REGULATING MARKET POWER: AN EMPIRICAL AND LEGAL ANALYSIS OF ANTI-COMPETITIVE PRACTICES IN INDIA'S PHARMACEUTICAL SECTOR

- Dr. Seema Shrivastava[1] & Aarya Shrivastava[2]

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ABSTRACT

At the very junction of public health lies the pharmaceutical sector. It is essential to examine the effects of regulations and market structure in line with competition law aspects. Therefore, this study aims to look into the extent and impact of the pharmaceutical sector practices and trends onto the consumers especially at a retail level in the Bengaluru region. How local market dynamics and regulatory weakness have led to price distortion and reduced access to medicine which overall harms an innocent and uninformed consumer. Using a mixed and interactive approach of combining empirically accessed and doctrinally analysed data to assess the impact on consumers. This study draws its conclusions from a structured survey of pharmacies and consumers, including 15 outlets and 35 consumers. The Competition Act of 2002 and the DPCO of 1995 along with landmark cases like Novartis AG v Union of India (2013) have been relied on. Additionally, reliance has been placed on India's situation within the global discussion on pharmaceutical competition policy. The studies have revealed brand favoritism, entry barriers, and limiting of consumer choices. Significant gaps in the legal framework have been strawed out and inclusion of stronger enforcement measures by CCI is recommended for transparency.

Keywords: *Competition Commission of India (CCI) Pharmaceuticals, Market regulation, Consumer behavior, Anti-competitive practices.*

JEL Codes: K21 (Antitrust Law), I18 (Health: Government Policy), L65 (Pharmaceutical Industry)

[1] Assistant Professor of Economics, National Law Institute University, Bhopal (Madhya Pradesh) India, Email ID seemashrivastava@nliu.ac.in, ORCID ID https://orcid.org/0009-0008-7301-1612.
[2] Student of Law, Christ Academy Institute of Law, Bangalore (Karnataka) India, Email ID, ORCID ID https://orcid.org/0009-0001-3586-1084.

Corresponding Author: Dr. Seema Shrivastava, Assistant Professor of Economics, National Law Institute University, Bhopal (Madhya Pradesh) India, Email ID seemashrivastava@nliu.ac.in, ORCID ID 0009-0008-7301-1612.

1. RESEARCH METHODOLOGY

This present research is conducted with the help of *empirically* analyzed results and insights along with a *doctrinal* analysis of latest legal developments in the pharmaceutical sector. Using a mixed method approach the study combines empirical data from a structured survey of pharmacies and consumers (n=15 outlets, n=35 consumers) with doctrinal and comparative legal analysis of key statutes (e.g., the Competition Act, 2002; DPCO, 1995) and landmark cases, such as (Novartis AG v Union of India, 2013). The sample collection method is *Non- Probability – Convenient sampling*. The sample size is small in case of outlets i.e. 15 as the study is confined to a particular area of Bengaluru city. Thus, the sample is not the representative of the population, so the results cannot be generalized. Also, Convenience samples are at risk for sample bias and selection bias. Though the sample size of Consumes i.e. 30 is as per the Central Limit Theorem (CLT).

Limitation of the Study: This study is limited on account of the fact that the inferences are based on a small sample size (n=15 and n=30). Based on this sample the empirical findings are exploratory and cannot be generalised to the entire Bengaluru market or India. This leaves a scope of further research into the ambit of the wide consumer and supplier base of the pharmaceutical sector.

2. LITERATURE REVIEW

The first paper that has been used to analyse the present study is *"Implications of Competitive Pricing on the Indian Pharmaceutical Industry"* authored by Datta & Kaushal (2025) and published in the *International Journal of Advanced Legal Research*. This paper examines the interaction between competition law and pricing mechanisms within the Indian pharmaceutical market, with particular emphasis on the role of the Competition Act, 2002. The authors analyse how competition law functions as a regulatory tool to ensure fair pricing and ethical market conduct in an industry that directly impacts public health. The study highlights that despite the presence of multiple market players, pricing irregularities persist due to practices such as excessive pricing and lack of effective competition at the consumer level. The legal themes explored in this paper such as competitive pricing and consumer protection, are directly relevant to the overall theme of the present research, as they demonstrate how competition law is instrumental in safeguarding consumer interests and preventing the abuse of market power in the pharmaceutical sector.

The second paper used in the analysis is the *Market Study on the Pharmaceutical Sector in India* conducted by the Competition Commission of India (CCI). This report serves as a foundational regulatory and policy-oriented document that provides an in-depth assessment of market structure, pricing dynamics, and competition-related challenges within the pharmaceutical industry. Although technical in nature, the study offers crucial insights into systemic issues such as high trade margins, the dominance of branded generics, and the lack of effective price competition at the retail level. The CCI identifies areas requiring regulatory and policy intervention, thereby reinforcing the role of competition law authorities in addressing market distortions. The themes emerging from this report align with the overall focus of the paper, as they highlight how regulatory oversight is essential to ensure that competitive forces translate into affordable pricing and enhanced consumer welfare in the Indian pharmaceutical market.

3. INTRODUCTION

The competitive dynamics of the pharmaceutical industry are intricate, and nuances marked by interactions between company objectives, market forces and regulations. The significant influence of the industry on how healthcare is delivered in the country at a both public health and economic growth end. The anti-competitive environment of the pharma sector has a potential to create concerns regarding pricing, innovation incentives and fair access to necessary medications.

The corporations compete to control markets through the creation of innovative drugs, generic alternatives, and biosimilars. Yet, the anti-competitive nature of the industry can heavily and drastically have detrimental effects on patients in the form of higher prescription costs, restricted access to drugs and heavy decline in innovation. These actions have the potential to worsen healthcare disparities. They may also affect the supply and cost of essential medications. This study aims to investigate how the aforementioned anti-competitive practices among local pharmacies affect the availability and pricing of essential medications, ultimately impacting consumer access and choice.

Even though there have been studies conducted previously examining the wider spectrum of competitive aspects in the pharma sector. Yet, in order to shed light on the public health and market regulation aspect of the same, this study has aimed to conduct data-driven research. Market trends and results across geographical locations and various product categories has been conducted.

It is so that the present analysis has been computed and done so with an objective to balance the ends of pharma industry with those of sustainability, affordability, and innovation. In the longer run policymakers, industry stakeholders, and researchers will have to decipher the dynamics of competition in the pharmaceutical sector in order to successfully negotiate the difficulties of guaranteeing an easily accessible healthcare system. The study aims to offer insights that will guide future choices and assist in balancing societal and economic demands. This study is based on empirical approach to investigate the dynamics of competition in the pharmaceutical industry with the goal of identifying the major determinants of market outcomes and competitive behavior. The results highlight how anti-competitive practices among local pharmacies affect the availability and pricing of essential medications, ultimately impacting consumer access and choice. The data collected for analyzing the degree of competitiveness of the pharmaceutical market in the city comprises the following:

1. Products:

a) Drugs - (Anesthesia, Insulin etc.)

b) Over-the-counter medicine (Dolo, Azithromycin etc.)

c) Medico products (syringes, oxygen masks & cylinders etc.)

