its pocket*. Operating profit margin of Eli Lilly, AbbVie, and Pfizer are 20%, 22%, and 43% respectively (Figure 1).

Figure 1 shows that the operating profit margin (blue sector) of pharmaceutical companies is significantly higher than a typical company: 20% to 43% of pharmaceutical companies' revenue goes directly to their pocket, in comparison with 11% of a typical company. These three companies are not the extreme cases of the U.S pharmaceutical industry. In fact, it is very likely to find a pharmaceutical company with a premium operating profit margin above across-industry-average (Anderson, 2014 and Damodaran, 2018). In addition, the above pharmaceutical companies only spend about 13% to 24% of their expenditure on R&D. These data show that what really inflates pharmaceutical price is not R&D but rather the extraordinary high direct-to-pocket profit. Therefore, these pharmaceutical companies do not have to charge a premium price on their products to keep their companies function.

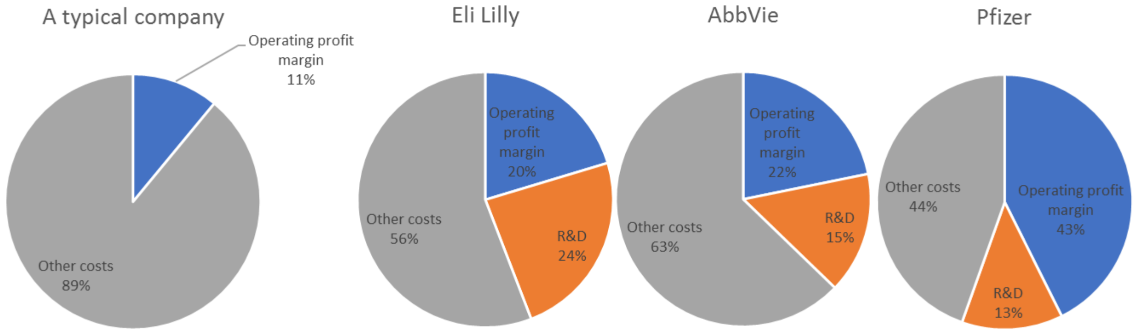

Figure 1. Operating profit margin and expenses (including R&D and other costs) of three World leading pharmaceutical companies in the U.S in comparison to that of a typical company (Anderson, 2014).

Is it just for a pharmaceutical company to pursue a premium profitable level by charging a prohibitively high price and sacrificing the life of patients? Based on free-market philosophy inspired by Milton Friedman in his article about the social responsibility of business, Chatterjee argues that the current premium high price is just because the only responsibility of business is maximizing its profit. In addition, she claims that corporations should not care about social responsibility because, in the capitalist society, the benefit that pharmaceuticals provide to patients does not generate any financial value to investors (Chatterjee, 2016). The problem with this point of view is that it isolates business from society. Indeed, it treats the firm as an apolitical agent without any social responsibility. However, because every decision made by the firm generates some impacts on and is affected by the society, the firm would not be able to separate itself from the society (Mintzberg, 1989). By avoiding putting the social responsibility into the equation to calculate pharmaceutical prices, pharmaceutical companies create a severe and un-hideable negative impact on the society. Recall that a moral decision is a choice made by agents based on what they believe is proper behavior; the framework of Chatterjee and Friedman gives the firm a morally incorrect advice. Indeed, it is hard to agree that creating an artificial price barrier to prevent patients to achieve a better life in order to maximize direct-to-pocket profit is a proper behavior. Therefore, it is unjust to charge prohibitively high prices on essential pharmaceuticals to pursue a premium profitable level.

Given that (i) patients need to have a secured access to their needed essential pharmaceuticals, (ii) it is possible for drug companies to reduce drugs' price, and (iii) it is morally right to do so, pharmaceutical companies should operate at a lower profitable level by charging a *lower but ethical* price for essential pharmaceuticals. That lower but ethical price the will ensure the widest possible distribution of essential pharmaceuticals (Spinello, 1992), will not damage the R&D process, and will create enough incentive for shareholders to invest, just as other majority industries with a similar operating profit margin do.

Who should act to adjust the current premium price to a lower but ethical one? For patent pharmaceuticals with a single monopolistic supplier, price setting power can only be placed on the corporation itself or the government. With the U.S free-market system, the drug prices are determined by corporations. However, empirical evidence shows that corporations, with their self-interest nature, tend to violate distributive justice by inflating the price to maximize their profit. A notable example is a case of Martin Shkreli with his price hike scandal for Daraprim, a life-saving pharmaceutical used to treat and prevent malaria. In 2015, to raise 1$ billion for his company, Shkreli rocked the price of Daraprim by 5000%, from $13.50 per pill to $750, overnight. Shkreli wrote to the board of chairman of his company before the transaction, "$1bn here we come" (Luckerson 2016). The price of Daraprim nowadays in many pharmaceutical stores is still around $800 per pill and many patients who cannot afford it have to search for alternative non-proven drugs. This example confirms that, with self-interest behavior and unsatisfiable demand for profit, and without any constraint, corporations have the incentive to inflate the price to maximize their profit. The benefit from the high price of one firm will leverage its financial position in comparison to its peers and, therefore, will trigger the price-inflating action of other firms. Therefore, placing the price-setting power on the corporation itself will not ensure the distributive justice. Putting the price-setting power on the government may be a better solution. With a reasonable price for essential pharmaceuticals that does not damage R&D, price regulation tools from the government, such as price ceiling, will give the entire pharmaceutical industry a similar plain field - a homogenous business sphere in which corporations can freely play their favorite economic game of profit maximization.

In conclusion, I believe that patients should have access to essential pharmaceuticals they need regardless of their financial background. R&D is not the primary factor that inflates the price of medications, but rather direct-to-pocket-profit. It is possible for pharmaceutical companies to function and derive new drugs through R&D at a lower but ethical price. This lower but ethical price will provide enough incentive for shareholders to invest in this industry, like other industries with the same average operating profit margin. Putting the price-setting power on corporations will not assure distributive justice for essential pharmaceuticals due to corporations' self-interest nature. However, placing the price-setting power on the government, we can hope for a healthier industry in which price regulation will not only suppress corporations' incentive to inflate the price to maximize their profit but also secure the duty of social responsibility for all players.

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