Building Blocks for an Inclusive and Resilient Economy

CUTS International

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Foreword

Isabelle Durant
Deputy Secretary General, UNCTAD

I was a speaker in the Inaugural Session of the 7th edition of the CUTS-CIRC Biennial Conference on Competition, Regulation and Development organised on the theme "Building Blocks for an Inclusive and Resilient Economy" on November 16-17, 2021. The conference's purpose was to discuss the effects of the COVID-19 pandemic on the global economy and a potential scheme for effective economic recovery.

The pandemic triggered a massive economic crisis, highlighting and exacerbating existing inequalities. The United Nations World Food Programme Meeting held on November 07, 2021, raised concerns and highlighted the number of people living on the brink of famine in 43 countries. Another 45 million people have been added to the list. In 2021 alone, this increase recorded was 3 million people. This is, of course, a result of the pandemic, but conflicts and climate change have also played a role. Increased inequality has been at the centre of debates in almost all international forums, particularly at UNCTAD-15 ministerial meetings.

Another issue that emerged during the pandemic year was a growing trend of protectionism in the measures taken by countries to deal with the COVID 19-induced crisis. Today's global economic order embodies the feature of interconnectedness, which grew stronger and more visible during the pandemic. Because of this global interdependence, protectionism or a nationalist approach to recovery will not be effective in resolving the current crisis. It is critical to understand and act on the distinction between protection and protectionism. In our world, we need protection for the environment, biodiversity, and human rights, among other

things, but only nationalist approach will not address the global challenges such as climate and digitalisation.

Countries should work together to promote free trade, especially at the regional level: the trend of global value chains' regionalisation and regional market integration are opportunities to make trade a growth engine that can lead to a more inclusive and resilient global recovery. Countries should work together to remove trade barriers for trade to be inclusive in terms of its benefits. Trade barriers include tariffs and non-tariff measures imposed by the government and private barriers that impede fair trade. For example, consider the issue of cartels, where a large group of firms can cause significant harm to cross-border trade while violating competition law.

According to a study, private international cartels influenced over 51 trillion dollars in global sales between 1989 and 2016. This overcharge was worth 1.5 trillion dollars, indicating that cartels inflate prices by establishing margins above competitive prices. The mandate of promoting free trade and implementing or establishing mutually agreed-upon UN rules and principles is at the heart of competition law and policy at UNCTAD.

In dealing with pandemic-related challenges, competition law and policy have been helpful. Competition and consumer protection authorities worldwide have taken a proactive stance. Since COVID 19 irrupted, they have taken concrete steps to mitigate the pandemic's impact on markets and fight anti-competitive and practices such as hoarding and price-gauging.

However, there is still a need to develop strong legislative and regulatory competition frameworks. The emphasis should also be on arming competition authorities to combat anti-competitive practices, especially in the digital economy. Effective competition law and policy ensure that markets are

open and accessible, particularly MSMEs, which play an essential role in job creation, innovation, and economic growth.

Competition law and policy are also important in increased market concentration. Market concentration effects contribute significantly to economic inequality. A study highlights that the capitalisation of the top 100 firms increased fourfold while the employment share affected less than doubled. The digital revolution has accelerated the inequality gap, as digital platforms and large tech firms increase their profits, which does not effectively translate to increased wages for workers worldwide. The average profit-to-revenue ratio for the top 2000 firms is 7 percent, while the top eight big tech firms have a 25 percent average.

Priority should also be placed on strengthening the existing framework for regional integration to achieve more equitable regional recovery. More efforts should be made to establish stronger regional competition regimes that limit multinational corporations' anti-competitive and unfair commercial practices.

Trade policy, competition, and consumer protection are all intertwined in the digital world. The digital economy has a more direct relationship with consumer rights and privacy than the traditional market. The pandemic accelerated online services, resulting in more extensive and robust digital platforms. Competition and consumer protection authorities will need to gather and analyse relevant data to strike a balance between the need to regulate and intervene to uphold competition and consumer welfare while encouraging continuous innovation.

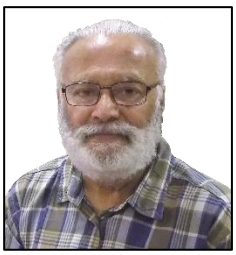
Fair competition is essential in the digital world if we want to ensure that MSMEs can access and effectively use digital platforms under fair terms and conditions. The COVID-19 pandemic hit the most vulnerable countries the hardest, and

this comes at a time when they are already dealing with socio-economic challenges. The pandemic is expected to have a long-term impact on developing countries' efforts to gain benefits from the growing global economy.

We must affirm and adopt UNCTAD's motto "*Prosperity of All*" as our motto. For international trade to be effective for all, the world must work together to promote free and fair competition and consumer protection. To establish an effective world order, everyone should work together to revitalise multilateralism. This growing interconnectedness of the world must guide our path to effective international trade while also leading us all to economic and social prosperity.

This publication, a compendium of select papers from the conference, provides valuable insights on trade, regulatory, and competition dimensions that could be useful in devising economic recovery strategies by countries. I want to thank CUTS for the work undertaken on trade, competition, and consumer protection policies and reiterate that UNCTAD is committed to working closely with civil society organisations (CSOs), such as CUTS International.

Preface



Pradeep S Mehta
Secretary General
CUTS International

The CUTS-CIRC Biennial Competition Regulation and Development Conference series started in 2007. Since then such a conference has been organised every two years, except for 2009, which was dropped due to resource constraints. Every time, the themes of the Biennial had been carefully chosen by considering, among other things, its relevance to developing countries, its currency and its connection with development, competition and regulation.

The theme – Building Blocks for an Inclusive and Resilient Economy – for the 7th CUTS-CIRC Biennial Competition Regulation and Development Conference has been set in the backdrop of the COVID-19 pandemic and its associated crisis. COVID-19 crisis has had socio-economic adverse effects all around the world. The world we live in is a globalised and liberalised one, which has resulted in positive economic progress and poverty reduction. However, it is also to blame for the widening economic gap. Further globalisation creates interconnectedness among countries, making any global catastrophe impossible to avoid. Every worst crisis presents an opportunity to restructure more efficiently.

Multilateralism is a useful instrument for creating a more inclusive economy and a more resilient society. A national will for building back better and adopting a systematic and mutual cohesive international strategy is essential. The conference also attempted to understand how to deal with growing market power and concentration in economies, contributing to the increase in economic inequality. In addition, the debates around the equitable access to vaccines and treatments for COVID-19, for which countries must collaborate, were also deliberated during the event.

Further, the increasing digitalisation of businesses during the pandemic has positioned e-commerce as an important technique to aid in an economic recovery and as a tool for an inclusive economy. However, there are certain risks involved, which must be minimised while advantages should be maximised. Furthermore, creating more jobs and income opportunities has become

imperative for governments worldwide, which demands concerted efforts for an effective economic recovery.

Be that as it may, this volume presents a set of 10 papers contributed from across the world that were carefully selected by a panel. We hope that readers will find this volume interesting. It might be particularly useful for policymakers and regulators.

Finally, I would like to extend my sincere gratitude to my colleagues for the timely preparation of this publication. My sincere gratitude to [Isabelle Durant, Deputy Secretary-General, UNCTAD], for writing the Foreword. Further, on behalf of CUTS, I would like to extend our warm appreciation to all writers who responded to the call for papers. We also thank our development partners for their support and cooperation in making this volume possible.

Introduction

COVID-19 has been more than just a health catastrophe. The pandemic has resulted in an unprecedented socioeconomic adverse effect on the economy and society. It has surfaced the vulnerability and stark inequality under the current world order and respective national systems. The great challenges of the current that stands are hunger, extreme poverty, environmental degradation, diseases, economic shocks and limiting interstate conflicts.

Under a globalised and interdependent global setting, the ability of the world to withstand a global crisis needs to be defined in direct relation to the ability of the world's poorest nations to cope. The happening of COVID-19 or the pandemic has pushed human civilisation further to the tipping point of its existence in terms of social, economic and environmental aspects. It has derailed national development strategies and further pushed back its commitment to sustainable development goals.

The pandemic also enhanced the already growing nationalism and protectionism, negatively impacting the global crisis management and economic recovery. In an interdependent world, it is impossible to embrace isolation and adopt an approach in satisfaction with the national interest of each state. Vaccine Nationalism is one such measure that led to the inequitable access to vaccines, which retards the economic recovery graph.

It is clear that to overcome the pandemic-induced crisis successfully, we must bring the pandemic to its permanent end. The study by IMF has observed that those countries with rapid vaccination are coming out of the crisis fast and are growing commendably. Still, those with low vaccination rates primarily because of non-availability due to vaccine nationalism are falling further behind. It is high time that the countries understand the importance of multilateralism and that no one is safe, until everyone is safe. We need a world system of cooperation and collective action amongst states with a shared principle of development and the rule of law based on international order - a world in which resources and technological know-how can be pooled to mitigate the negative impacts of a global emergency.

India and South Africa in the year 2020, in realising the need for quick and equitable access of covid 19 vaccine and other medical products, made a proposal at the World Trade Organisation (WTO). In the proposal, they have requested a temporary waiver of some of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs).

But the proposal is still being negotiated, and seems to be highly mellowed down after several rounds of consultation amongst the WTO member states.[1]

By the end of 2021, the global vaccine production had reached the mark of 1.5 billion doses per month in December. This is enough supply to achieve WHO's target of vaccinating 70 percent of the world's population against COVID-19 by mid-2022, provided they are distributed equitably.[2] In today's world, supply may not be a problem as such; the actual problem lies in the allocation of resources.

The adverse effects of the pandemic also extend to the level of competition in the market. The pandemic led to economic distress and market failure has hit small and medium enterprises worst or the most. Many such firms have been under serious financial hardship, many declared broke and have filed for bankruptcy or some have shut down. Small businesses have failed to sustain market closure, the practice of price undercutting and other barriers superimposed because they are generally small pocketed and in shortage of surplus. Whereas the large, economically well-positioned companies have been able to cope with the recent economic downturn and have increased their cash reserves and market share by acquiring competitors, the crisis has damaged them.

The concentration of market power in the hands of a few hampers state of competition in a market. Lack of competition in a market would mean slowed down economic growth, lesser job opportunities, downscaling of investments and dwindled innovation. Competition is the guiding force for an efficient economy. Governments and policymakers should act mutually coordinated to prevent a sharp rise in market power that could hold back the broad-based recovery. It is required that greater focus should be on providing support to small and medium enterprises by government-funded programmes aiding their sustenance and growth, these small and medium enterprises are of high growth potential and create high-quality jobs.

The pandemic has also accelerated the digital transformation and propelled the adoption of modern-day technology in automation and A.I. It has also disrupted people's consumption patterns and business operations. Shifting to digital technologies was seen as the most natural solution to the changing consumption and business operations. Many businesses and customers quickly adapted to the new normal or the next normal and became digital. Businesses and consumers that we're able to 'go digital' have helped mitigate the economic downturn caused by the pandemic. The share of e-commerce in global retail sales has recorded a considerable surge in the pandemic year 2020.

The digital transformation has been experienced as intersectoral with expanding verticals in teleworking gaming, distance learning, digital entertainment and online conferencing. But not all countries and their citizens are well equipped or trained to realise the fruits

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1 WTO News Archive, available at: https://www.wto.org/english/news_e/news20_e/trip_20oct20_e.htm

2 Strategy to Achieve Global Covid-19 Vaccination by mid-2022, WHO, available at: https://cdn.who.int/media/docs/default-source/immunization/covid-19/strategy-to-achieve-global-covid-19-vaccination-by-mid-2022.pdf

of the existing digital shift. There is a digital divide within less developed countries. These countries are subjected to barriers like inefficient digital infrastructure, unaffordable broadband services, no regulatory framework for securing digital transactions, and poor digital skills among the populations. Governments should prioritise their national digital readiness to capitalise on e-commerce in the post-pandemic economic recovery. Countries should cooperate closely to develop policies to build an enabling e-commerce ecosystem globally.

The COVID-19 pandemic has caused a general disruption in the labour markets globally. This has resulted in millions of people losing their jobs, others being furloughed and many others have been busy adjusting to the new normal of working from home. The International Labour Organisation has conducted a study to assess this pandemic's impact on young people worldwide. As per the study, twenty-three percent of the young people aged 18 to 24 years working before the pandemic are unemployed now. There has also been a reported reduction in working hours and income for those still in employment. It has been observed that the young population has developed a general sense of uncertainty for the future.

Further, the pandemic has not been easy on women either. Millions of women who have been victims of gender disparity and were forced to live on. Some even supported their families on such meagre wages, were left unemployed due to the current crisis. The working women experienced increased pressure because they had to resume their family duties as school, and childcare centres shut down and restricted house help under social distancing norms. Measures to reactivate the economy and rebuild jobs in the market should follow a job-rich approach, backed by stronger employment policies and institutions, better-resourced and comprehensive social protection systems. International coordination on stimulus packages and debt relief measures will also be crucial to successful and long-term recovery.

Thus, the pandemic has exacerbated inequities and demonstrated how intertwined poverty, gender, racism, and disability. As we emerge from the crisis and attempt to 'build back better,' the recovery will be critical to be guided by the 2030 Agenda and the Paris Climate Agreement, with gender equality and decision-making parity at its centre.

No one should be left behind as the backbone. Building resilience throughout our economies necessitates a systematic policy approach to prevent the accumulation of vulnerabilities and reduce exposure to shocks and the ability to absorb shocks when they occur and recover quickly and sustainably through adaptation and transformation. It is also crucial that generous financial support is provided to the Global South to tackle the problem of rising indebtedness, which may jeopardise global economic growth over the next decade.

1
Supply-Chain Antitrust and Being Too Big in the Context of AT&T's 1984 Breakup

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Abstract

The Internet has increasingly morphed into several so-called "vertical Internets," closed systems that provide content and/or communication primarily through specialised apps that run on smartphones. The primary example of a *vertical Internet* is Meta, including Facebook, Instagram and WhatsApp. "Facebook plus Instagram" and WhatsApp, on the other, constitute complementary services.