2. Geographical Boundaries:

Bangalore - Hullahalli Neeladri HSR Layout etc. (6 km Radius)

3. Sample / Respondents

a) Consumers (patients, family of deceased, elderly consumers etc.)

b) Sellers/ Suppliers/ Retailers/ Small Business Owner

4. THEORETICAL FRAMEWORK

Economic analysis of pharmaceutical market is grounded in the following key theories:

1. Monopoly Rent: Patent exclusivity allows firm to earn economic profit beyond competitive levels. While justified as a reward for innovation, such rent seeking behavior can become harmful when extended through evergreening or licensing manipulation.
2. Information Asymmetry: As highlighted in Akerlof's (1970) theory of "The Market for Lemons," patients are not well positioned to evaluate drug alternatives, making them

vulnerable to overpricing and brand manipulation. Physicians and retailers often act as intermediary, but may have conflicting incentives, specially, when influence by pharmaceutical promotions.

3. Regulatory Capture: As theorized by Stigler (1971), industries, subject to regulation may capture their regulators to act in the industries interest rather than in the public interest. Under enforcement of DPCO, weak price monitoring, and Limited CCI intervention in the Indian pharmaceutical sector may reflect such dynamics.

a. Kaldor-Hicks Efficiency: Reform Evaluation

Unlike Pareto efficiency, the Kaldor-Hicks' criterion allows a change to be deemed efficient if the gains to some parties are large enough to hypothetically compensate the losses of others- even if no compensation actually occurs.

Regulatory reform, such as expanding the Drug Price Control Order (DPCO), imposing supply chain, transparency, or removing brand linked prescribing main post compliance cost on dominant firms, but these are outed by the systematic gains in consumer welfare through reduced prices, increased access and more competitive markets.

b. Game Theory: Modeling Retailer Collusion and Strategy Behavior

In oligopolistic environments like pharmaceutical retail markets, game theory models explain the presence of collusion. Pharmacies and distributors often operate under repeated interactions, where deviation from price fixing or brand favoritism may be punished by exclusion from future supply agreements.

Using the repeated prisoner's dilemma model, collusive price setting emerges as a Nash equilibrium:

a) *Each player (pharmacy) prefers to maintain collusion (higher prices, stable supply) rather than undercutting others, which may lead to being blacklisted by dominant distributors.*

b) *This dynamic is sustained by the threat of retaliation (cut off of inventory or credit lines), preventing entry of smaller, independent actors, and stiffing market competition.*

Legal rules must increase the payoff of deviation (e.g. incentivizing whistleblowing, reducing dependency on single suppliers) to break the equilibrium that sustains collusion.

Global Scholarship on Antitrust in Pharmaceuticals:

F.M. Scherer (1996) laid a foundational understanding of how patent-based monopoly can lead to price, inflation and innovation, stagnation in the absence of robust competition and law enforcement. Patricia Danzon (1997) further analyzes the role of price controls, and international reference pricing in curbing excessive markup in drug pricing, noting that competition policy must balance innovation incentives with excess objectives. More recent (OECD) report 2021 emphasize how vertical restrain, pay-for- delay agreements and abuse of dominance by large Pharma corporations have become key concerns in both developed and emerging markets.

c. Indian Context

In the Indian context, the Drug Price Control Orders (DPCO) have been the principal tool for regulating drug prices since 1970s. However, several scholars have criticized DPCO regime for being reactive arbitrarily applied and poorly enforced. Nayak (2011) points out how the reduction in the number of drugs under price control has corresponded with the rise in consumer level pricing. Articles from the *Indian Journal of Health, Economics,* and NUJS Law Review (2014-2021) have raised concerns about regulatory capture and the limited proactive role of the Competition Commission of India (CCI) in detecting, collusion and abuse in pharmaceutical markets.

The notable case of *Novartis AG v Union of India* (Novartis AG v Union of India, 2013) was a turning point in reaffirming the country's commitment to access over patent exclusivity and it set a precedent against "evergreening" of drug patents. In a similar fashion CCI decision in *Re: M/s Alis Medical Agency* (In re M/s. Alis Medical Agency, n.d.) highlighted collusive behavior and emphasized the dire need for systematic reform in drug distribution practices.

Another notable example is the case of *Roche v. Cipla F* (Hoffmann-La Roche Ltd. & Anr. v. Cipla Ltd., 2015*)*, where Roche, a multinational pharmaceutical company, attempted to prevent Cipla, an Indian generic manufacturer, from selling a cancer drug.

The legislation on competitive practices seeks to balance market efficiency with public health imperatives. CCI actively intervened to curb anti-competitive practices such a s cartelization, abuse of dominance etc. It further regulates exclusionary distribution arrangements, and restrictive trade practices prevalent in the pharma supply chain. By way of making sector-specific enquiries and enforcement actions CCI also clarified that even regulated industries like pharma are not immune from CCI scrutiny. In the Indian context, competition law has emerged as a crucial regulatory tool that complements price control mechanisms and drug regulation frameworks to promote fair competition, affordability of medicines, and consumer protection.

d. Various Anticompetitive Practices in the Pharmaceutical Industry

The pharmaceutical sector of India has been one of the largest around the globe. It is ranked third by volume and thirteenth by value and is valued at approximately $50 billion but is expected to grow to $130 billion by 2030. India is a global leader in generic drug production, manufacturing 20% of the world's generics by volume, and supplying over 40% of generics to the U.S. market. The pharma sector is regulated by the Central Drugs Standard Control Organization (CDSCO) which works with the National Pharmaceutical Pricing Authority (NPPA). Both organizations monitor essential drug prices. Due to increasing demand for treatment for chronic diseases like diabetes and cancer, domestic market is witnessing growth (Sindkhedkar et al., 2020).

e. Trends in the market

Like any other industry, the Pharma sector also suffers from vices of anticompetitive and unfair trade practices. Anti-competitive practices along the pharmaceutical value chain for profits and high trade margins. A survey conducted on the doctors, pharmaceutical industry, consumer organizations, hospitals and pharmacists in India bring to light various facts about collusion along the pharmaceutical distribution chain at the ground level, Competition Commission of India (CCI, 2011). In a recent study, the majority of the pharmaceutical companies surveyed claimed awareness with respect to the existence of collusive practices in the pharmaceutical industry and a high 32.2 per cent of respondents asserted that such practices prevail in the industry to a great extent (Nayak, 2011).

Some of these unethical practices were about irrational drug prescriptions by doctors motivated by kickbacks received from pharmaceutical companies. As a result, they prescribe expensive drugs that may not be necessary either. What encourages such rent-seeking behavior is the information asymmetry and low elasticity of demand to changes in prices because here the doctors are the influencers and not the consumers. Collusion also takes place along the distribution between drug companies, stockists, retailers, and Medical Representatives (M.R.) which disproportionately inflates the cost of medicines & the overall treatment. Consumers have little or no choice in such a rigged market and buy what is prescribed by doctors or what are sold by chemists (Sengupta, 2010).

