The Effect of Mergers on Drug Pricing

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Rising drug prices affect millions of Americans today and will continue to have a strong effect on both the health and financial stability of these people years in the future. Over the years, there have been debates over how the competitive environment in the pharmaceutical industry functions and why drug prices continue to rise despite economic principles of competition fighting to keep them stable.

The idea that a competitive market keeps prices stable is an economic concept that is well-researched and generally agreed upon by economists; however, this principle can only function properly if the characteristics of market competition are upheld. Specifically, this paper will be looking at how the number of sellers and market share affect the price of specialized pharmaceutical products such as plasma derivatives. Plasma derivatives are a class of pharmaceutical that are created using human plasma, the liquid part of blood. It contains proteins essential to maintaining life, serving functions of disease prevention and blood coagulation. The plasma can be harvested and used for the creation of life saving drugs which treat auto-immune disorder, immunodeficiencies, bleeding disorders, as well as lung and liver disease. These drugs, though very important, account for just 0.3% of all drugs on the market according to the Food and Drug Administration (FDA). In such a small market, there is additional space for competitive factors to drastically change due to the presence of very few companies selling the product and high barriers to entry in such a specialized field. One way that this competitive landscape can change is through horizontal mergers within the space. This paper addresses the question: How do mergers affect drug acquisition costs within the plasma derivatives market? More specifically, the paper examines whether, and to what extent, the presence of M&A activity and shifts in market shares affect the price for a consumer to acquire potentially life-altering medication.

Previous literature has investigated the effects of changes in market competition in the pharmaceutical industry. The two main explanatory characteristics of price changes investigated are mergers and acquisitions in the space and generic entry into the market.

There is a vast amount of academic literature that explores the effect of mergers on prices, and innovation. Many of these studies conclude different results based on the space being studied and methods of analysis. Some studies find that through M&A activity, companies generate synergies that lead to increases efficiency in product generation, innovation, and ultimately, decreases in prices (Sheen 2014). Others focus their analysis on the changes in market share and pricing power associated with M&A activity and find an associated increase in prices (Bonaime and Wang 2019). Research has shown that from the 1995 through 2016, there has been a continuous and exponential increase in the amount of merger activity, as well as the value of mergers within the pharmaceutical industry (Gagnon and Volesky 2017), further emphasizing the importance of continuing research on the effects on product acquisition cost due to merger activity.

Additionally, there is much research on patent expiration in the pharmaceutical industry. After a certain period of time, patents for the formula used to create a medication expire, which is soon followed by mass generic entry into the space, generally decreasing the acquisition cost of a medication (Granlund and Bergman 2018). In other studies, evidence shows that though generic acquisition cost greatly decreases, there is an increase in the price of the brand name product due to brand loyalty of its original consumer base (Conti and Berndt 2014). Due to this being such an essential piece in identifying causality for changing prices, it is important to control for this effect in the analysis in this paper.

**\*Add paragraph on historical policy papers from when more research done\***

The main intended contribution of this paper is to investigate the specific market dynamics with the drug class of plasma derivatives. This is a very important, yet very under researched aspect of pharmaceuticals due to its small proportion to the overall market; however, I contend that it is just as important as any of the other drug classes due to its ability to both save and positively alter the lives of those who utilize it. There is specific research on other drug classes such as prescription medication and over the counter medications, as well as research into types of medicine such as those used to treat specific diseases such as cancer. There is a gap in the literature when it comes to plasma derivatives and beginning to fill that gap is the main intent of this paper. The goal of this paper is to not only investigate the interaction between M&A activity and the acquisition price of plasma derivatives, but also to explore potential policy options which can allow for innovation and growth to continue while making life saving medication affordable to those in need.

In addition, another purpose of this paper is to continue the work of Gagnon and Volesky (2017) and research the rates and of M&A, specifically within the field of plasma derivatives. Their work tracks mergers from 1995 to 2016, while the data utilized in this paper is as recent as 2024. Within their paper, they concluded that the number and value of mergers in the pharmaceutical industry was increasing as time went on and this paper will be able to use more recent data to see whether these trends continue or began to slow down after 2016. Additionally, this will allow a separate analysis specifically within plasma derivatives potentially demonstrating a connection or gap between their research and conclusions on general pharmaceutical mergers and companies which produce plasma derived products.

The remaining organization of this paper is as follows: Section II (the next section) will outline the data collection methods and sources. It will also outline explanatory and outcome variables to be utilized in the analysis and why they were chosen as representative of the question. Section III will present the analytical strategies and econometric methodologies employed in the analysis. It will include a primary model, as well as robustness checks, identifying why these methods fit the data and establish causality in results. Section IV will discuss results of the analysis and present appropriate figures, examining how the results answer the research question and apply to the two contributions outlined in the introduction. Finally, section V will conclude the paper by emphasizing the importance of the findings in section IV, while outlining potential policy implications and direction for future research on the topic.