This paper first presents the double-marginalisation problem in successive monopolies by relating them to complementary inputs. The paper then analyses the incentive to invest in demand rigidity by a vertically-integrated monopoly and contrasts it with the investment incentive of successive monopolies. It briefly examines the historical example of the private U.S. telecommunications monopoly AT&T having been split into eight components – a long-distance-and-manufacturing company, plus seven local monopolies or Regional Bell Operating Companies (RBOCs) – and deliberates whether this can serve as a precedent for contemporary policy.

This paper was motivated by two considerations. On the one hand, there is the theoretical issue of interactions between profit-maximising firms in a demand-supply relationship with one another as in a supply chain. On the other hand, there is the reality that in contemporary society, much information is obtained through the semi-distorting prism of social media that is dominated by fast-evolving commercial relationships. This paper focuses on the first consideration, although it discusses the second one briefly.

As for the first consideration, antitrust policy primarily treats horizontal mergers or acquisitions (M&As) as a suspect. In contrast, vertical integrations have typically been

[3] I thank Kenneth C. Baseman of MiCRA Microeconomic Consulting Associates, Inc., Washington, D.C., and previously of the U.S. Department of Justice's Antitrust Division, for having worked with me on the ideas in this paper in a different context. Any errors are solely my responsibility.

regarded as benign. Antitrust agencies' focus on short-term consumer welfare provides the theoretical ground for these approaches.

As a matter of definition, *horizontal M&As* apply to *substitute* products that compete with each other, whereas *vertical integration* applies to *complementary* products that do not compete. When competition agencies investigate horizontal M&As, they seem to start with a presumption of anticompetitive effects until proven otherwise (for example, through marginal cost reductions). On the other hand, investigations of vertical integrations appear to start with a presumption of benignity until and unless anticompetitive effects can be proven.

As for the second consideration, it is both interesting and instructive that the Internet technology, supposedly "open" and "egalitarian," has become subject to observation and criticism as having metamorphosed into several so-called "vertical Internets," closed systems that provide content and/or communication primarily through specialised apps that increasingly run-on smartphones.

The primary example of a *vertical Internet* is Meta (formerly Facebook), which now includes Instagram and WhatsApp. Although Facebook and Instagram are "free" (at least in terms of money), business accounts on WhatsApp are paid channels through which businesses reach consumers and *vice versa*. Moreover, it is clear that "Facebook plus Instagram", on the one hand, and WhatsApp, on the other, constitute complementary services, very similar to Cournot's example of the complementary inputs that I discuss below.

It should be possible to construct a stylised model in which, for example, a firm posts information (e.g., about its product) on "Facebook plus Instagram" and announces its post by sending messages to (and/or receiving messages from) existing or potential customers on WhatsApp, where the control variables are *quality* for "Facebook plus Instagram" and *price* for WhatsApp.

However, this paper does not aim to develop this line of research. Below, I first present the double-marginalisation problem in successive monopolies by relating them to complementary inputs. I then analyse the incentive to invest in demand rigidity by a vertically-integrated monopoly and contrast it with the investment incentive of successive monopolies.

Next, I examine the splitting of the private U.S. telecommunications monopoly AT&T. I suggest that ex-post separation of vertically-integrated monopolies along complementary lines can reduce welfare through introducing double marginalisation, but this must be weighed against the potentially welfare-increasing effect of the reduced incentive to invest in demand rigidity. A similar comparative static analysis can be used for ex-ante analyses of M&As between vertically-related firms planning to integrate with each other.

The Thesis of the Paper

A profit-maximising firm may find it profitable to build *demand rigidity* (usually at the expense of consumers). I use the concept of *demand rigidity* as the opposite of *demand elasticity*. A demand is elastic ("not rigid") if, as a result of an X percent increase in price, the quantity demanded falls by *more than* X percent.

Conversely, demand is inelastic ("rigid") if, as a result of an X percent price increase, quantity demanded falls by *less than* X percent. By undertaking certain costly behaviours, a firm may be able to make its demand more rigid (less elastic). With a more rigid demand, the firm can charge a higher price without losing too many consumers, which increases its profit before investment expenditure? For the investment to be profitable, the investment cost (of building a more rigid demand) must be compared to the increase its profit.

For example, it may be profitable for a firm to create *excessive product differentiation* by investing a lump-sum amount toward developing *brand proliferation* in the market. The expectation from product differentiation is to *blunt price competition* in the market. Blunted price competition means that, when a firm cuts its price relative to its rivals, it will attract fewer customers than before. This enables the firm to raise its price to the consumer because it expects less of a price cut from its rivals than before. If the increase in the firm's revenues exceeds the lump-sum investment amount, the firm would be willing to build demand rigidity (meaning a lower demand elasticity).

There may be other methods for building demand rigidity. As another example, a firm may be able to exclude one of the existing rivals from the market (either partially or entirely). If the rival is entirely excluded, then *consumers will have fewer choices* than before. If the rival is partially excluded, then some consumers who could have bought from the rival will not be able to do so – as a result, *fewer consumers will have as many choices* as before. In either case, the firm will be able to raise its price to consumers because it would be facing a *less elastic* (more rigid) demand than before. Again, if the increase in the firm's revenue exceeds the cost of excluding the rival, it would be willing to build demand rigidity by excluding its rival.

The thesis of this paper is that an *integrated monopoly* is more willing to build demand rigidity – for a fixed expenditure – than two monopolies in a vertical relationship ("successive monopolies"). If this thesis is true, then the *welfare benefit from a vertically-integrated firm* (charging a lower price than two successive monopolies) must be compared to a potential welfare loss from the integrated firm's *higher willingness to build demand rigidity* in order to set a higher price.

The reason for an integrated monopoly being more willing to invest in a rigid demand than two successive monopolies is as follows. When one of the two successive monopolies plans to invest in demand rigidity and raise its price, it expects its "sister

monopoly" to raise its price. Now, I will attempt to explain this curious (and rational) economic phenomenon.

Successive Monopolies and Double Marginalisation

I tackle the issue by comparing a vertically-integrated firm to two separate firms in a supplier-customer relationship with one another. Basic economics teaches that vertical integration of suppliers is usually benign; because it eliminates what is known as the successive monopolies problem leading to a phenomenon known as *double marginalisation*.

To wit, two monopolies in a vertical supply relationship would create a too high price for the consumer; the price the consumers pay would be even higher than the monopoly price if the two monopolies were vertically integrated into one firm. The reason for this seemingly irrational behaviour on part of vertically-related firms is the "prisoner's dilemma" problem. Each of the two prisoners chooses an action that maximises his or her benefit given the action of the other prisoner. The two self-serving actions result in a suboptimal outcome for the two of them collectively. If the two prisoners could coordinate, they would have selected the action that would have maximised their collective benefit.

Similarly, each successive monopolies chooses a price that maximises its profit while treating the other firm's price as given. If the two firms do not coordinate, the resulting consumer price and quantity demanded will be suboptimal for the two firms collectively. This outcome reduces total profits, consumer welfare and total welfare even relative to an integrated monopoly. The successive monopolies problem is closely related to the complementary monopoly problem describing producers of two inputs that are combined in a fixed proportion to produce an output.

Cournot first examined the complementary monopoly problem in 1838, where consumers purchase an output, *brass*, which is produced only by combining two inputs, *zinc* and *copper*, in a fixed proportion. The inputs are each supplied by a monopolist. The demand for each input is inseparable from the output (brass) demand since the two inputs must be combined in a fixed proportion. Therefore, each consumer's purchasing decision is based on the total cost of the two inputs (zinc + copper).

Consequently, each input supplier (zinc or copper) sets a price that maximizes the supplier's profit, while treating the price of the other input supplier as given. These individually-profit-maximizing input prices lead to a combined price that is more than the price that would be charged if an integrated monopolist was setting the price for both inputs.

Table 1: Complementary Monopolies as Prisoners' Dilemma

		Copper supplier's action	
		Half the monopoly price (P*/2)	**Single-firm profit-max. price p***
Zinc supplier's action	Half the monopoly price (P*/2)	α , α	$\alpha - \delta$, $\alpha + \varepsilon$
	Single-firm profit-max. price p*	$\alpha + \varepsilon$, $\alpha - \delta$	$\alpha - \beta$, $\alpha - \beta$

A demonstrative, symmetric example of the double marginalisation problem is presented in Table 1 organised in a game-theoretic matrix format. The two rightmost columns correspond to the pricing choices of the copper supplier. The two bottom rows similarly correspond to the pricing choices of the zinc supplier. Row labels and column labels (shaded grey) describe the two players' possible actions. The four un-shaded cells toward the bottom-right containing Greek letters show the four potential outcomes, each resulting from the players' chosen actions described on the active row and on the active column. Each Greek letter denotes a positive number such that $\alpha>\delta>\beta> 0$ and $\varepsilon > 0$. For each outcome (x,y), the first expression, x, shows the zinc supplier's profit and the second expression, y, shows the copper supplier's profit.

I consider only two price points: first, half of the monopoly price under integrated monopoly (shown as P*/2) and second, the single-firm profit-maximizing price p* which is greater than P*/2.[4]P* is the profit-maximising price of the integrated monopoly if the copper and zinc suppliers were to unite in a profit-maximising entity.

As separate firms, each copper supplier and the zinc supplier can charge half of the profit-maximising integrated-monopoly price and sell their combined inputs at the total price of P*. This behaviour would produce the maximum profit that an integrated monopoly could earn, which is assumed to equal 2α, equally shared between the two suppliers so that each would earn a profit equal to α. This is the outcome shown as (α , α) in the Table.

How would these profits change if the zinc supplier raised its price to its profit-maximising price p* while the copper supplier continued to charge P*/2? This is the outcome ($\alpha + \varepsilon$, $\alpha - \delta$) which indicates that the zinc supplier's profit would increase by the positive amount ε. So the zinc supplier prefers to charge p* when the copper supplier is charging P*/2.

Suppose the copper supplier were charging its profit-maximizing price p*, as in the rightmost column, what would the profits be if the zinc supplier were to charge P*/2? That's the outcome ($\alpha - \delta$, $\alpha + \varepsilon$) where the zinc supplier earns $\alpha - \delta$ and the copper supplier earns $\alpha + \varepsilon$. How would these profits change if the zinc supplier raised its price

[4] As a technicality, present conclusions are independent of whether the level of p* depends on the other player's price.

to p* while the copper supplier continued to charge p*? This is the outcome ($\alpha - \beta$, $\alpha - \beta$) which indicates that the zinc supplier's profit would increase by the positive amount $\delta - \beta$. So, the zinc supplier prefers to charge p* when the copper supplier is charging p*. Therefore, the zinc supplier always prefers to charge p* regardless of the action of the copper supplier. In other words, charging p* is the dominant strategy for the zinc supplier.

Since the game is symmetric by construction, the copper supplier's dominant strategy is also charging p*. The unique Nash equilibrium of the game is established as each player playing its dominant strategy, with the outcome ($\alpha - \beta$, $\alpha - \beta$) meaning each player earns $\alpha - \beta$. Because both players charge p*, the total price paid by the customer equals 2p* which exceeds the integrated-monopoly price P*.

Note that the profit of each player in equilibrium is lower than α, which is what each would earn if the players could coordinate their behaviour. It is precisely because vertical integration enables this kind of "coordination" between the two suppliers that it lowers the price of zinc + copper to P* and increases the total profit to 2α.

I refer the enquiring reader to Masson, Dalkir and Eisenstadt (2014), which extensively discusses double marginalisation and its policy implications.

Successive Monopolies and Demand Rigidity

Going back to Cournot's example, suppose that the supplier of zinc, "firm Z," sells zinc to the owner of copper, "firm C"; firm C then combines zinc with copper and sells the combination as brass. Seen this way, Cournot's example becomes a model of two successive monopolies (*firm Z* and *firm C*) in a vertical supplier-buyer relationship. For brevity, I assume that zinc has no other use; I also assume that the cost of any other input (e.g., chemicals, labour, machine use, etc.) is zero.

Virtually no monopoly can arbitrarily raise its price and not lose sales. In other words, practically every monopolist faces a downward-sloping demand curve that is somewhat elastic. Thus, firm C, the producer of the final output (brass), is presented with a somewhat elastic demand curve by the consumers. Imagine that firm C is considering whether to invest in demand rigidity for brass. Suppose firm C builds additional demand rigidity (i.e., reducing demand elasticity for brass). In that case, it can raise the price of brass to the consumer and increase its short-term profit (before investment cost).

I will assume that the investment cost is less than the additional short-term profit from raising the price of brass *as long as the price of zinc remains at the level before investment* (i.e., at the status-quo level). As discussed above, the demand for zinc is inseparable from the demand for brass (zinc + copper). This implies that *increasing demand rigidity for brass* also increases *the demand rigidity of zinc*. With a more rigid demand, firm Z can successfully charge a higher price for zinc and *increase its profit*.

On the other hand, firm C pays a higher input-price to firm Z, and the net profitability of its investment is reduced *relative to a situation where firm Z did not raise the price of zinc, meaning the price of zinc remained at the status-quo level.*

This scenario can be thought of as a "free ridership" problem. In a vertical relationship, at least with a fixed-proportion production technology, the sister monopoly (firm Z) has a rational incentive to increase its input-supply price to the downstream monopoly (firm C), which has undertaken the investment toward demand rigidity. Since firm C has to pay a higher price for the zinc input, the profitability of investment for firm C decreases somewhat because of this free riding by its sister monopoly.

In some cases, this free rider problem can even cause a seemingly profitable investment to become a loss-making proposition once the input-supplier's rational reaction is considered. If firm C can foresee this problem before it invests, it would choose not to invest. This would save the consumers from paying a higher price for the output, brass.

On the other hand, an integrated monopoly would not have to worry about this problem, thus making it *more willing to invest in demand rigidity and raise price to the consumer*. This is the counter-factual situation where firms C and Z combine, turning them into a vertically-integrated monopoly that produces brass. I shall name this new, integrated entity "firm B." The integrated firm does not pay for its inputs to a third party. In other words, it is not in a vertical relationship with an input supplier.