Pursuant to the Drug Price Control Order, 1995 (DPCO), a grave concern has been the decreasing number of drugs under statutory control in the wake of liberalization and economic reforms (Mahapatra, 2011). Major efforts need to be made in bringing all essential medicines under price regulation. In response to a petition, the Supreme Court directed the secretaries of Ministry of health and Ministry of chemical and fertilizer to file affidavits in four weeks stating whether the Union government wanted to bring the essential medicines under the ambit of price control. The petitioner had stated that medicines are not being available to the poor at affordable prices (All India Drug Action Network v. Union of India, 2011).

Recently, the Draft National Pharmaceutical Pricing Policy was proposed in 2011, which introduced two significant changes to the existing system of drug pricing. First, to calculate the drug prices based on market demand and not the cost of production. Second, to control bulking of drugs. In India, anti-competitive pricing practices in the pharmaceutical sector have been a significant concern, particularly given the size of the market and its importance to global drug supply.

f. Anti-competitive Practices in the Industry

Instances of price fixing have been seen and it occurs when pharmaceutical companies collude to set prices at an agreed level, which limits competition and inflates costs. In India, such practices have been detected among both generic and branded drug manufacturers. For instance, similar allegations were investigated by the Competition Commission of India (CCI) against Cipal, Lupin and Dr. Reddy's Laboratories for conspiring to fix prices and led to the imposition of costs (In re M/s Alis Medical Agency v. Federation of Gujarat State Chemists & Druggists Associations, 2014)

The country has also been faced with cases of price gouging when the pharma companies raise prices dramatically, particularly for life-saving drugs and often in response to supply shortages. For medicines, like Remdesivir prices skyrocketed at over 400% in some cases and NAPA had to intervene (National Pharmaceutical Pricing Authority [NPPA], 2020).

Other practices include evergreening (patent trolling) and the Supreme Court of India in the *Novartis AG v. Union of India (Novartis AG v. Union of India, 2013)* addressed this issue in the Indian pharmaceutical market and the protection of public health.

Exclusive distribution agreements limit the competition by restricting the availability of drugs in the market and allowing certain giants to maintain dominance. In 2015, Mylan was investigated for entering to exclusive distribution agreements with its suppliers.

Price discrimination is also seen in the industry as different prices for rural and urban areas was being charged by companies in order to maintain profitability and sale (World Health Organization, 2017).

5. PREVALENT ANTI-COMPETITIVE BEHAVIORS AMONG PHARMACEUTICAL COMPANIES OPERATING IN THE CITY OF BANGALORE

To adjudge the scenario of the pharma sector in the city of Bangalore a geographical area of Neeladri, Electronic City and Hullahalli was picked. The three locations fall within a radius of 6 km and comprise both urban as well as rural populations. A sample size of 15 Medical stores was taken and the following data was gathered:

1. Names of Pharmacies Surveyed:

a) Sri Sai Hospital

b) Aashraya Poly Clinic

c) Hansika Medical

d) Life Care Medical

e) Apollo Clinic

f) Palash Medico

g) Balaji Medical

h) Heera Medical

i) RV Clinic

j) Clinic Medical

k) Nakoda Medical

l) Kalapataru Medical

m) Narayana Pharmacy

n) Aster Medico

o) Apollo Pharmacy

2. Relationship with Store:

a) Owners (33.3%)

b) Relatives of owners (33.3%)

c) Employees (33.3%)

3. Type of Products Sold:

a) Pharmaceuticals (73.3%)

b) Essential drugs (66.7%)

c) Medico products (syringes, masks, etc.) (46.7%)

4. Perceived Competition:

a) Moderately competitive (40%)

b) Highly competitive (26.7%)

c) Limited due to dominant players (33.3%)

a. Anti-Competitive Behaviors Prevalent Among Pharmaceutical Companies in the Sample Area

Anti-competitive practices within the pharmaceutical sector undermine market fairness in the Electronic city, Neeladri and Hullahalli as well. The inflated drug prices and restrict on consumer choice majorly affected competition in the area. Insights from the survey have revealed the existence of patterns highlighting such practices and their influence on market dynamics.

1. *Brand Favoritism and Pressurization:* It was discovered that around 80% of the pharmacies occasionally or frequently face pressure from distributors to prioritize their products as evident in Figure 1. These brands threaten to discontinue business with any shop which refuses to deal as per their set conditions and completely robs the stores off any autonomy. The consumers are not provided a diverse range of products.

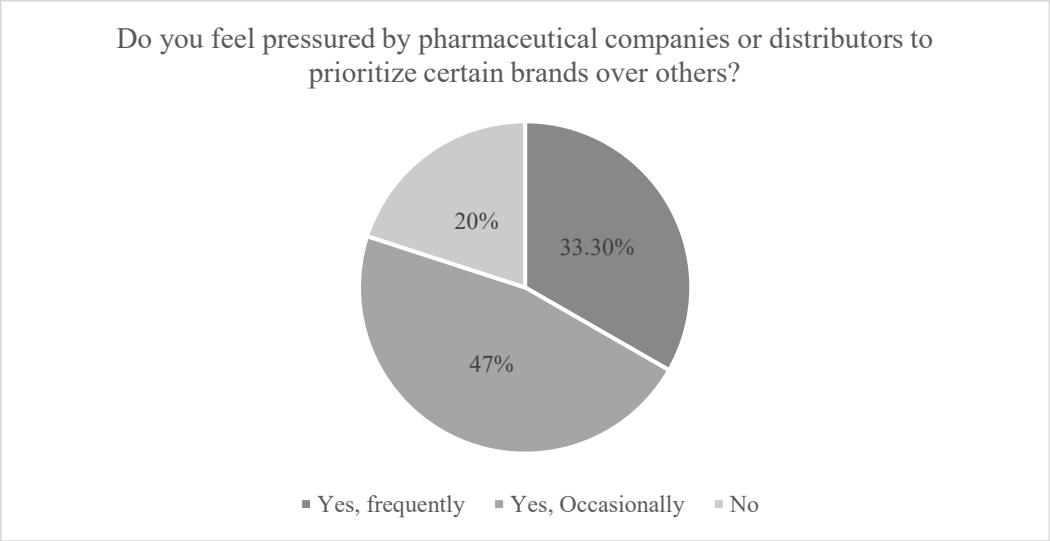

Figure 1: Do you feel pressurized by pharmaceutical companies or distributors to prioritize certain brands over others?

Source: Author's Construction

2. *Restrictive Supply Practices:* Tactics to restrict supply have also been employed by manufacturers and wholesalers of medicine and medico-products. About 42.9% of the participants responded that a significant downscaling of supply was seen during the second and third wave of Covid-19 and it majorly hindered the stores from providing essential drugs to the consumers without challenges. Responses presented in Figure 2.