Imagine that firm B considers the same investment considered by firm C shortly above. Remember that the profitability of firm C's investment is hampered by its input-supplier firm Z's rational reaction to raise its price in response to firm C's building of demand rigidity. Firm B does not suffer this free-riding problem because it does not have an input supplier. It becomes obvious, then, that a given investment toward a certain amount of demand rigidity is more profitable for firm B than firm C. Consequently, a vertically-integrated monopoly is more likely to harm consumers through investing in demand rigidity relative to sequential monopolies.

Table 2: Prices, Profits and Consumer Surplus without Demand Rigidity

Supply-chain structure	**Price setter**	**Price (p for zinc, P for brass)**	**Profit**	**Consumer welfare**
Successive monopolies	Firm C	P_C > 0	$(P_C - p_Z)\, Q_C$ > 0	W_C
	Firm Z	p_Z $< P_C$	$p_Z Q_C$ > 0	
	Total Z+C		$P_C Q_C$ > 0	
Vertical integration	Firm B	P_B $< P_C$	$P_B Q_B$ $> P_C Q_C$	W_B $> W_C$

Table 2 displays the "textbook" example of supply-chain (i.e., vertical). Production of brass has two inputs, zinc and copper. The input supplier Z sells zinc to firm C, which adds copper to zinc and sells the combination as brass. Other than the cost of zinc all costs are zero. There is a one-to-one input relationship between zinc and copper; one unit of zinc is combined with one unit of copper to make one unit of brass.

Without integration, firm C sets the price of brass at $P_C = P(p_Z)$ *conditional on* the price of zinc p_Z. At this stage, p_Z is not a numerical value, but a variable. Then firm Z solves its profit maximisation problem and determines the numerical value of p_Z. Next, firm C computes the unconditional value of P_C by incorporating the numerical value of p_Z into $P(p_Z)$. The quantity of brass demanded at that P_C is Q_C. Since there is a one-to-one input relationship between zinc and copper, the amount of zinc demanded is also Q_C. Consumer surplus is measured as the region under the demand curve of brass between the choke price of brass (defined as the price at which $Q_C = 0$) and P_C.

With integration, firm Z is incorporated into firm C, creating an integrated firm. Since the new firm B owns both inputs zinc and copper, it does not have to pay a positive price for zinc. It can, therefore, set the price of brass at the monopoly level, P_B, which is lower than the double marginalised price P_C. At this price, the quantity of brass demanded is Q_B.

Since this is the profit-maximising price for a monopoly, firm B's profit is higher than firm C's profit, the latter hampered by the double marginalisation problem. In fact, firm B's profit is higher than the sum of firms Z and C's total profits. As the price of brass is lower under vertical integration than under vertical separation, consumer surplus W_B is also higher under vertical integration.

Table 3: Prices, Profits and Consumer Surplus with Demand Rigidity

Supply-chain structure	Price setter	Price (p for zinc, P for brass)	Profit before investment-cost accounting	Profit after investment-cost accounting	Consumer welfare
Successive monopolies	Firm C	$P^*_C > P_C$	$(P^*_C - p^*_Z)\,Q^*_C > 0$	$(P^*_C - p^*_Z)Q^*_C - I < (P^*_C - p_Z)Q^*_C - I$ [$(P^*_C - p_Z)Q^*_C - I > 0$ is assumed]	$W^*_C < W_C$ if investment is realized; $= W_C$ otherwise
	Firm Z	p^*_Z $p_Z < . < P^*_C$	$p^*_Z Q^*_C$	$p^*_Z Q^*_C$	
	Total Z+C		$P^*_C Q^*_C > 0$	$P^*_C Q^*_C - I \gtreqless 0$	
Vertical integration	Firm B	$P^*_B < P^*_C$; $\gtreqless P_C$	$P^*_B Q^*_B > P^*_C Q^*_C$; $> P_B Q_B$	$P^*_B Q^*_B - I > P^*_C Q^*_C - I$; > 0	W^*_B $W^*_C < . < W_B$

Table 3 modifies the example in Table 2 by introducing an investment toward demand rigidity. Profit-maximisation calculus proceeds similar to that in Table 2 above. However, it is assumed that firm C (if the supply chain is un-integrated) or firm B (if the supply chain is integrated) have invested in demand rigidity for a fixed cost of "I" dollars; and, as a result of the investment, the demand for brass has become more rigid (less elastic) relative to the one underlying Table 2.

In the un-integrated structure (the top three rows) in Table 3, demand for zinc has also become more rigid (less elastic) relative to the demand for zinc underlying Table 2. The reason, again, is the one-to-one relationship between the demand for brass and the demand for zinc; the two are inseparable. *Asterisked variables* in Table 3 are meant to reflect that profit maximisation is being made on the basis of the new, more rigid, demand curves for brass and for zinc.

Furthermore, in Table 3, it is assumed that *the investment is profitable for firm C if the zinc price were to stay at the level in Table 2* $(P^*_C - p_Z)Q^*_C > I$. The left-hand side of the inequality is firm C's short-term profit *assuming that the price of zinc stays at the level without investment as in Table 2*; the right-hand side is the cost of investment. This is a counterfactual, however, since given the *more rigid demand for zinc,* thanks to firm C's investment, firm Z would now rationally maximise profit based on the more rigid demand, and determine a new price for zinc (p^*_Z) which is higher than the previous price p_Z.

This higher price by firm Z reflects firm Z's free riding behaviour on firm C's investment. When the price of zinc is at this new (higher) level, firm C's investment may or may not be profitable; however, it is logically obvious that *the investment must be less profitable to firm C* than when the price of zinc was to stay at its previous level p_Z.

<u>The crux of this paper is: in a supply chain consisting of separate firms, the expected opportunistic behaviour of firms that are vertically related to a firm hampers the firm's willingness to build demand rigidity toward raising its price and profit at the consumers' expense.</u>

Going back to Table 3, the integrated firm B sets the price of brass at the monopoly level *given demand rigidity*, P^*_B, which is lower than the double-marginalised price P^*_C but can be higher or lower than the double-marginalised price *without demand rigidity*, P_C (from Table 2). At this price, and given rigid demand, the quantity of brass demanded is Q^*_B. Since the integrated firm does not pay an input price to buy zinc, its investment profitability is not affected by opportunistic behaviour.

Thus, the integrated firm's willingness to invest is not hampered by a reaction by an input supplier. Therefore, one can predict that the integrated firm will proceed to invest for demand rigidity and raise its price and profit at the consumers' expense.

A Historical Example

In 1984, as a result of an antitrust lawsuit by the U.S. Department of Justice (USDOJ), the private U.S. telecommunications monopoly AT&T agreed to split itself into eight components: a long-distance-and-manufacturing company, plus seven local monopolies or Regional Bell Operating Companies (RBOCs). It has been argued that the splitting up of the local service from long distance ended the subsidisation of local service through excessive pricing of the long-distance service and created an estimated annual efficiency gain of billions of dollars for the U.S. economy. See Hausman, Tardiff and Belinfante (1993).

Hausman, Tardiff and Belifante also thought that it should have been possible to solve the subsidisation problem through a lump-sum surcharge on the local service. They must have in mind a surcharge paid by each user of telephone service within a local area regardless of their usage of the local service. The surcharge amount could be set to eliminate the cross-subsidisation of the local service through excessive pricing of the long-distance service.

As a result, the price of long distance could have approached the competitive level, while the per unit price of local service not being any higher, given the lump-sum nature of the surcharge. This could have solved the subsidy problem without splitting the company into eight components.

The three authors claimed that the U.S. national and regional regulators of telecommunication services may well have been aware of that solution. Surely, negotiating such a surcharge scheme within the antitrust settlement must have been possible. Yet, this is not what happened. The question I aim to address in this paper is, why so?

As Hausman, Tardiff and Belifante suggest, there may have been a bureaucratic power struggle between the local and the national regulators, which may have impeded an ex-ante solution to the subsidisation problem (e.g., a surcharge). The authors offer those local regulators may have been worried that such a surcharge would reduce adoption of local service, that is, telephone technology. Against this explanation, three arguments can be put forth.

First, it was known at the time that the price elasticity of demand for local service was nearly zero (ibid.); so, even if the total user cost of local service were to increase as a result of the surcharge, it would not significantly reduce the demand for local service.

Second, there is the possibility that adoption depended on long-distance price as well as the local-service price: there was empirical evidence of this being the case, so that the decrease in the long-distance price could have offset the downward effect of the local-service price on technology adoption (ibid.).

Third, any remaining downward effect on technology adoption could have been made up by offering selective income support for households that the new price system would have affected the most. These three arguments show that offering the regulators' collective lack of willingness (or lack of agreement) as the sole reason for the absence of an ex-ante solution would be too simplistic, and, at any rate, incomplete.

I endeavour to answer the question "Could there have been an economically justifiable reason for preferring a structural (ex-post) solution to a behavioural (ex-ante) solution?" I suggest that AT&T may have been broken up vertically simply because it was too big. However, "big" isn't exactly an economic concept. "Big" does not necessarily mean "bad"; an *efficient monopoly* being the classical example of a "big", yet benign, economic entity.

In light of the foregoing, it appears that by separating long distance from local service, USDOJ was promoting a *suboptimal outcome*. The question is, "why?" A possible explanation is that USDOJ was concerned that AT&T was "too big." This sounds like a *political standard* more than a *welfare standard*. However, there may have been an "intuitive" economic rationale for it. I will attempt to explain this immediately below.

Discussion, Conclusions and Further Research

The previous section highlighted that by separating long distance from local service, USDOJ appeared to promote a suboptimal outcome and asked why. It argued that a possible explanation is that USDOJ was concerned that AT&T was "too big," which sounds like a political standard more than an economics standard. Still, there may have been an economic rationale for it.

An integrated monopoly is more willing to "buy" rigidity of demand than two successive monopolies; the reason being that when one of the two successive monopolies plans to invest, it predicts that its "sister monopoly" would opportunistically (but rationally) raise its price as well, which can be thought of as a "free ridership" behaviour. As a result, the profitability of investment decreases because of free-riding by the sister monopoly.

On the other hand, an integrated monopoly would not have to worry about this problem, thus making it more willing to invest in demand rigidity and raise the price to the consumer. This is not to say that USDOJ must have worked out a technical solution for the problem of "bigness." Rather, whatever USDOJ's reasons – technical or intuitive – it may well have ended up doing the right thing, which is both instructive and relevant for today's antitrust theory and practice.

AT&T was subject to price regulation to some extent, so how can the above discussion be applicable to it? A firm subject to price regulation can maximise its objective function (normally, profit) by determining *the quality* of its product. In telecommunications, quality may be in the form of *ease of communication*; but it can also be in the form of

ease of access, *the level of customer service* or *technical support*, *waiting time*, *dropped calls*, *coverage area*, etc.

More generally, considering any medium, quality may be in the form of "paid" or "pushed" content such as advertisement or "infotainment." It may also be in the form of the *relevance* and the *truth level* of the content and its *appropriateness* and *addictiveness*, a higher level of addictiveness implying lower quality.

The long-distance versus the local service components of land-line telephone service presents a natural example of a vertical relationship. The 1984 breakup of the telecommunications monopoly AT&T may be considered a precedent for ex-post separation of a monopoly along complementary lines. Nevertheless, further theoretical and empirical studies are necessary to see whether the conclusions of this paper may be applicable to the emerging communications technology the *social media*, where the existing vertical relationships may not be readily apparent.

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The Potential for a Broader Application of the Substantial Lessening of Competition Standard: A South African Perspective

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Abstract

This paper considers the bar for intervention in competition matters, in particular the substantial lessening of competition (SLC) standard, used in merger control in many jurisdictions and the anti-competitive effects requirement more generally. In the context of research, which strongly suggests that there has been systemic underenforcement of competition policy across the globe, this paper considers, firstly, how the SLC and/or competitive effect test has been interpreted more broadly in certain instances and how this may further inform the assessment of the competition. The paper finds that the distributive impact of mergers or other conduct is already considered by authorities and public policy must justifiably inform what may ultimately be considered substantial.

Secondly, this paper considers the clear gap in enforcement created by the SLC standard (or the practical consideration thereof by competition authorities) whereby only consumer effects that result directly from a change in the competition are considered, rather than consequences of the transaction. The paper finds that any competition legislation with provisions for public interest concerns as a result of the transaction itself should also consider consumer effects or an SLC that results from the transaction itself.

Introduction: A Substantial Lessening of Competition

A ubiquitous phrase across many countries with competition laws is the 'SLC' – the substantial lessening of competition or 'SPLC' – the substantial prevention or lessening of competition - or some variation of this.[5] We jointly refer to each of these tests as the

[5] *Countries with an SLC test include the United States, United Kingdom, New Zealand, and Australia. The SPLC is found in South Africa and Canada. The European Union uses the Significant*

'SLC' test. Mergers can be prohibited where they are expected to result in an SLC, and certainly, there are other areas of competition law where similar concepts are routinely spoken of.

Such concepts include the abuse of dominance provisions where, for instance, in South Africa, the firm's conduct must have an 'anti-competitive' effect for it to be prohibited (although typically an *ex post* assessment). While there is no moniker before the term 'anti-competitive effect', in practice, these would have to be of a certain magnitude or type to be sufficient to hold the dominant firm to account in the form of an administrative penalty or other remedies.

This does of course raise some questions. What type of effects can constitute an SLC? How much of an effect is sufficiently *substantial* to matter? Amidst growing evidence of increasing corporate margins, and the hypothesis that this may reflect increased market power and therefore a gross underenforcement of competition laws or policies[6], a further question can be posed: is the current SLC, or competitive effects standard, whether by definition or by application, sufficiently broad to deliver on the objective of competition policy more broadly? The consideration of a more comprehensive or inclusive approach to the question of competitive effects is not without merit.

A further question is what should constitute a competitive effect. Our understanding as practitioners is that the SLC, or any anti-competitive effect terminology more broadly, essentially captures only pricing and quality effects, while volume effects may also be relevant. However, in the merger assessment context across jurisdictions, the inquiry of whether an SLC would result from the merger in practice focuses almost exclusively on price effects from the merger[7].

In this paper, we explore these questions, primarily from a South African perspective, but also by drawing on selected cases and research from other jurisdictions.

The Nature of the Effect: The Distribution of Effects

When considering harm or effects in terms of the SLC (or anti-competitive effect), one must certainly consider the nature of the harm. In particular, harm may not in practice be distributed equally across consumers. Typically, competition investigations are concerned with the 'average consumer'[8], but in actual fact the harm suffered by one

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Impediment to Effective Competition (SIEC) standard (Gunnar Niels, Helen Jenkins, James Kavanagh (2016), Economics for Competition Lawyers (2nd Edition), para. 7.03)

6 *Centre for Competition Regulation and Economic Development. 2017. Concentration, profits and investment: Let's focus on the structure of the economy, not "cash hoarding". Policy Brief December 2017; Buthelezi, T. Mtani, T & Mncube, L. 2018. The extent of market concentration in South Africa's product markets (Working paper CC2018/05); Thakoor, V. 2020. Market Power, Growth, and Inclusion: The South African Experience (IMF Working Paper).*

7 *OECD Policy Roundtables (2009) Standard for Merger Review.*

8 *Franco Mariuzzo, Peter Ormosi, Do the poor pay more for increasing market concentration? A study of retail petroleum markets, University of East Anglia (unpublished) p.3*

consumer may be relatively more substantial than for another consumer. Considering only the 'average consumer' may mask the true harm.

Recent research at the University of East Anglia has attempted to shed some light on the true impacts of changes in competition on different consumers and this is potentially instructive for the interpretation of the SLC. Mariuzzo and Ormosi (2021)[9] use petrol station-level data on fuel prices in Western Australia alongside data on acquisitions and concentration in the retail of fuel to understand the impact of these mergers on different segments of the population.

What the paper finds is particularly interesting. Poorer consumers[10] in fact suffered more harm from the mergers than richer consumers. While fuel prices for richer consumers do not appear to be affected to any significant degree by the merger activity, fuel prices for poorer consumers tend to increase following concentration in the market. Thus there is an unequal distribution of effects in the market, where of course poorer consumers are affected significantly whereas richer consumers experienced little change.

One can easily accept that a merger that results in greater price impacts for richer consumers is objectively preferable to a merger that results in greater price impacts for the poor. This is not only because of one's natural aversion to inequitable outcomes, but in most cases, at least for more essential products, one would expect the practical impact of price increases on poorer consumers to be greater relative to their existing incomes or wealth as compared to the same price increase for richer consumers. Richer, higher-income consumers are more capable of sustaining price increases in a particular product.

Despite the product in the study (fuel) being homogenous, prices are not uniform because consumers engage with the market differently.[11] One of the reasons posited by the authors for why we might observe such outcomes is search costs. Higher-income consumers may be more able to search or afford to search for the lowest prices. Thus, in wealthier areas, prices are more competitive or less susceptible to increases following a merger transaction.

The paper ultimately shows the dangers of only considering the 'average consumer', but also that, in assessing whether an SLC is likely to result from a merger, one may consider how specific consumer groups (such as the poor) may be affected.

This approach has also been followed in practice. In 2019, the United Kingdom's Competition and Markets Authority (CMA) blocked the merger between Asda and

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9 *Franco Mariuzzo, Peter Ormosi, Do the poor pay more for increasing market concentration? A study of retail petroleum markets, University of East Anglia (unpublished)*

10 *The study tested the pricing effects according to the average income for the area. Thus price effects in lower income areas are used as a clear indicator of price effects for lower-income consumers. Thus "poorer consumers" here can be understood as consumers from poorer areas.*

11 *Franco Mariuzzo, Peter Ormosi, Do the poor pay more for increasing market concentration? A study of retail petroleum markets, University of East Anglia (unpublished), p.2*

Sainsbury due to concerns that the merger would increase prices for consumers and further raise prices at the supermarket's petrol stations lead to longer checkout queues.[12]

In this case, the CMA accounted for the distributive effects when determining if the merger would likely lead to unilateral effects in the retail markets for fuel (petrol stations) and groceries in-store. The CMA found that products such as fuel or groceries are considered non-discretionary in household expenditure items, and these goods cover a large share of household expenditure. Even a small price increase for these products could cause significant harm to consumers, especially low-income households.

The CMA considered that price effects on these goods could cause significant distributive effects. It found that seemingly small price increases of between 1.5 percent to 2.75 percent on fuel and groceries would cause substantial harm to competition.

A further example of the greater focus on the poor specifically was evidenced in the recently completed Data Services Market Inquiry ("DSMI") of the Competition Commission of South Africa.[13] Part of the DSMI's final report focused on "anti-poor pricing" – the report showed that the incumbent operators, when looking at effective prices, priced smaller data bundles at exorbitant 'Rand per megabyte' prices compared to the larger bundles. Smaller bundles tend to be associated with poorer consumers, whereas larger bundles tend to be associated with richer consumers.

In essence, while one might consider whether data pricing in a country is high by looking at pricing on average, an entirely different story can emerge when considering a specific group, such as the poor.

However, policy is also at the heart of emphasizing one group of consumers over another (such as poorer consumers over richer). If it is public policy to reduce inequality and/or uplift the conditions of the poorest citizens, then surely this should be factored into what one considers to be 'substantial' or meaningful, even if the policy is not necessarily directly expressed in the legislation.

In fact, part of the underlying reason why one might be amenable to an SLC being interpreted differently for poorer consumers may well be policy itself. Thus citizens and authorities already implicitly accept that policy positions may justifiably inform the interpretation of substantiality in an SLC.

This perspective is also evident in the prioritisation of sectors by competition agencies. Sectors like agriculture and transport, which form a greater part of lower-income consumers' salaries, are understandably prioritised. Historically disadvantaged groups

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[12] *CMA. 2019. Anticipated merger between J Sainsbury PLC and Asda Group Ltd- Final Report, p 6-17.*

[13] *Competition Commission of South Africa, Data Services Market Inquiry, Final Report, December 2019*

are understandably prioritised, or groups (such as the youth) that face particular challenges in an economy such as South Africa's may be given focus in public policy too.

Thus, public policy or economic policy should arguably be a relevant factor in interpreting what amounts to an SLC. Outside of questions of the magnitude of the effects, what can be considered to be substantial is likely more readily judged through the lens of policy than anything else. Thus, the interpretation and application of the SLC standard can potentially be broader.

Effects of the Transaction Vs. Effects of a Change in Competition

When considering whether the effects of a merger amount to an SLC itself, the courts routinely consider only effects that directly result from a change in competition in the market. However, one may question whether there is room to consider a broader interpretation where the transaction results in harm to consumer welfare as a consequence of the transaction rather than competition itself.

At first glance, this is already, to some extent, provided by public interest provisions, such as those in the South African Competition Act. In South Africa, public interest provisions include considering the effect on a particular industry or region; employment; the ability of small firms and firms held by historically disadvantaged persons to participate and expand in the market; the ability of a national industry to compete in international markets; and the promotion of a greater spread of ownership[14].

However, what is also apparent is that these public interest provisions, at least in South Africa, seem to steer clear of any consumer-centred effects. Thus, while these broader public interest concerns are covered as well as the effects on consumer welfare stemming directly from changes in competition, other harms to consumer welfare that may not stem directly from a change in competition appear not to be considered in the same light by legislators or at least the adjudicators of the legislation.

Three cases illustrate the potential for important merger-specific effects that may be candidates for a more expansive interpretation of SLC and competitive effects (or a change to the policy or legislation around this): the dialysis market in the United States; the Walmart case in South Africa; and the more recent Mediclinic/Matlosana Medical Health Services (MMHS) merger in South Africa.

A recent study of acquisitions of outpatient dialysis facilities in the United States revealed an interesting conclusion. Eliason et al (2019)[15] studied the industry for dialysis treatment. The study covered a period of 12 years, and more than 1,200 acquisitions of independent dialysis facilities by 'large chains'.

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[14] *Competition Act of South Africa, Section 12A(3)*

[15] *Paul J. Eliason, Benjamin Heebsh, Ryan C. McDevitt, James W. Roberts (July 12th 2019) "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry".*

The assessment shows that concentration levels naturally increased markedly over the period given the acquisitions, with two firms ultimately accounting for 60 percent of all facilities. Whereas the industry was initially quite fragmented, the industry changed as the larger players gradually acquired the independent players.

The research paper found that where the large firm purchased an independent, the quality of care fell substantially. Among other effects, the prescription of costly treatment medications (paid for by health insurance) increased, while recommendations for kidney replacements fell (enabling greater claims for treatment medication), patient loads per employee increased, and more highly skilled nurses were replaced with less highly skilled technicians. This all translated into higher earnings for the acquiring firms and inferior patient outcomes (a negative impact on quality).

What is most interesting about the study results is that it found that these effects were not driven by changes in competition or increased market power. Markets for dialysis treatment are narrow and local, as patients reside near the facility and are unlikely to travel far for their treatment or switch to a facility which is further away.

However, the effects were apparent regardless of whether the large chain and the target were present in the local market before the acquisition. Even where the target firm would be the only local facility in an area, the effects remained. The paper finds "*that chains transfer several prominent strategies to the facilities they acquire*"[16].

The results for patients are not driven by competition but rather the adoption of the chains' strategies and practices following the acquisition. Many independents were not-for-profit, whereas the chains are for-profit, and the authors show that the change in strategy is also clear from the patient level data.

Thus, in this case there is clear evidence of harm to consumer welfare from these acquisitions, and therefore it is questionable whether these transactions should have been allowed. However, there is little room for such transactions to be addressed under the current application of competition laws and the SLC test. Referring to the US Horizontal Merger Guidelines, Eliason et al recognise that "*most acquisitions of dialysis facilities fall outside the scope of current antitrust laws, which prohibit acquisitions if 'the effect of such acquisition may substantially lessen competition, or to tend to create a monopoly'*"[17].

What this research may in fact suggest is that the acquiring firm (the large chain) was merely more willing to exploit the market power that the independent facility had already possessed due to the narrow, local geographic markets, in which they operated. It is not apparent that the large chain did anything innovative or invested in the acquired

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[16] *Paul J. Eliason, Benjamin Heebsh, Ryan C. McDevitt, James W. Roberts (July 12th 2019) "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry", p. 1*

[17] *Paul J. Eliason, Benjamin Heebsh, Ryan C. McDevitt, James W. Roberts (July 12th 2019) "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry", p. 50*

businesses in any significant way – the effects were observed across the month prior and post the acquisition.

However, it can be inferred that these mergers did result in a type of SLC – the substitution of a more competitive incumbent firm with a less competitive acquiring firm, or at least a firm more willing to take advantage of market power to the detriment of consumer welfare. Therefore, it is not clear that such a case should be simply excluded from the SLC rubric.

The *Walmart*[18] case in South Africa raised a similar issue. In this case, Massmart, a mass retailer, was to be purchased by Walmart – the American retail group. On its face, there were no competition concerns with the merger, as it involved a foreign entity with no operations in South Africa purchasing the local entity. However, objections were raised by a labour union, which argued that Walmart's acquisition of Massmart would result in harm to labour given Walmart's reputation for poor labour practices. Thus, the argument was that the merger would result in negative effects, even if not directly a consequence of a change in competition.

An area of debate, therefore, arose in the hearing concerning the relevance of public policy in assessing the nature of the impact of the merger. There were a number of concerns from a policy perspective that the acquisition, or aspects thereof, may not be in the best interest of consumers, labour and the economy more broadly.

However, the Tribunal found unequivocally that it could only limit itself to the specific public interest considerations contained within the Competition Act rather than any public policy concerns, regardless of how legitimate. Naturally, the legislation must only account for certain public interest considerations. But at the very heart of the public interest provisions is public policy – these provisions capture what the policymaker believes is in the public interest. However, public policy is to some degree fluid and thus it does beg the question of whether the public interest provisions should have a broader reference to public policy, or whether the SLC itself can be interpreted more broadly to engage with public policy as argued above.

The *Mediclinic/MMHS* case in South Africa also speaks to the same concerns, but with interesting recent developments. In this case, a small independent hospital group was to be acquired by one of the three largest hospital groups in the country. Mediclinic's plans to acquire MMHS based in Klerksdorp in the North West province of South Africa were prohibited by the Commission in 2019. The Commission successfully argued that should the transaction be allowed, there would be an SLC in the area and prices would likely increase.

In February 2020, the Competition Appeal Court of South Africa (CAC) overturned the Tribunal's decision to block the acquisition of MMHS and ruled in favour of Mediclinic

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[18] *Competition Tribunal, Walmart Stores Inc v Massmart Holdings Ltd (73/LM/Dec10) [2011] ZACT 42 (29 June 2011)*

after the group appealed. The Commission appealed to the Constitutional Court because the case involved the interpretation, protection and actualisation of the constitutional right of access to healthcare services.

Amongst a number of aspects to the case, the Commission argued that the acquisition would result in the acquiring firm (Mediclinic), a large national group of hospitals, enforcing its pricing policies and strategies on the independent group. The argument was that the independent hospital was a lower-priced business, and the acquisition would result in higher prices for insured and uninsured patients. However, in the appeal at the CAC, Mediclinic successfully argued that there was no competitive effect – no SLC – resulting from the merger, and thus it could not be prohibited.

On further appeal to the Constitutional Court, while also arguing there was a competition effect, the Commission also argued that it would be unconstitutional for it not to consider the welfare effects of lower access to healthcare due to the likely price increases. The Commission argued that the proposed merger would make the options outside of medical insurance schemes much less attractive, which allows the merged firm to offer lower or no discounts on Designated Service Provider networks (DSPs) and deteriorate non-price factors in the relevant market. As stated by the Commission, "*Medical scheme members on low-cost options collectively are an important group from a public interest perspective since they are particularly vulnerable to increasing costs of private health care in South Africa*".[19]

The Commission also viewed that the likely price effects of the proposed merger raised public interest concerns regarding the health care sector and the relevant region, with no positive countervailing public interest grounds that mitigate against these concerns. The Commission emphasised that a particularly vulnerable group is uninsured patients in the area, as they would post-merger have less choice (of cheaper hospitals) and less ability to switch to cheaper options.