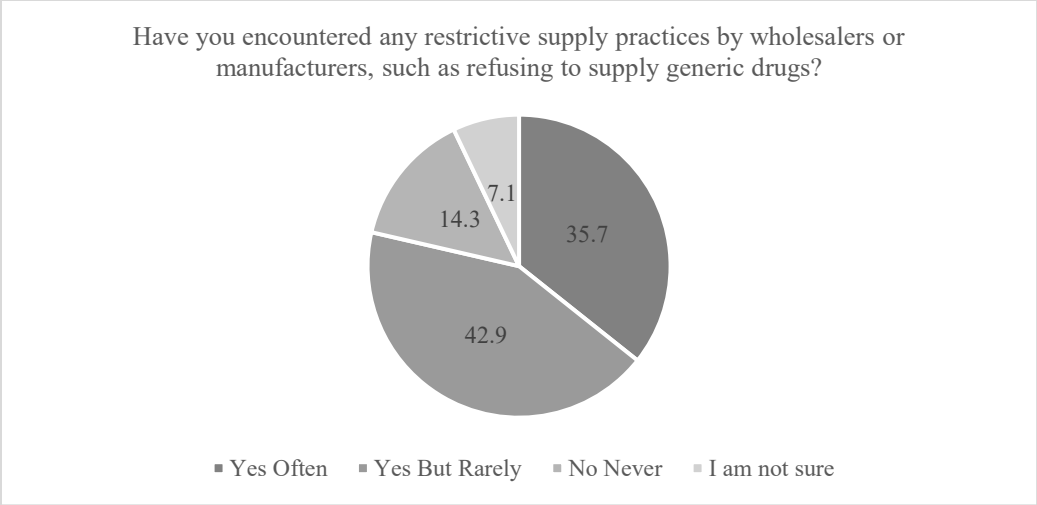

Figure 2: Have you encountered any restrictive supply practices by wholesalers or manufacturers, such as refusing to supply generic drugs?

Source: Author's Construction

3. Price Fixing: Though not clearly accepted to but respondents have hinted towards the price-fixing agreements among pharmacies that appear occasionally. 28.6% of respondents recognizing this behavior have pointed out price collusion inflating costs, distortion of the competitive landscape and financial burdening on the consumers. Refer to Figure 3 for responses.

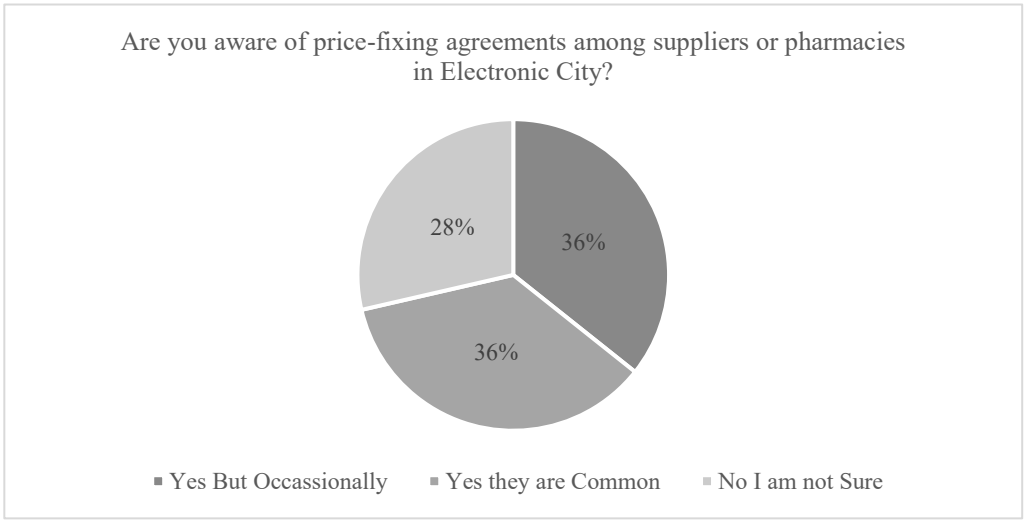

Figure 3*: Are you aware of price-fixing agreements among suppliers or pharmacies in Electronic City?*

Source: Author's Construction

4. Supply Chain Favoritism: It is pertinent to note that more than 35% of respondents reported occasional difficulties in sourcing medications due to supply restrictions or favoritism. Such practices create artificial scarcity and give undue advantage to certain players, sidelining smaller retailers. Refer to the following Figure 4 for responses.

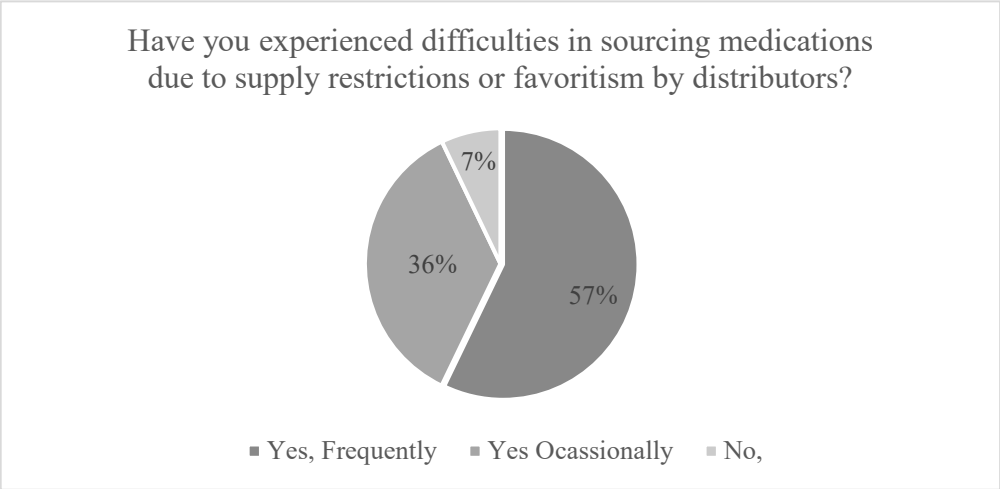

*Figure 4****:*** *Have you experienced difficulties in sourcing medications due to supply restrictions or favoritism by distributors?*

Source: Author's Construction

5. Market Concentration: The responses classify the competition level as limited due to "presence of dominant players" in the market or similar to a 'monopoly' in 40% of the cases and 53.3% as area specific dominance as shown in Figure 5. Such dominance reduces opportunities for growth and challenges the smaller businesses to thrive. This leads the consumers to lack access to the market with competitive prices.

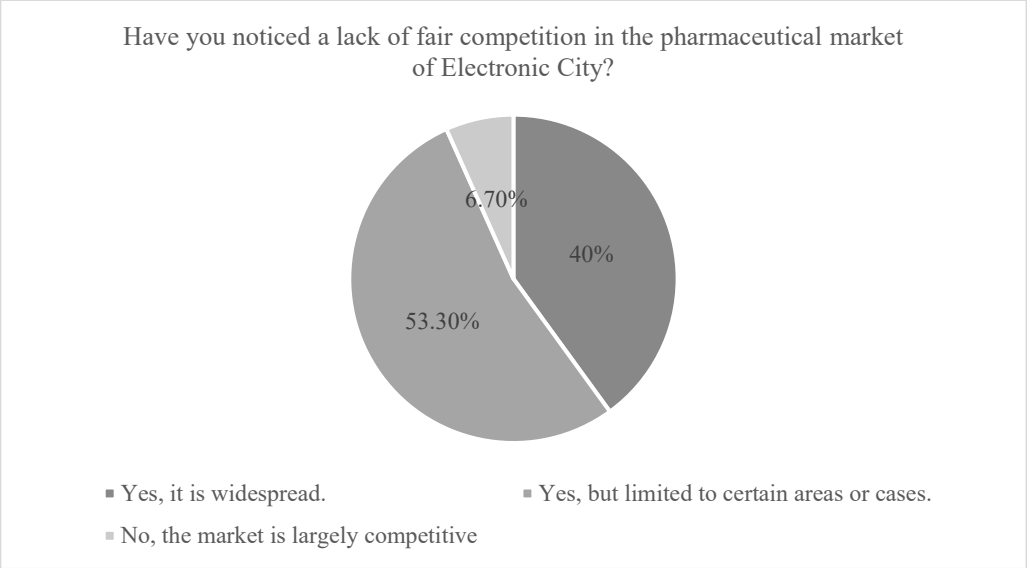

Figure 5: Have you noticed a lack of fair competition in the pharmaceutical market of Electronic City?