Consequently, the argument is that to the extent that the impact of the merger is to restrict or impede human rights, there is effectively an SLC and the Commission must, therefore, be able to prohibit such a merger. On October 15, 2021, the Constitutional Court upheld the Commission's appeal, setting aside the CAC ruling, which had allowed the merger. The Court considered the effects on the healthcare costs of patients living in the relatively rural region, but especially the cost of uninsured patients. It would deny them of the lower tariffs charged by the target hospitals while also limiting the ability to negotiate better prices or switch to cheaper hospitals.[20]

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[19] *Application for Leave to Appeal Volume 1 (CCT Case No. 31/20). Commission Founding Affidavit p. 14. See: Application for leave to appeal.1pdf (concourt.org.za)*

[20] *Constitutional Court of South Africa, Competition Commission of South Africa v Mediclinic Southern Africa (Pty) Ltd and Another. 2021. Judgement 15 October 2021 Case CCT 31/20. P. 33-34.*

The Court's decision also acknowledges the Tribunal's consideration for the broader public interest concerns within the context of healthcare in South Africa, where it reads, *"[…] the Tribunal grappled with a pertinent public interest concern that there is already a high and historical concentration of ownership and control in the private hospital sector which would be somewhat exacerbated by the proposed merger […]".*[21]

Thus, the context and nature of the impact on uninsured persons who were seen as relatively poorer consumers was a critical aspect of the decision, and again supports the emphasis on the distributional impact of mergers, as discussed above.

What is also interesting, and more relevant for this section of this paper, is that the judgement appears to delink the SLC from a change in competition, or at least open the door to do so. It found that the CAC "… *misdirected itself in a material respect by construing section 12A(1)(a) and (2) of the Act as requiring that a price increase post-merger be shown to be the result of the market share changes, which it termed "enhancement of market power". This is not the test required by the Act. And nothing in the language and context of section 12A(1)(a) and (2) allows for the assessment to be conducted with reference to the "enhancement of market power" which is not even listed as one of the factors listed in section 12A(2). … All that section 12A requires in this regard is that a determination be made whether there is a substantial prevention or lessening of competition. And this is ordinarily measured with reference to a potential increase in price*"[22] (emphasis added).

While the impact of the Constitutional Court judgement is not yet clear, what the discussion above suggests is that there is room for the SLC, at least in South Africa, to be interpreted more broadly in that the SLC need not result from a change in competition but can also merely result from the transaction in that the acquiring firm has a different strategy. If this approach is not taken, it would appear that there would be a gap in the application of competition law in many jurisdictions, including South Africa. Certainly, where competition laws allow for the consideration of public interest provisions resulting from the *transaction* – like South Africa's – it would be an odd position if negative effects on consumers as a result of the same *transaction* are not considered by the legislation or the application thereof.

Substantiality and Magnitude: The Importance of Context

A further area of uncertainty when considering whether there is an SLC is the *magnitude* of the effects – is it sufficiently large to warrant a prohibition or other action from the competition authority? If, for instance, one considers SLC in terms of pricing effects, how much of a price increase is sufficient? As one might expect, there is no simple rule

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[21] *Constitutional Court of South Africa Competition Commission of South Africa v Mediclinic Southern Africa (Pty) Ltd and Another. 2021. Judgement 15 October 2021 Case CCT 31/20. p. 33 para. 77*

[22] *Constitutional Court of South Africa, Competition Commission of South Africa v Mediclinic Southern Africa (Pty) Ltd and Another. 2021. Judgement 15 October 2021 Case CCT 31/20. P. 22 para.53-54*

as to what kind of increase is enough. While case precedent in South Africa shows that an SLC cannot simply be non-trivial[23], what constitutes an SLC in terms of the magnitude of the effect is less clear.

However, what *must* filter into this is an understanding of the market context and the nature of the ultimate harm. Although not a merger scenario, the 'price gouging' cases pursued by the Competition Commission of South Africa amid the initial stages of the Covid-19 pandemic (and associated lockdown) illustrate this. The term 'price gouging' is used to describe a situation in which firms take advantage of the victims of a natural disaster or emergency by charging exorbitant prices for goods and services essential to the public during that crisis.[24]

The Commission used the excessive pricing provisions in Section 8(1)(a) of the Competition Act to provide the legal framework for the first cases of price gouging in South Africa, and used these provisions to argue that in the specific market context, suppliers with access to certain Personal Protective Equipment (PPE) items may possess a temporary form of market power whereby customers were unable to shop around due to the lack of supply in the short term.

The importance of market context in competitive assessment is also emphasised by the Tribunal and the Competition Appeal Court in decisions on the most high-profile price gouging cases in South Africa, namely the *Babelegi*[25] case and the *Dis-Chem*[26] case.

Although these cases were not mergers, the assessment structure for excessive pricing was first for the Commission (as the complainant) to establish a *prima facie* case of excessive pricing whereby the price is found to exceed the competitive price. After that, under section 8(1)(a), the burden of proof shifts to the respondent to show that the price is reasonably related to the competitive price. This assessment of reasonableness evokes a sense of magnitude, much like the SLC. The Tribunal's decision in *Babelegi* and *Dis-Chem*, and the CAC's decision in *Babelegi,* all of which were in the Commission's favour, revealed key insights into the thinking of the adjudicators.

The Tribunal, while acknowledging that some level of price increase would be acceptable (the Commission suggested that in the Covid-19 context, a threshold of 10 percent should be used), noted that "*Babelegi's increases in both prices and mark-ups are, however, so far above any acceptable level that they are exploitative*".[27]

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23 *The Nationwide Poles case and appeal dealt with this issue where it was found by the Competition Appeal Court that "substantial" does not equate to non-trivial.*

24 Keleme, M & Moeketsi, N. 2020. *Excessive pricing in the time of COVID-19: insights from a regulator's perspective*. Competition Commission.

25 Competition Commission vs Babelegi Workwear and Industrial Supplies CC (Tribunal Case no. CR00Apr20), at para 159.

26 Competition Commission v Dis-Chem Pharmacies Limited Competition Tribunal Case No. CR008Apr2

27 Competition Commission vs Babelegi Workwear and Industrial Supplies CC (Tribunal Case no. CR00Apr20), at para 171.

The CAC similarly found that "*the price charged was manifestly far higher than the yardstick price, that is the price charged in a relatively competitive pre-COVID-19 market*".[28]

Lastly, the context of overpricing on key items of PPE and the specific nature of the harm in the midst of the Covid-19 crisis – facial masks in both cases –appeared to be key factors in the decisions. In both the *Babelegi* and *Dis-chem* cases the Tribunal highlighted the importance of the COVID-19 outbreak and that the pricing conduct of these firms during a crisis be contextualised within the Tribunal's role in protecting the public interest and the broader purpose of the Act.

The Tribunal noted in Babelegi that "*…one must have regard to context, including the nature of the conduct, or the theory of harm, as well as the economic and other circumstances, in this case, the substantial hiking up of prices in the time of a health crisis. Such conduct by a firm at such a time should from a public interest perspective be regarded as offensive.*".[29]

In the Dis-Chem case, the nature of conduct and detriment to consumers was also emphasised within the context of the global pandemic and health crisis. The Tribunal agreed with the Commission's view that price increases during Covid-19 "*…have the most detrimental impact on poor individuals and families, who are already the most vulnerable during such crisis.*"[30] Material price increases in the time of crisis (viewed as price gouging) are especially concerning as they could cut off poor consumers from goods essential to their health, (surgical face masks in the Dis-Chem case) by either making the goods unaffordable or imposing higher costs to poor consumers.[31]

In its judgement the Tribunal emphasised that the excessive pricing conduct of Dis-Chem was to the detriment of consumers as "*material price increases of the magnitude of 47-261 percent without corresponding increases in costs, of any goods in a country such as South Africa with a long history of economic exclusion and deep inequality would seriously affect the public interest adversely*",[32] and further highlighted the skewed nature of more consumer harm towards poorer customers, noting that "*material price increases of surgical face masks […] would seriously impact vulnerable and poorer consumers even more. Poorer customers would have been excluded from accessing the masks by such exorbitant increases, other customers would have spent more on these items as a percentage of their disposable income*".[33]

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28 Competition Appeal Court decision on the Babelegi case (Case no. 186/CAC/JUN20), para. 59.

29 Competition Commission vs Babelegi Workwear and Industrial Supplies CC (Tribunal Case no. CR00Apr20), at para 169.

30 *Competition Commission v Dis-Chem Pharmacies Limited Competition Tribunal Case No. CR008Apr20 para.226.*

31 *Ibid*

32 *Competition Commission v Dis-Chem Pharmacies Limited Competition Tribunal Case No. CR008Apr20 para.228.*

33 *Ibid*

The importance of considerations around consumer detriment is further demonstrated in the CAC judgement in the *Babelegi* case, which states, "*In this case, the excessive prices were charged at a time of crisis when the employment of a mask by every person in the country was seen as being essential to the protection of health, safety and welfare of others and therefore as critical to the reduction of the danger posed by Covid-19. The high prices of such a necessity unquestionably acted to the detriment of consumers in the country.*"[34] The context of health and safety of individuals appears to have been key in the assessment of reasonableness (or magnitude) across the courts.

Conclusions

This paper has explored the rationale and possibility for a more expansive and inclusive interpretation of the SLC and anti-competitive effect terminology. There are essentially three key findings from this paper.

Firstly, public policy or economic policy should naturally be considered relevant to what constitutes an SLC or anti-competitive effect. In some ways, the South African authorities and others may already be taking a broader approach, which would likely be driven further by the recent Constitutional Court ruling in the Mediclinic/MMHS case. But there is also a question as to whether legislation could provide a more fluid provision for public policy consideration.

Secondly, policymakers should consider providing a broader definition of effects that includes provisions for prohibiting transactions based on the likely impact of the transaction itself on consumer welfare outcomes. Competition authorities may consider whether there are changes to the nature of competition through, for instance, a further or larger exploitation of market power and whether this is sufficient for a prohibition under an SLC standard.

Importantly, where competition legislation provides for the assessment of public interest considerations as a result of the transaction itself, it must be the case that effects on consumers as a consequence of the transaction itself must also be included in any consideration of a merger.

Thirdly, any assessment of SLC must take account of the context in assessing the relevant magnitude of effects that would constitute an SLC.

Moreover, there is a question as to whether a broader interpretation of the SLC or competitive effects may produce more effective competition enforcement and regulation regime. This paper has explored ways in which the SLC standard can be interpreted more broadly and raised the question of whether policy and legislation (or the application thereof) is sufficiently and comprehensively formulated, and changes may be required.

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[34] *Competition Appeal Court decision on the Babelegicase (Case no. 186/CAC/JUN20), para. 67.*

3
Impacts of Changes Within the Telecommunications Sector on Competition Policy in Bosnia and Herzegovina

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Abstract

This paper deals with the topic of increasing market power and concentration. The growth of market power of telecommunications companies, including cable operators, is becoming an increasingly important area of regulation, especially in countries in the process of approaching the EU. In Bosnia and Herzegovina, as one of these countries, the market power of telecom operators is becoming increasingly important.

Measurements of market concentration indicate a high level of the HHI index.

However, it did not establish the effective existence of a contractual oligopoly in the telecommunications market, as existing telecommunications companies have specific differences in the supply and prices of services.

The Council of Competition of Bosnia and Herzegovina monitors and controls possible market disturbances. Although there are several dominant telecommunications operators, depending on whether it is mobile telephony, the Internet or the distribution of audio-visual media services, it can be recognised that this is an oligopoly model where the price level influences consumer choice.

Introduction

This paper aims to examine the market structure of telecom operators to determine whether the existence of oligopolies distorts competitiveness in the sense that customers bear the final burden in the form of restrictions on price or quality of service.

The research questions that are asked are:

- Do existing telecom operators create an oligopoly?
- Is that oligopoly too detrimental for the customers?
- Is there a possibility of merging existing telecom operators -- cooperative behaviour (horizontal agreements)?

We will start from the assumption that the oligopoly does potential detriments to customers. Due to supply-side constraints, especially if one or two firms are involved, buyers cannot influence pricing policy.

Precisely due to the limited number of sellers with very similar products/services, customers are directed to a limited selection of products with prices that, although different, are still quite approximate. Therefore, this research focuses on the challenges that customers have in the conditions of oligopolies in the telecommunications market.

This paper used the deductive method because we went from the general principle of oligopoly to individual cases. The deductive method used in this paper is based on inference from general courts to an individual or other available courts.

These two methods complement each other so that a general judgment on the communications market is made based on data on each telecom operator in Bosnia and Herzegovina. Conversely, based on the general approach of the telecommunications market, we conclude individual companies.

An analysis method was also used, including an individual review of data for each telecom operator.

Finally, a comparison of data between market participants was made. This primarily refers to the data on the package of services with the corresponding prices

Namely, there are three dominant operators in Bosnia and Herzegovina, as stated in the rules of the communications regulator, with the fourth operator already having significant strength in the field of cable television.

Entry into this business area involves various constraints such as technology, human resources and the requirement for large investments.

These characteristics indicate the existence of an oligopoly in this area, with the proviso that the presence of price competition between competitors can be understood as a helpful thing for end customers.'

However, their market power, which includes occasional price increases, indicates that regulations in this area should be as good and efficient as possible.

Acquisitions of small telecom operators by the dominant ones, which took place in the previous period, strengthened the existing three and four operators, respectively. A pricing policy left to market conditions allows end customers to choose between current operators.

Due to high costs, new telecom operators are not expected to enter this branch of industry in the future, except for the consolidation of existing or the entry of a foreign telecom operator through the acquisition of one of the existing operators with significant market power.

Expanding services and including existing ones in certain service packages with customised price, offers can lead to certain price wars. From their marketing appearances, it is a struggle for every customer, as these businesses are based on economies of scale. Cost efficiency is the basis for pricing, so average costs should be as low as possible, while marginal cost follows the number of new users and tends to fall.

Interestingly, a possible reduction in prices is not even in sight, which indicates that existing operators can generate high revenues, allowing the oligopoly's position. Excessively high prices do not exist or at least are not increases expressed in high percentages, which reduces the possibility of possible effective control in this segment.

The Council of Competition Bosnia and Herzegovina monitors and is involved in various procedures in this market segment to ensure fair and efficient competition. In that sense, it strives for the competition between the existing telecom operators to be within the framework of legal regulations, that is, for the end-users to have the possibility of effective selection.

Since the telecommunications market segment is in continuous technical improvements, this further complicates the issues of distortion of possible abuses of market position.

Therefore, the Competition Council in Bosnia and Herzegovina has a strategic commitment to preventing, together with other regulators, the distortion of competition in the field of telecommunications. In this sense, the following activities in the given market are monitored, as follows:

1. conducting market concentration procedures,
2. introduction of new technologies and their offers on the market,
3. pricing policy in the sale and purchase of individual services from the telecom operator's portfolio

Finally, we emphasise that the Council of Competition Bosnia and Herzegovina applies ex-post analysis in a way that determines the violation of competition rules and prohibited competitive actions in the market by applying existing legislation. The relevant market is determined on a case-by-case basis. Appropriate measures are adopted when considering individual prohibited competitive activities or specific behaviour of an economic operator in the market.

Consequently, the competition authority in Bosnia and Herzegovina has not established the effective existence of a consensual oligopoly in the telecommunications market, as existing telecommunications companies have certain differences in the offer and prices of services. Although there are several dominant operators in telecommunications, depending on whether it is mobile telephony, internet or distribution of audio-visual media services, we see that this is an oligopoly model where the price level affects consumer choice.

Literature Review

This paper seeks to analyse the measures of market competition in telecommunications about the level of equilibrium in that market. For example, in their part of the equilibrium model of De Loecker and Eeckhout (2017), they consider the level of market power that is exogenously determined by the "behavior" parameter. In all cases, only the strength of the product market is taken into account and firms are assumed to have no market power in the labour market or the capital market.

Neary (2003a) considers the continuity of industries with Cournot's competition in each industry, taking the marginal utility of wealth (instead of wages) as a given. The labour market is inelastic (supply), while firms increase profits. His paper shows the negative relationship between market concentration and labour levels.

In this paper, firms are relatively large in the overall economy and have market power in service offerings, and labour elasticity was not considered in this context.

An oligopoly is classified into the collusive and the competitive oligopoly. This division is conditioned by how the participants in the oligopoly act. Namely, whether they have certain agreements among themselves or act independently on the market arises.

Discussions about the oligopoly existed for a long time. However, a formal analysis of the oligopoly and trade commenced with Brander in 1981.

The paper is based on his 1979 doctorate, which begins with the thesis of segmented markets in Cournot's model, in which domestic and foreign firms are setting up their products separately for each country. The result is a two-way trade in identical products. The work was later extended to Brander and Krugman (1983), the "Model of International Trade of Mutual Dumping."

In 1981, James Markusen published the book "Trade and Profits from Trade in Imperfect Competition" based on the traditional model of integrated markets. Namely, Marcussen shows that trade in Cournot's oligopoly increases world prosperity, but it is possible for a large country to lose.

As Posner (2001) states regarding secret agreements, we can say that there is no recipe for identifying that agreement from economic evidence if the environment is such that prices are formed without communication. That is, sellers can match their prices without conspiracy in the classic sense of the word. This is a phenomenon that, according to Posner, is called "tacit agreement".

Mazzezo (2000) suggests that product choices and market structure predictions are critically dependent on the assumptions and specifications of the particular model in question. Therefore, these are endogenous elements that explain the connection in the structure of a specific oligopoly.

The cited literature explains customer behaviour in the oligopoly model and the relationships between firms in that structure. This further provides a better insight into how companies operate in the oligopolistic market and the pricing policy they lead.

Scope of Research

The telecommunications market usually operates in the area of imperfect competition. Imperfect competition refers to any economic market that does not meet the strict standards of a purely competitive market. In this environment, firms sell various products and services, set their prices, fight for market share, and are often protected by barriers to entry and exit.

The main forms of imperfect competition are:
a) Monopoly
b) Oligopoly
c) Monopolistic competition

Unlike oligopolies, monopolistic competition offers differentiated products. Customers can choose a substitute due to limited monopoly power.

Monopoly power in the case of monopolistic competition is limited, and in the case of rising prices, customers can buy a differentiated product elsewhere. Entering the monopolistic competition market is relatively free. It is easier for the new company to enter the market with their products, as existing businesses can leave if their products become unprofitable.

Oligopoly does not offer a large selection of competing products/services due to the limited number of sellers. Therefore, there is a possibility of agreement between sellers, which is to the detriment of customers. Due to various obstacles to entering the oligopoly, sellers have a chance to make huge profits in the long run.

Examples of oligopoly include oil companies, grocery stores, mobile phone companies, telecom companies and tire manufacturers. Because several players control the market, they can prohibit others from entering the industry. Firms in this market structure

determine the prices of products and services together or, in the case of cartels, they can do so if someone takes the lead.

The characteristics of an oligopoly are:

- A small number of providers of the same or similar product or service.
- Bidders are interdependent, which means that their actions directly affect the behaviour of another bidder.
- The possibility of entering and exiting the market or the market is limited.
- Products and services are homogeneous or differentiated

This characteristic is evident when few firms operating in a particular market choose cooperative or non-cooperative behaviour. When companies try to minimise or eliminate competition, they use a cooperative pattern of behaviour. This pattern represents the market situation, in which two or more bidders act together, determine price levels, share the market, make decisions, and determine production levels.

If these companies act independently or without any agreements with others, they have taken on non-cooperative behaviour that leads to market wars, especially price wars.

The most important source of oligopoly is the existence of economies of scale, which gives larger producers or service providers a cost advantage over smaller ones. When economies of scale are strong, it leads to monopoly, but when it is not so strong, it leads to competition from a small number of firms.

Since an oligopoly is made up of a small number of firms, any change in the price or product of a firm affects the sales and profits of competing firms. Precisely because of this, every firm must realise that changes in its policies are most likely to encourage changes in competition policies as well.

Oligopolists face a situation in which the optimal decision of one firm depends on the decision of other firms due to this interdependence. That is why there is an opportunity for conflict and cooperation.

A good example of an oligopoly, and which is the subject of this research, is the telecommunications industry. In the telecommunications sector, as a separate public sector, the entry of new jobs is strictly regulated by state approval. This policy of foreclosing competitors may be due to smaller economies or duplication of services. Another factor in the emergence of oligopolies in this sector is the patent law that several companies acquire in connection with the service.

As far as the telecommunications sector is concerned, the oligopoly structure is desirable because these are entities of specific importance for the state.

Another factor responsible for the emergence of oligopolies is a large-scale firm. Several firms can meet the entire demand for products or services in some industries, and it is

possible that the demand can be met by a large number of firms, while small firms cannot ensure a large-scale production economy.

The existence of an oligopoly requires that several firms succeed in gaining significant market power, preventing other, smaller competitors from entering the market. For example, three telecom operators have the same portfolio of services. If a third operator increases that portfolio, then there will be an increase in supply, which will cause a drop in the prices of telecom services and a decline in revenue. Since firms do not want a reduction in income, they will abide by the oligopoly rules.

For comparison, we can take Croatia, which has three dominant telecom operators, as stated by Kovačević, Krajnović and Čičin-Šain (2018). Mobile Croatia is the first mobile network in Croatia that allows it a monopolistic position in the market. A few years later, VIPnet entered the Croatian telecommunications market, which resulted in lower prices from 50 percent and improved the quality of service. Several years later, the Swedish Tele2 entered the market and affected the existing market operators with its lower prices.

Today, when there are three operators in the market, HT is especially chosen by those who have friends and relatives on that network, VIPnet is selected by those who seek a certain quality of technical support and professionalism. In contrast, Tele2 is chosen primarily for prices, and all three operators have dominant foreign ownership.

The paper further concludes that the state would not benefit if it allowed the entry of a new operator because such a decision would "destroy" the existing operators, from which it already profits through annual concession payments. Consequently, the mobile telecommunications market is likely to remain an oligopolistic market in the foreseeable future. As it is further stated, the best way for the growth and development of telecommunication operators is to optimise the price-quality ratio and satisfy users' needs by increasing data traffic within tariff packages.

In the case of Slovakia, we come across the following data. Namely, in their work, Durica, Kovacova, Gregova and Lazaroiu (2019) state that there were three operators on the market until 2015; the CR3 index was then 100 points. This indicator fell to 98.58 points in 2016 and 97.56 points in 2017 after the fourth operator (Swan) entered the market. This further means that the entry of the new operator did not have a significant negative impact on the three already branded companies.

Interestingly, the concentration limit is 25 percentage points in the European Union and 50 percentage points in the US. The acquired values of the surveyed indicator CR3 show that the concentration of the mobile telecommunications market in Slovakia was extremely high throughout the observed period.

Oligopoly on the Telecommunications Market in Bosnia and Herzegovina

Telecom operators have recently acquired several alternative operators with significant market power in Bosnia and Herzegovina. Such decisions have been defined by the Communications Regulatory Agency as such (significant market power - operator with significant market power) in several relevant markets. These relevant markets concern fixed telephony, mobile telephony and the internet. Under Article 10 of the Bosnia and Herzegovina Law on Competition, the designation of SMP operators, in terms of competition law, is equated with the position of the dominant position.

Three telecom operators have been established according to the rules of the Communications Regulatory Agency in Bosnia and Herzegovina. The fourth operator appears in the sphere of distribution of audio-visual media services. The question is whether there is a possibility of negotiating prices in a given case, which would ultimately be less favourable for consumers. In the specific example, this is not the case since the offers of existing telecom operators are of different price categories.

Methodology

The analysis presents the breakdown of the selected oligopoly into individual parts, according to the basic characteristics that determine this market structure to identify internal relations and interdependencies and the type of selected oligopolistic market structure. In this sense, it is necessary to provide as relevant information as possible about companies operating in the telecommunications industry. Actual data were mainly obtained from the operators' annual reports that were published annually. The Communications Regulatory Agency prepared the analysis.

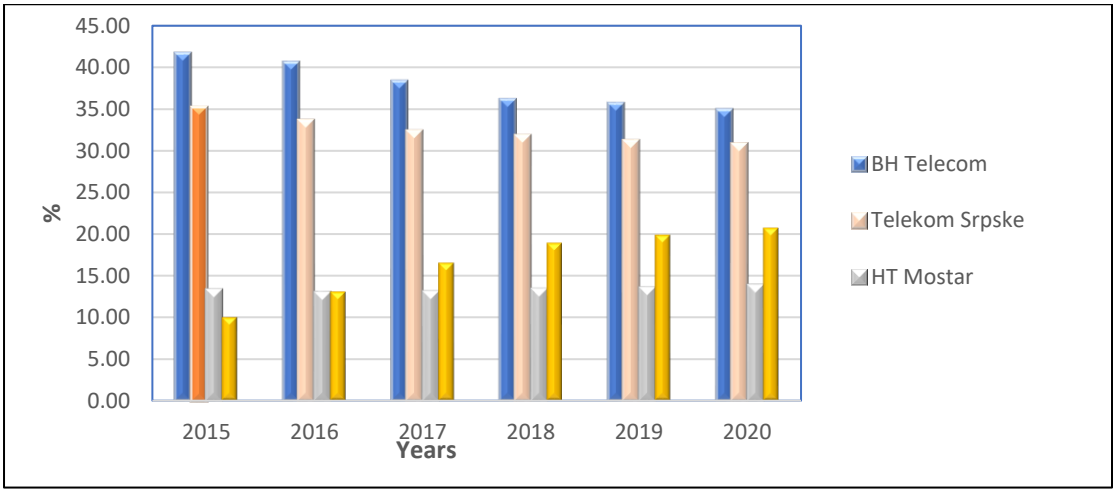
The implementation of Comparative Analysis of Mobile Operators may be limited due to the lack of comprehensive data. Nevertheless, we compared telecom companies taking into account operator's share based on total revenues in the telecommunications market and the number of active users and an important indicator of service quality provided by mobile operators, measured by available networks, frequencies and technologies.

Alternative service providers are service providers known as virtual network operators. These operators do not own any mobile network but cooperate with mobile network operators and gain access to network services for wholesale prices and then set retail prices for their customers. Alternative mobile service providers have their consumer services, billing and marketing.

According to the data of the Communications Regulatory Agency, certain analysis have been made for this paper. These analysis include shares in certain segments of telecommunications services and revenues of leading telecom operators. Based on the collected and systematised data, we will have an insight into the situation in the given market.

The share in fixed telephone lines per operator for 2015-2020 is presented in Figure 1.

Figure 1: Share in Fixed Telephone Lines per Operator in the Period 2015-2020

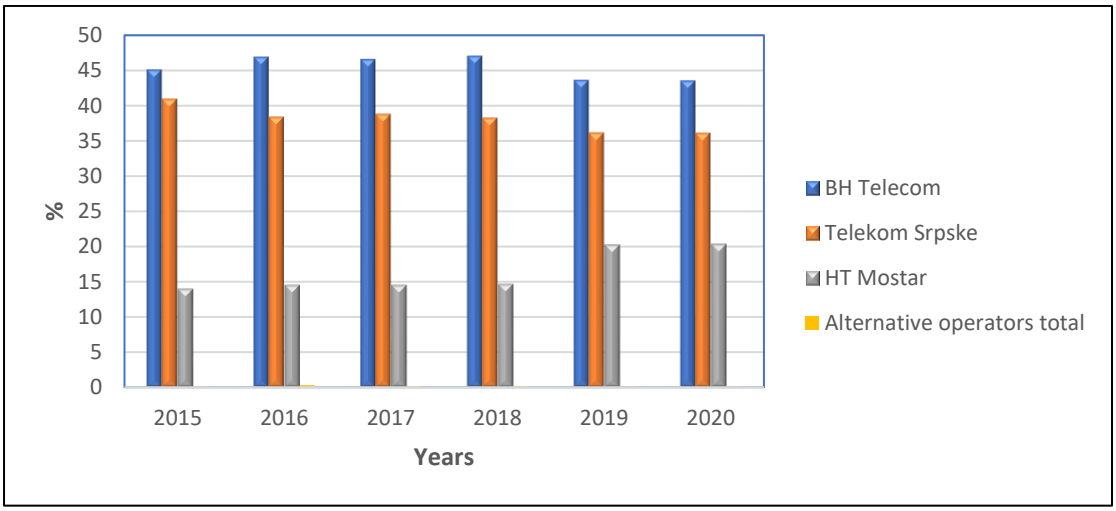


Source: Calculated based on Communications Regulatory Agency Bosnia and Herzegovina data, Annual report for 2020

We can see from the graph that the fixed telephony service has decreased in the last five years. As is well known, the reason lies in new technologies based on the internet. Alternative operators are other operators with significant shares in a particular telecommunications services segment. Some of them are independent and some operate as leading telecom operators. The provision of fixed and mobile telephone services requires permits from the competent communication regulatory agency.