Source: Author's Construction

IMPACT OF THESE PRACTICES ON MARKET COMPETITION

1. Erosion of Market Fairness: There is a major prevalence of restrictive supply agreements in this sector which erodes the consumers & suppliers of fairness. Small business owners often lose their customer base due to their inability to match prices with giants like Narayana and Apollo Pharmacy. These giants also enjoy inventory excess and always hold an edge over the other shops.

2. Reduced Consumer Choice: Once the pharmacies push certain brands and limit other brands in the supply of generic OTC Medicines, the consumers face restricted choices. This often forces them to opt for higher-priced branded drugs over cost-effective alternatives, significantly raising healthcare costs.

3. Inflated Drug Prices: Practices such as fixing prices has led to driving up of drug cost because competition with natural price regulation gets diminished. Consumers in the lower tax bracket are harmed and undue restraint is placed onto them**.**

4. Barriers to Entry: Significant barriers to entry are create by dominant players' anti-competitive practices and harms new businesses. The new entrants have to struggle to break even in the absence

of a reliable supply chain. Their market visibility becomes negligible and leads to a perpetual failure of chance.

5. Undermined Innovation: Decreased and lacky competition disincentivizes the innovation in the pharmaceutical sector. And without such pressure to make amends and improvements, there is no reduction in cost and research and development in deprioritized. Hence, the healthcare industry is often skewed by practices that undermine competition in the market.

Businesses are significantly impacted and so are consumers. A major portion of respondents reported that they had lost customers due to these practices as shown in Figure 6. Smaller businesses were facing challenges in competing due to limited access to products. These practices also restrict consumer choice as pharmacies are unable to stock generic or alternative brands. Options become way fewer and costs for consumers hikes. The effects of price-fixing further inflate drug costs, reducing affordability and squeezing the margins of smaller businesses.

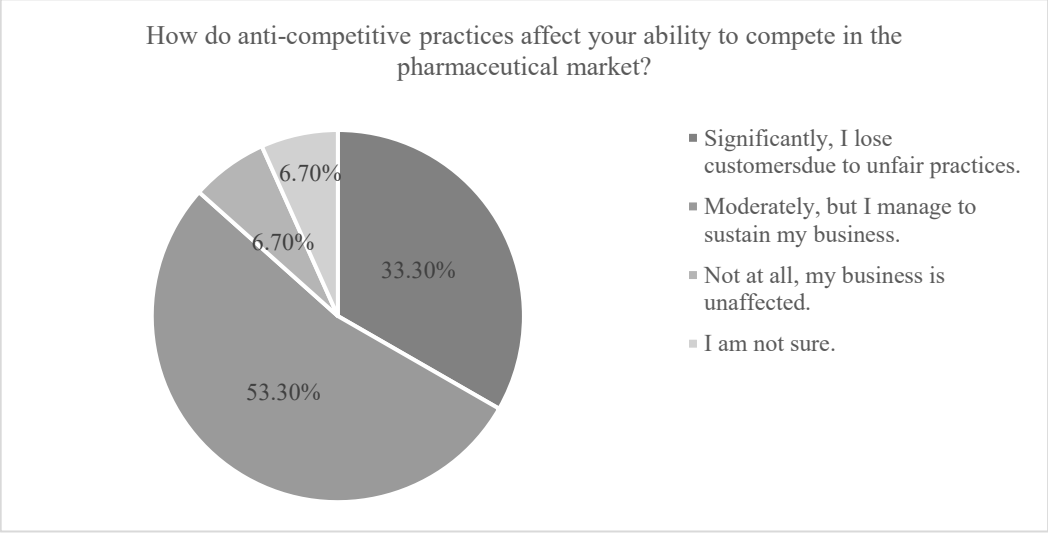

Figure 6: How do anti-competitive practices affect your ability to compete in the pharmaceutical market

Source: Author's Construction

The supply chain manipulation has created operational difficulties for smaller pharmacies. While many respondents highlight challenges in sourcing medications there lies an inequity in the supply chain consolidation. An uneven playing field is set with burdens on the smaller businesses to face

increasing difficulties. These practices distort market dynamics, limiting competition and harming both businesses and consumers (Analysis of anti-competitive practices in the pharmaceutical and healthcare sectors, n.d.).

5. Reflection of Regulations of the Market

Only 53.3% % of the respondents found government rule to be 'partially effective' therefore, they need better enforcement. While 26.7% said they were ineffective. These answers highlight the pitfalls between current laws and their implementation, which allows abusive activities to flourish. Refer to the following chart for data.

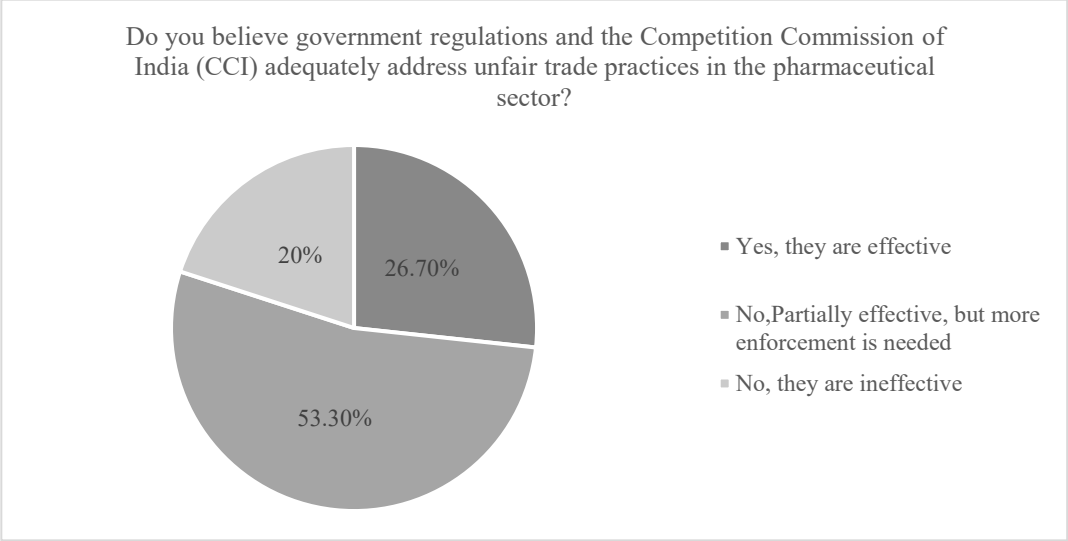

Figure 7: Do you believe government regulations and the Competition Commission of India (CCI) adequately address unfair trade practices in the pharmaceutical sector?