Figure 2 presents the leading operators in mobile telephony, where it can be seen that alternative operators have insignificant shares.

Figure 2: Share of mobile telephony subscribers in the period 2015-2020.

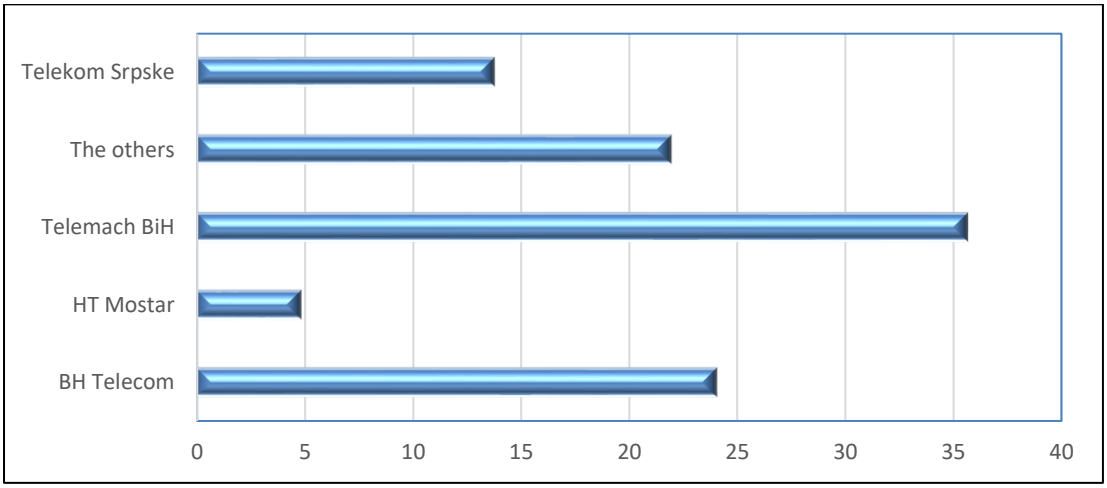


Source: Calculated based on data from Communications Regulatory Agency Bosnia and Herzegovina, Annual report for 2020.

In the mobile telephony market, alternative operators have a low market share. The reason probably lies in greater investment in network infrastructure and pricing policy based on economies of scale about the unit of measurement.

The audio-visual media content market situation is slightly different since we also have a fourth-leading operator. Thus, the share of subscribers in the distribution of audio-visual media services is shown in Figure 3.

Figure 3: Share of Subscribers in the Market of Distribution of Audio-visual Media Services



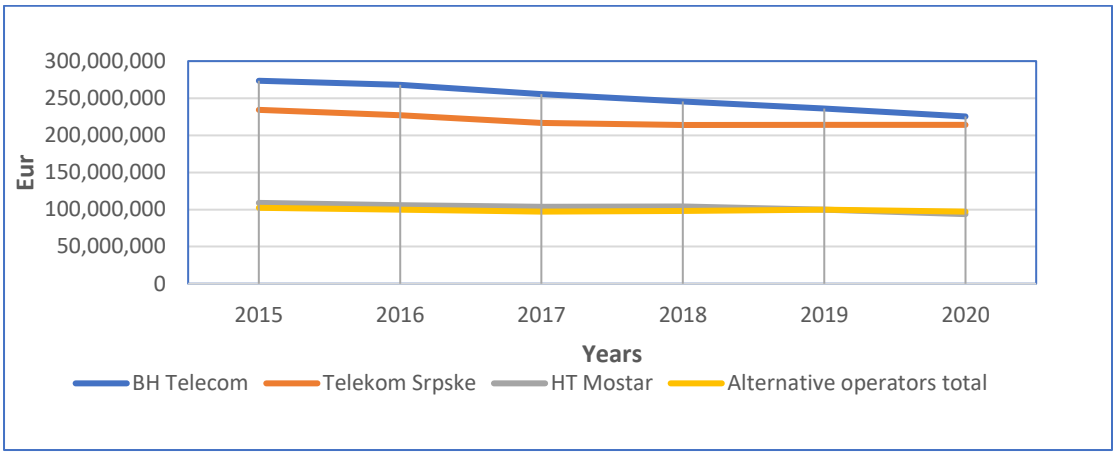
Source: Calculated based on data from Communications Regulatory Agency Bosnia and Herzegovina, Annual Report for 2020

Leading operators in audio-visual media services have a different share compared to fixed telephone lines. Telemach has the most significant percentage among all affiliated companies. However, it should be noted that Telekom Srpske has about 25 percent, if affiliated companies join it. The number of subscribers in this market segment is highly growing, which indicates the development of this part of telecommunications services.

The movement of revenues of leading and alternative telecom operators in the period 2015-2020 can be seen in Figure 4. The decrease is evident in the last period. This may also result from the weaker use of certain telecom services, traditionally used a lot.

Some applications have become free and their use has multiplied, and with some services we have a significant reduction in prices. And certainly, the drop in revenue is also a consequence of the emergence of alternative operators who are trying to take over a certain number of customers with slightly lower prices.

Figure 4: Review of Revenues of Leading And Alternative Operators in 2015-2020



Source: Calculated based on data from Communications Regulatory Agency Bosnia and Herzegovina, Annual report for 2020

We start the analysis by calculating the absolute measure of Herfindahl – Hirschman Index (HHI) concentration. Absolute indicators are intended mainly for economic purposes and to describe the market structure in the sector. The coefficient of variation determines the uneven distribution of the values of the analysed indicators. The Lorenz curve and the Gini coefficient can describe this type of measurement. Based on the values of the calculated indicators, we come to know whether the industry is concentrated or not. We first calculate the concentration rate for the n strongest companies in the industry (CRn). The concentration rate is written in the form:

$$CR_n = \sum_{i=1}^{n} s_i$$

where: si - market share of the i-th company,
n - number of companies, n∈ (1,n).

One of the most commonly used and accepted measures of market concentration is the HHI index. Theoretically, its value ranges between 0 and 10,000. If there is only one monopoly company on the market, the market concentration of bib would be maximum, while competition on the market would be minimal. Conversely, if thousands of companies were in the market, each with a market share of around 0, the HHI index would be 0.

$$HHI = \sum_{i=1}^{n} (s_i)^2$$

As we can see, the HHI index is the sum of the squares of the market shares of all companies in the selected industry. Brzina (2009) explains in his paper that HHI is a convex function of the market shares of all companies in a given industry.

Results and Discussion

We focus on market shares based on revenues from telecommunications services to calculate the above indicators. We test the value with three leading and the total number of telecom operators.

Table 1: Values of CR 3 and CR 4 in 2015-2020

Indicator/Year	2015	2016	2017	2018	2019	2020
CR3	85,77	85,76	85,55	85,17	84,65	84,58
CR4	100	100	100	100	100	100

The CR 4 indicator includes all telecom companies and is at 100. For the leading telecom companies, CR 3 varies from 84 to 85. If we look at the number of users, this indicator will not be identical to all segment market since in the field of audio-visual content it has the largest market share. While the numbers of users of other services (e.g. mobile and fixed telephony) for alternative operators are convincingly low. Due to the large difference in the given sizes, revenues were considered a better market share indicator.

The HHI index is a general index of market concentration assessment. Pursuant to the Guidelines of the European Commission for the assessment of horizontal mergers under the Council Regulation on the control of concentrations between entities:
HHI < 1000 is not concentrated
HHI = < 1000,20009 > and Δ HHI is lower than 2050 moderately concentrated
HHI >2000 and D HHI is lower than 250 highly concentrated.

Table 2 shows the value of the HHI index for the Bosnian telecom operator market based on the revenues of telecom operators.

Table 2: Values of the HHI in the period 2015-2010

Year	2015	2016	2017	2018	2019	2020
HHI	2.941	2.944	2.923	2.889	2.877	2.890

As we can observe HHI has had a downward trend as a result of a slight increase in competition in the market. However, it is still a highly concentrated market. No major oscillations are noticeable in the given market segment and the three leading telecom operators are still leading, except for the audio-visual content market.

Table 3: Values of Coefficients of Variance in 2015-2020

Year	2015	2016	2017	2018	2019	2020
Coef. of variance	0,42	0,42	0,41	0,39	0,39	0,40

The relative measure indicates that revenue changes were not significant. If the values were closer to zero, it would mean a balance in the market and a significant competitive environment.

However, the competition authority in Bosnia and Herzegovina considers the possibility of distortion of competition in this market through analysis and verification, which is a challenge as services in these markets become more complex and integrative.

The Regulatory Agency analyses the telecommunications market in B&H in terms of an *ex-ante* approach. This approach implies regulation where competition is not yet effective; that is, existing market facts and future development factors are considered. This regulation results in equal conditions for all operators in the relevant market and eliminates structural market failures that affect business decisions between competing firms.

The concentration level is a significant indicator for measuring the strength of oligopolists. All restrictions in the oligopoly market result in higher concentration levels, and conversely, less concentrated markets also have lower conditions. The results indicate a high level of oligopolistic market concentration in the telecommunications market segment in Bosnia and Herzegovina. This can also be attributed to a particular part of the legacy of the state monopoly in this market segment.

Quality and efficient competition is the best instrument for incentives in a given market. In his paper, cave (2006) states that competition is a key regulator and state institutions that regulate competition signal the conditions for changing assessments.

The fourth operator seeks to increase market share through marketing and better services. So, the barriers to entering this market, in addition to the technical ones, are the high costs of marketing, the huge capital associated with the construction of network infrastructure, the improvement of innovations in services about competition.

We can say that the existing oligopolistic structure is acceptable from the aspect of customers since they have a choice in terms of price and technical terms. This is reflected in different service packages at different price tariffs.

In Bosnia and Herzegovina, the Communications Regulatory Agency is an institution that *ex-ante* regulates the situation on the telecommunications market by setting certain rules, issuing licences and making other decisions related to telecommunications.

The Council of Competition of Bosnia and Herzegovina act *ex-post* in the given market by monitoring market abuses and assessing justified concentration procedures.

Council of Competition Bosnia and Herzegovina applies analysis to determine the violation of competition rules and prohibited competitive actions on the market using existing legal regulations. The relevant market is determined on a case-by-case basis.

Adequate measures are adopted when considering individual prohibited competitive activities or specific behaviour of an economic entity on the market.

In this sense, the competition authority Bosnia and Herzegovina has not established the effective existence of a consensual oligopoly in the telecommunications market, as existing telecom companies have specific differences in service offerings and prices. There are three or four dominant operators in telecommunications, and it depends on whether it is mobile telephony, internet or distribution of audio-visual media services. In this case, we can talk about model of oligopoly where the amount of price and the quality of service affect the competitiveness of the company's position.

Conclusion

In the telecommunications market in Bosnia and Herzegovina, several telecom companies offer similar services at different prices. The oligopoly in this market shows that the dominant firms, including their acquired firms, have performed market segmentation in terms of market share. Namely, according to the HHI index, we see a high concentration in this market.

However, the agreed oligopoly is not present because firms have different price levels of services and different offers. Even though there are more than two firms in the market, what can be concluded is the situation of an incomprehensible oligopoly where consumers will switch from one service provider to another due to different price levels. This study concerned the telecommunications market of Bosnia and Herzegovina without a broader comparison with other countries in the region. However, based on certain reports, it can be seen that the problems and challenges in this market are similar in other countries. Further research should include different measurement sizes, such as Simpson's Diversity Index and the Hannah - Kay index (HK). In additional market sensitivity analysis, they would use net profit, EBIT, the average number of employees and the number of business units.

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4
The Role of Competition Law and Policy in a Faster and More Sustained Economic Recovery

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Abstract

COVID-19 pandemic has led to unprecedented economic shocks across the globe. The impact on the real side of the economy, namely on demand, output and employment, is much greater than that of the global financial crisis of 2008. As a result, several firms have struggled to survive as their business revenues and corporate cash flows and working capital have decreased rapidly with the pandemic confinement measures.

The corporate solvency crisis has risked a massive loss of labour and business relationships, know-how and investments that could have a long-lasting effect and hamper economic recovery. All these elements, taken together, have prompted unprecedented government actions. Several governments have tailored targeted measures to prevent a wave of insolvencies of fundamentally viable companies.

Therefore, as the COVID-19 crisis develops and moves through different stages, Government, policymakers and regulators, including Competition Authorities face different challenges in order to support a swift and robust recovery.

Introduction

Throughout history, most economic shake-ups have been because of a crisis. The crisis has primarily been triggered by various factors such as the financial system's collapse, pandemics, wars, and political incompetence. While some economic crises have been mainly localised and some global, the economies affected faced significant economic meltdowns requiring stimulus packages of one form to resuscitate economies to sustain growth.

The world has not been short of such a crisis. While there are several success stories of economic reforms undertaken after a crisis, what is most remembered are the years of hardship suffered by millions of people at times of economic crisis. Challenges included rising unemployment, economic frustration, massive income and output loss, and social tension.