Source: Author's Construction

Respondents were also questioned regarding who is responsible for dealing with anti-competitive behaviour. Equal representation of government agencies, pharmaceutical firms, consumer advocacy groups, and legal authorities in the opinions underscores the recognized shared accountability in addressing these concerns.

6. Impact of Anti-Competitive Practices on Consumers

Another survey was conducted among the consumers of drugs, medico-products, and OTC medicines. These included the elderly, the families of the elderly and deceased and the sick

consumers of Electronic City, Neeladri and Hullahalli. The consumers have expressed significant concern about the impact of anti-competitive practices on their access to affordable and essential medications. Practices including price-fixing, monopolization, and bundling, are widely seen as direct contributors to rising healthcare costs. This has significantly reduced the consumer's affordability (Agarwal et al., 2022). There has been a steady increase in medication prices over the past year, as reported by the majority of the respondents. The same is attributed to unfair market dynamics and monopolistic behaviors by pharmaceutical companies and distributors.

a. Consumer Insights

Respondents that belong to families of terminally ill or the deceased and are consumers of life-saving drugs or chronic condition treatments have reported that a surge in costs has created financial significant hardships on them. This has led them put off, delay or outright skip of necessary purchases. Nearly 65% as shown in Figure 8 of respondents admitted to postponing or avoiding medication purchases due to high costs, indicating how profoundly these practices affect their healthcare access and overall well-being.

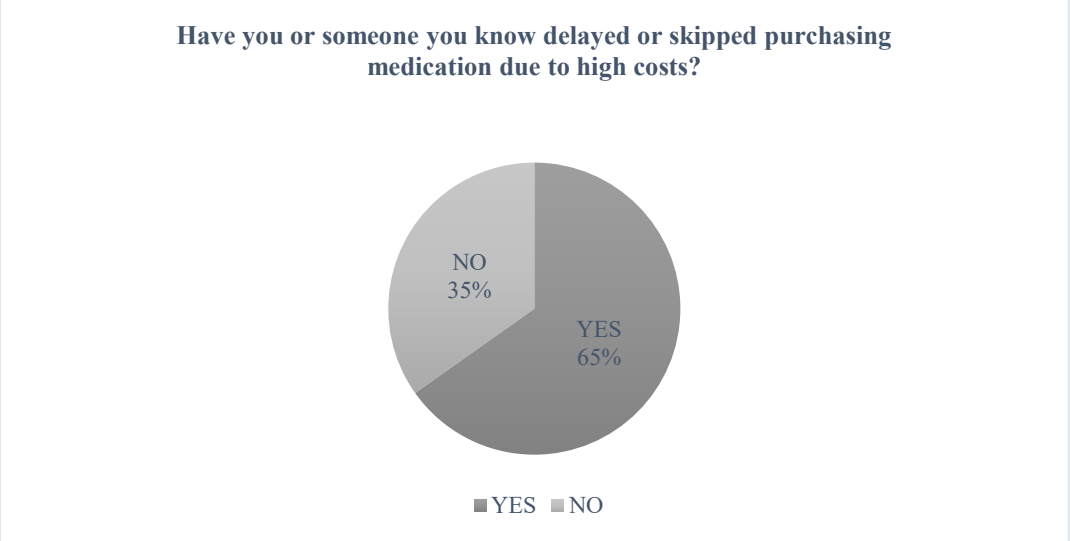

Figure 8: *Have you or someone you know delayed or skipped purchasing medication due to high costs?*

Source: Author's Construction

The affordability of medicine has been poorly rated by consumers with only a minority of the responders satisfied with the current prices that is 4% of the total respondents. The same can be seen in the Figure 9 given below as nearly 48% of the respondents show a very low level of satisfaction of the same. It is also to be noted that the impact of the same extends beyond the financial strain. Majority of the consumers worry about the long-term health consequences of being unable to afford OTC medication or adhere to the prescribed drugs.

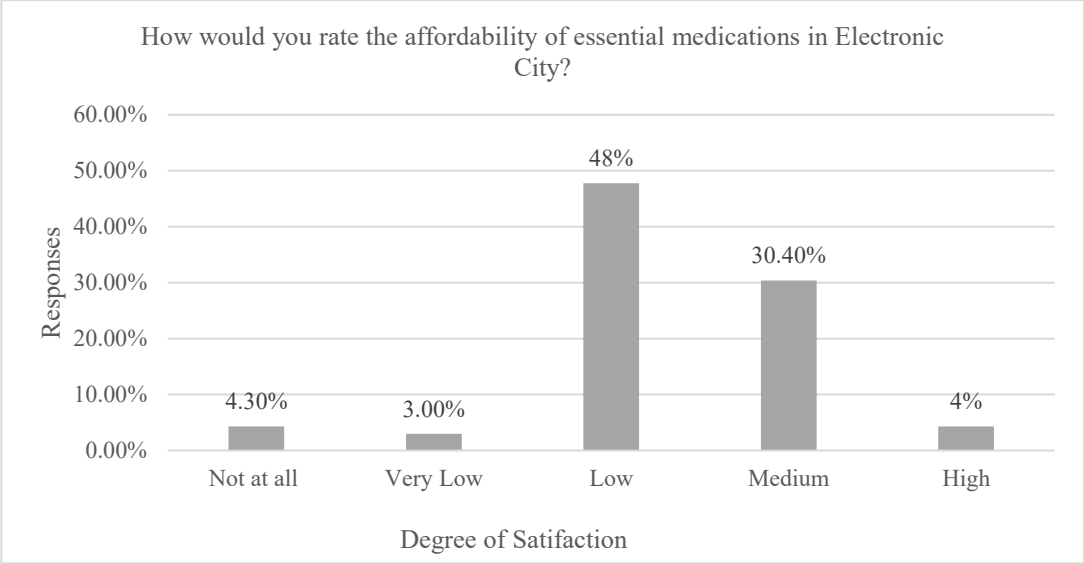

Figure 9: How would you rate the affordability of essential medications in Electronic City?

Source: Author's Construction

Many consumers are unsure about the precise role of anti-competitive practices. A notable majority of them have also linked these issues to escalating healthcare expenses for themselves and their families. These consumers view price-fixing, monopolies, and limited competition in the sector as barriers. They have reported to having been deprived of fair pricing that ultimately restricts access to essential medications for vulnerable populations, shown in Figure 10.

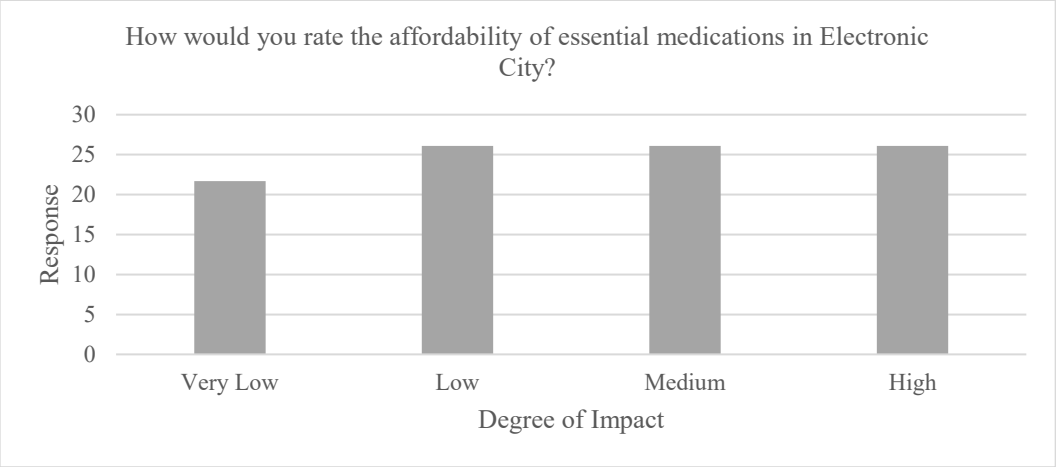

Figure 10: How would you rate the affordability of essential medications in Electronic City?

Source: Author's Construction

b. Regulations of the Market

The sentiment from the above inferences is underscored by the fact that most respondents are aware of the systemic challenges but feel powerless to combat them. Which is why the consumer need stronger regulatory frameworks. The respondents showed support for regulatory intervention in the pharmaceutical industry. This overwhelming response leads one to consider a dire need for regulation in this sector. Over 65% of respondents explicitly called for stronger legal frameworks and enforcement mechanisms to curb anti-competitive practices as shown under Figure 11.

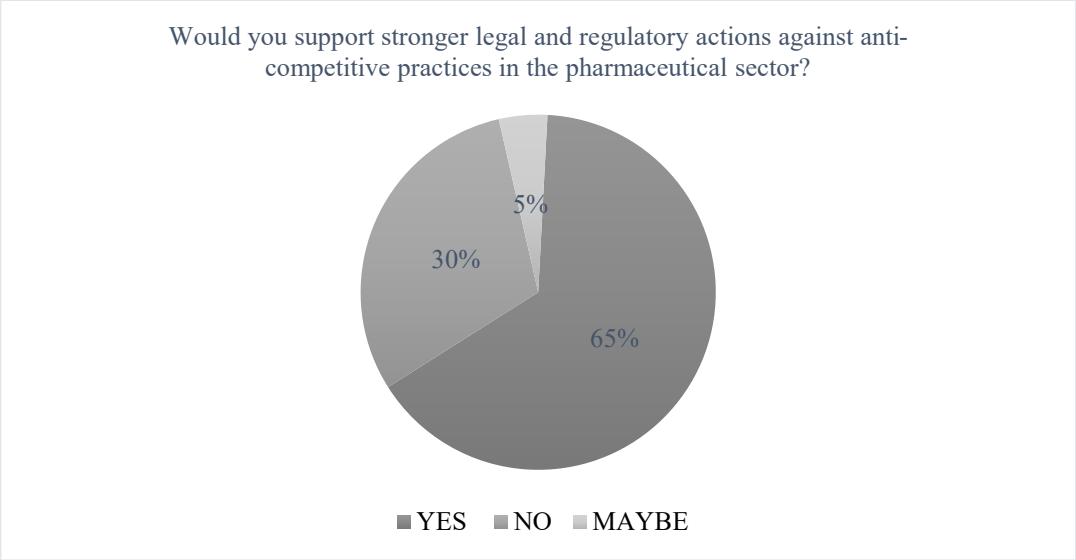

Figure 11: Would you support stronger legal and regulatory actions against anti- competitive practices in the pharmaceutical sector?

Source: Author's Construction

Many have also suggested that government-imposed price controls on medications are an effective solution. This will ensure fair and consistent pricing for essential drugs. Additionally, respondent have also advocated for increased competition within the market. They want to encourage more pharmacies and manufacturers to operate in the area. This was asserted to help break the monopolistic hold of a few dominant players and give consumers more affordable options. Please refer to the following Figure 12.

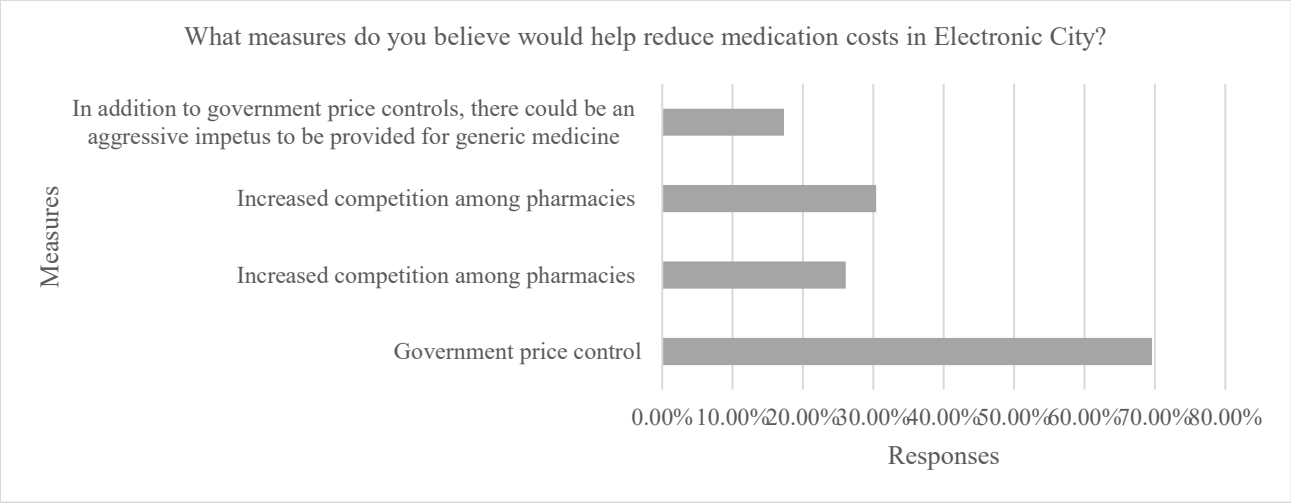

Figure 12: What measures do you believe would help reduce medication costs in Electronic City?

Source: Author's Construction

Overall, the consumers in Electronic City are acutely aware of the challenges posed by anti-competitive practices but are eager for solutions. They want the government agencies and regulatory to that address the affordability and accessibility of drugs. Consumers are of the belief that a combination of government intervention and consumer education could alleviate the burden of high drug prices. A strong desire for change is therefore, reflected by the obtained results.

7. LAW AND ECONOMIC SYNTHESIS: BRIDGING THE REGULATORY ECONOMIC GAP

It is to be noted that if transaction cost were to be negligible then from a Coasean stand point the consumers, retailers and regulators could bargain to reach efficient outcome. yet the transaction cost incurred in regulatory compliances, litigation and whistleblower exposure keep the private bargain a far- sighted practicality. Furter more Pigouvian interventions such as subsidies for substituting generic medication or taxes on inclusive behaviour may realign private incentive with social welfare.

The public choice theory offers a critical insight in to the rationale outcome of the concentrated industry interest that over power diffused consumer interest. So far so the Indian market goes the lobbying power of large conglomerates will lead to diluted amendments, selective enforcement and competitive neutrality. Economic models have also suggested an increase in the marginal cost of collusion or enhanced investigative autonomy may shift firms towards compliance.

The observed market outcome resonates with behavioral economics. The resistance to brand

manipulation is drastically reduced owing to blind reliability on known physicians. Therefore, a psychological anchor helps companies sustain premium prices. This is a common practice even in the presence of cheaper alternatives as such alternatives are never prescribed. Therefore, the law must intervene to harmonize the choice architecture at pharmacies with prescription by physicians. Furthermore, the erosion of innovation overtime along with current pricing distortion is due to the dynamic inefficiency created by monopolistic and oligopolistic practices. Rather than true R& D driven product differentiation, when dominant firms rely on exclusive distribution, patent evergreen and bundling the sector experiences Schumpeterian stagnation. Both allocative and productive efficiency is compromised, limiting long-term societal gains from pharmaceutical innovations.

To address these multidimensional failures, a hybrid regulatory model is needed one that leverages incentive compatibility mechanism alongside strict deterrents. Regulatory sandboxing, outcome-based regulations and AI driven surveillance can complement traditional legal enforcement. Integration of real time market intelligence with legal decision making will also enhance deterrence. Ultimately, a law and economic synthesis enable a shift from reactive, fragmented enforcement to proactive system-based regulation. By internalizing rationality into legal design, Indian pharmaceutical Governance can move closer to achieving Kaldor- Hicks efficient outcomes where gain to consumers and social welfare outweigh transitional industry cost

8. FINDINGS

There is a persistent disconnect between the aims of regulatory framework and the economic realities of India's pharmaceutical market as per the findings of the study. The presence of price fixing, supply in manipulation and brand favoritism-uncovered through both qualitative and quantitative data-demand critical synthesis of legal norms with economic theory to identify reform pathways and force accountability. Some of the major findings are:

1. At the heart of competition lies the objective of promoting consumer welfare and ensuring market efficiency from a law and economics perspective these anti-competitive behaviors lead to potential gains from trade or loss due to distorted pricing and restricted output result in significant dead weight loss. The empirical data supports this: over 53.3% of pharmacy respondents existing laws were only partially effective when 66.7% admitted to facing pressure from distributors to push specific brands. These coercive arrangements shift market power, upstream, and away from consumer interest violating the spirit of the

competition act 2002 and undermining the Drug Price Control Order (DPCO)'s regulatory ambitions.

2. The anti-competitive practices documented here have performed and measurable economic effects:
    a) *Reduced consumer welfare:* unaffordable condition for low-income families is created by the bundling and monopolistic pricing of medicines, particularly life-saving drugs.
    b) *Barriers to entry:* market concentration as seen in electronic city and Neeladri, has pushed smaller retailers to the brink, deterring new entrants and consolidating Oligopoly.
    c) *Distorted resort location:* markups driven by brand collusion divert public and private expenditure from the broader healthcare services toward inflated pharmaceutical costs. The resulting efficiencies are not merely market distortions- they are public health crisis in economic disguise.

3. The enforcement appears both fragmented and reactive, despite the presence of legal instruments like DPCO and regulatory body, such as the CCI and NPPA. The structural issues are:
    a) *Narrow Coverage of essential drugs:* The shrinking of essential medicine list (EMI) leaves many vital treatments unregulated. liberalization has diluted statutory price control, reducing their scope.
    b) *In efficient supply chain oversight:* regulatory blind spot, allow distributors and wholesaler to engage in practices like exclusive supply arrangements, which restrict downstream competition.
    c) *Weak Institutional accountability:* a significant proportion of respondents believe agencies, lack both teeth and transparency. This regulatory capture limits deterrence and often leads to Kaldor-Hicks inefficient outcomes, where the social cost outweighs private gains.

    The survey responses from consumers- 35% of whom have deferred essential medicine purchase due to price-underscore the inequity of outcome in an uncompetitive market.

9. CONCLUSION

The pervasive nature of anti-competitive practices in the pharmaceutical industry is highlighted in the responses from electronic city. The hypothesis that anti-competitive practices in the pharmaceutical sector significantly impact market dynamics, and healthcare affordability is confirmed by the findings of the study. Empirical evidence from the surveyed pharmacies highlights how market concentration, restrictive supply agreements, price fixing and brand favoritism undermine fair competition. This inflates drugs prices and limits consumer choice. These practices create significant barriers for small businesses, reducing market diversity.

From a legal perspective, such anti-competitive behaviors violate principles established under competition law, consumer protection, statutes, and pharmaceutical regulatory frameworks. Furthermore, the findings underscore the need for stronger regulatory interventions, including more rigorous enforcement of existing competition law.

To promote affair in sustainable pharmaceutical market, policy makers must consider legal reforms that prevent monopolistic dominance. Strengthening legal accountability mechanisms, enhancing consumer awareness and fostering market entry for new competitors are essential steps in ensuring that pharmaceutical markets function in a manner that prioritize public health overfit maximization.

A multi-faceted approach involving regulatory agencies, judicial oversight, industry, stakeholders, and consumer advocacy groups is required to achieve a balance between pharmaceutical innovation, economic, incentives and public health objectives requires. Only through a well-regulated, competitive and environment can enable access to essential medication ensured, protecting both consumer rights and long-term sustainability of healthcare sector.

10. POLICY RECOMMENDATIONS

The following policy interventions are recommended:

1. Strengthen the CCIs pharmaceutical enforcement wing- empower the competition commission of India with a dedicated unit for pharmaceuticals and expand its *suo motu* powers to proactively investigate anti-competitive conduct in the sector.

2. Expand the jurisdiction of NPPA- amend the mandate of the National Pharmaceutical Pricing Authority (NPPA) to regulate not only direct pricing, but also bundling practices, hidden commissions, and vertical distortion within the supply chain.
3. Create national medicine, price transparency portal- establish a real time, public portal that discloses retail and wholesale prices of essential medicines across region to empower consumer choice and detect pricing anomalies.
4. Strengthen the *Jan Aushadhi* scheme- scale of the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) by ensuring consistent supply of high demand generics, expanding outlets to underserved areas and removing procedural bottle necks for new entrants.
5. Mandate, generic substitution and rational prescription- legislate, mandatory generic substitution where appropriate and require prescribers to justify non-generic prescriptions, subject to audit by regulatory authorities.
6. Implement whistleblower protection mechanism in Pharma markets- encourage reporting of collusive or monopolistic conduct through confidential channels with legal protections and incentives for insiders.
7. Enhance supply chain oversight- introduced statutory audit mechanism for pharmaceutical, distributors and large retailers to detect preferential dealings and ensure equitable access across retailers.
8. Reinstate and expand Essential Medical List (EMI)- periodically revise and expand the EML with expert consultations to ensure broader coverage of life-saving drugs under price regulation.
9. Launch Public awareness campaigns- invest in educational programs to inform consumers about their rights, the benefits of generic, and how to report pricing abuse.

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