Crisis of note consists of the Great Depression 1932, the Suez Crisis 1956, the International Debt Crisis 1982, the East Asian Economic Crisis 1997-2001, the Russian Economic Crisis 1992-97, the Latin American Debt Crisis in Mexico, Brazil and Argentina 1994-2002, and the Global Economic Recession 2007-09. These were episodes in which many countries simultaneously experienced crises after an elevated growth rate.[35]

Role for Competition in Past Crisis

Competition law and policy have been the go-to tool for promoting and sustaining economic growth by fostering efficiency and innovation, among other benefits in times of economic stability. The enforcement of competition rules is no less critical during times of crisis than during normal periods. However, throughout the crisis periods, the escalation of recessions increasingly appeared to undermine the policymakers and public confidence in the ability of competitive markets to deliver positive outcomes.[36]

Competition law enforcement has come under question in times of a crisis and debates on the most appropriate way to enforce competition rules, considering the crisis continues to date despite the long historical period of competition law enforcement. On a global level, questions relate to the unfairness of international competition from countries where government intervention allows subsidised, state-owned enterprises to gain a substantial advantage over their competitors in countries without similar support.

Also, whether the focus on protecting competition through merger control can impair the development of national champions would induce and accelerate deindustrialisation.[37] Thus, a relaxed stance toward competition law enforcement during difficult periods remains tempting and is often the approach used in the past.[38]

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[35] *MAJOR FINANCIAL CRISIS From Great Depression to Great Recession: V. SRINIVAS, IAS CHAIRMAN BOARD OF REVENUE FOR RAJASTHAN accessed on nationalarchives.nic.in/sites/default/files/new/Final_Major_Financial_Crisis-i_0.pdf*

[36] *Remarks made by Angel Gurría OECD Secretary-General at the OECD Competition Committee Round table "Competition Policy in Times of COVID-19" of June 15, 2020*

[37] *Economic Resilience, Globalisation and Market Governance Facing the Covid-19 Test Frédéric Jenny Chair of the OECD Competition Committee and Professor of Economics, ESSEC Business School in Paris*

[38] *Competition Law in times of Economic Crisis : in Need of Adjustment ? GCLC Annual Conference Series 1re édition 2013 Jacques Derenne, Massimo Merola, José Rivas droit européen*

During the Great Depression (1929-1932), the US passed the National Industrial Recovery Act (NIRA) to limit competition and restrict production to keep prices reasonable, sustain higher wages, and stimulate consumer spending, thus fostering business investment. However, it was later considered unconstitutional by the Supreme Court in 1935.[39]

On the other hand, Norway had put in place a Trust law in 1926, which was practiced in a way that accepted agreements restricting competition so far as they were considered beneficial from a socio-economic perspective. Several other special laws were introduced, suspending competition and cartelising vital industries, in particular the primary sectors of fishing.[40]

Australia granted conditional authorisation for Medicines Australia (MA), the Generic and Biosimilar Medicines Association (GBMA) and their members to work together to support the continued supply of essential medicines during the COVID-19 pandemic.[41]

The recent (September 2021) fuel shortage crisis in the UK has prompted the UK government to consider suspending competition law in the fuel sector. This would tackle supply issues resulting in panic buying across the country,[42] a signal of willingness to balance antitrust rules and public policy objectives.

In addition to other measures, the Zambian government, as part of the response to the COVID-19 pandemic, put in motion the establishment of a Statutory Instrument (SI) according to the Control of Goods Act, seeking to control the prices of certain essential commodities that had been a subject of price gouging. However, the government did not proceed to issue the SI with the cognizance that the pandemic was transitory and permanent measures such as strengthening the competition law offered a more durable solution. Instead, the government amended the competition law to enable it to respond to a crisis, such as the COVID-19 pandemic.

The COVID-19 Pandemic

On March 11, 2020, the World Health Organisation (WHO) declared the Coronavirus disease 2019 (COVID-19) a global pandemic.[43] The nature and spreading of COVID-19 caused massive disruption to the normal flow and operations of the global economy and society at large. The prevalence of the pandemic caused states and governments across

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[39] *Romer, C. (1999), "Why Did Prices Rise in the 1930s?", The Journal of Economic History, Vol. 59/1, pp. 167-199, http://dx.doi.org/10.1017/s0022050700022336.*

[40] *Romer, C. (1999), "Why Did Prices Rise in the 1930s?", The Journal of Economic History, Vol. 59/1, pp. 167-199, http://dx.doi.org/10.1017/s0022050700022336*

[41] *OECD (2020), Co-operation between competitors in the time of COVID-19, https://www.oecd.org/competition/Co-operation-between-competitors-in-the-time-of-COVID-19.pdf*

[42] *https://globalcompetitionreview.com/brexit/uk-exempts-fuel-sector-antitrust-rules-quell-delivery-crisis*

[43] *https://www.who.int/emergencies/diseases/novel-coronavirus-2019*

the world to order the restricted trade, global logistics, travel and operations of essential businesses and other establishments in a bid to contain the spread of the pandemic.[44]

Amid the coronavirus pandemic, several countries worldwide, including Zambia, resorted to full or partial lockdowns and several restrictions to "flatten the curve" of the infection. These measures meant confining millions of citizens to their homes, suspending some business operations, and ceasing almost all economic activity in some sectors. As a result, several sectors were affected by the COVID-19 crisis, with varying degrees of severity.[45]

Many businesses could not carry out their operations, which resulted in knock-on effects on revenue, profits and consumer substitutes. Many economic sectors ranging from; tourism, health, finance, manufacturing, provision of fast-moving consumer goods, and agriculture were negatively affected.[46]

In Zambia, the pandemic affected consumers pushing them into shifting consumer demand attitudes, behaviours and purchasing habits and adopting unconventional ways of life such as virtual shopping. The suspension of some social services such as tourism and travel, events of an entertainment nature and others that promote social gatherings meant that consumers had to cancel or adjust their programmes in adherence to the public health regulations on social gatherings. This increased hospitality service cancellations, with some consumers completely losing out on their money because of the existence of no refund policies by some service providers.[47]

It's Effects on the Zambian Economy

1. The pandemic had a crippling effect on the sectors of the Zambian economy. International borders were closed, flights grounded and some hotels and cinemas were temporarily closed. Companies faced challenges, including supply chain disruptions, workforce disruptions, reduced cash flow and weak consumer demand.
2. The COVID-19 containment measures, which the government had put in place, shifted some industries' structures, with companies adjusting their conduct to better their performance. With massive disruptions in the production, supply and distribution of goods and services, demand for consumer goods had outstripped

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44 *http://www.oecd.org/coronavirus/policy-responses/the-territorial-impact-of-covid-19-managing-the-crisis-across-levels-of-government-d3e314e1/. retrieved 2/42021*

45 *http://www.oecd.org/coronavirus/policy-responses/stocktaking-report-on-immediate-public-procurement-and-infrastructure-responses-to-covid-19-248d0646/OECD Policy Responses to Coronavirus (COVID-19): Stocktaking report on immediate public procurement and infrastructure responses to COVID-19. Updated 24 June 2020 to include Austria revisions*

46 *http://www.oecd.org/coronavirus/policy-responses/stocktaking-report-on-immediate-public-procurement-and-infrastructure-responses-to-covid-19-248d0646/OECD Policy Responses to Coronavirus (COVID-19): Stocktaking report on immediate public procurement and infrastructure responses to COVID-19. Updated 24 June 2020 to include Austria revisions*

47 *DEVELOPMENT OF E-COMMERCE WITHIN FAST MOVING CONSUMER GOODS. What business models will be successful when the traditional food industry move online? SWEDEN, 2018. Retrieved 2/4/2021*

supply resulting in panic-buying. Consumer goods, including personal protective equipment (PPE) and hand sanitisers were affected. The country witnessed a general price increase of these items, even on old stock, while shortages had been reported in some parts of the country. This resulted in artificially inflated prices for the high demand for goods and services.

3. There were increased calls for industry collaboration stemming from ensuring a coordinated response to the pandemic. For example, sector response groups were formed to spearhead industry response to the pandemic. While this was a welcome move, which sought to consolidate industry response, the response group targeted individual companies and not sectors. Companies that were part of the response groups had preferential treatment and their access to markets had a detrimental impact on other companies in the sector.
4. Ordinarily, companies were made to look for solutions. Such solutions included cooperating with competitors to deal with supply-chain challenges or potential overcapacity. While it was clear that drastic measures were needed to adjust to the changing environment, businesses were still expected to operate within the confines of competition law principles.

Government Response to the Pandemic

5. The onset of the pandemic saw the government introducing measures to contain the pandemic. The containment measures were health-focused and meant to slow down the spread of the pandemic but had negative competition consequences. The measures disrupted logistics and supply chains, creating uncertainty regarding access to markets and raw materials in many businesses. Measures included the closure of bars, taverns, nightclubs, and restaurants, among other outlets.[48]
6. These measures foreclosed this section of the liquor sector from accessing the market while entrenching the dominance of liquor outlets on a takeaway basis, such as supermarkets. The government also called to encourage the hard-hit tourism sector players to collaborate with a potential to create fertile ground for cartel conduct.
7. The government also instituted border restrictions and directed only trucks carrying essential items such as food, fuel and medical supplies to enter the country in response to consumer panic buying, which had resulted in shortages of particular commodities due to the restrictions. Border closures starved the manufacturing sector of alternative sources of raw materials, with ethanol sourcing limited to domestic producers, which significantly increased their ethanol prices, potentially abusing the acquired dominance.

[48] *https://reliefweb.int/report/zambia/united-nations-covid-19-emergency-appeal-zambia-may-october-2020-revised-july-2020*

Competition Response as a Tool to Stimulate and Sustain Growth

While the competition law and policy were not "suspended", its reach in addressing emerging competition concerns triggered by a crisis came under the spotlight. Limitations in provision to deal with price gouging triggered a revision of the competition law while price controls were mooted as a temporary measure. Despite the non-suspension of the competition law, Government interventions inadvertently may not have considered the potential competition implications of interventions.

While government interventions may have been well-intentioned, some of the measures, unfortunately, resulted in competition concerns. For example, the closure of certain types of business due to their crowd-pulling nature without mandating the relevant authorities to issue appropriate licences to enable them to compete with those operating on a different model effectively meant foreclosing one segment of the relevant market from competing.

Further, despite incentives being made available to all eligible enterprises, only a few received the incentives or preferential treatment. The differential treatment resulted in some market players failing to access the market or having increased costs compared to their competitors. Similarly, the call and encouragement for tourism industry players to collaborate could create fertile ground for cartel conduct.

Conclusion

The brutal economic onslaught experienced with each crisis provides valuable lessons on the space that competition law and policy occupy based on the various governments' responses. It is, therefore, time to rethink if and how the role of competition law and policy should be redefined based on goals, achievements and failures in a time of deep economic crisis like one triggered by the COVID-19 pandemic. The vigorous promotion of competition in the future may not be as central an economic preoccupation as it was during the first two decades of the 21st century. To the extent that it is still useful, there is a need to consider the trade-offs between static efficiencies, reallocation of resources through industrial policies, dynamic efficiencies and economic resilience. At the very least, governments will have to take a longer and more dynamic view of the competition process than they have in the past and adapt their reasoning to state aid, crisis cartels, or mergers to circumstances of disequilibrium caused by an exogenous shock to the economic system[49].

In times of economic disruption, an adequate competition policy and its efficient enforcement are essential to strike a fair balance between the need to allow certain flexibility to operators engaged in economic stability and recovery on the one hand. On the other hand, the necessary preservation of a competitive market structure is required

[49] *Economic Resilience, Globalisation and Market Governance Facing the Covid-19 Test Frédéric Jenny Chair of the OECD Competition Committee and Professor of Economics, ESSEC Business School in Paris*

in the long term. The flexibility needed in times of economic crises is for both the issue of public support to companies experiencing temporary liquidity problems and the mechanisms for reinforced cooperation between economic actors, including competitors.

In the context of the COVID-19 crisis, this overarching 'flexibility' challenge involves several specific concerns from the competition. Such particular challenges include: (i) the need to adapt it to emergency procurement; (ii) the extraordinary need for public support by companies that would be viable in the absence of the crisis; (iii) the continued relevance of merger control and the difficulties posed to it by lockdowns and other measures of containment of the virus; and (iv) the particularly intense need for public guidance regarding cooperation between competitors in antitrust[50].

Where support is to be offered, such State support should be based on objective criteria and, when possible, applied to all businesses in an industry to maintain a level playing field. In addition, such support should be offered for a limited time, long enough to restore the competitiveness of aided companies but short enough to avoid disincentivising those companies to compete and innovate.

Cooperation between competitors may be necessary for a crisis to stimulate economic growth, especially in an increasingly globalised economy where companies face competition from companies that enjoy state subsidies and support. This is important to maintain or revive the manufacturing and supply of essential products, severely disrupted by the crisis and the confinement measures; and to create new products. These forms of cooperation may be very beneficial for consumers and should be allowed, if they do not spill over into complex core restrictions of competition, such as price-fixing.[51]

Competition law and policy thus remain relevant in contributing to a sustained economic recovery after a crisis so far as it adopts a flexible character, enough to fit in the overall policy context and agile enough to recognise the unique response approach of an exogenous shock to an economy.

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[50] *COMPETITION & STATE AID COVID-19 Insight: "Competition law in times of crisis: an overview of challenges for competition policy and authorities" by Dolores Utrilla: https://eulawlive.com/competition-law-in-times-of-crisis-an-overview-of-challenges-for-competition-policy-and-authorities/*

[51] *Remarks made by Angel Gurría OECD Secretary-General at the OECD Competition Committee Round table "Competition Policy in Times of COVID-19" of 15 June 2020*

5
E-Commerce as a Vehicle for Inclusive Global Economy

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Abstract

A select few players dominate the E-Commerce landscape in the global economy. To the detriment of true inclusiveness, policymakers and governments are outsmarted by ever-enhancing technology clusters that act as data silos and knowledge hogs in their operations. In the name of advancement, certain tech corridors with vast resources have effectively rendered the application of skills acquired through traditional academic efforts rather obsolete.

Broadly e-commerce refers to the ability of interested parties to interact with each other to discharge certain commercial activities in a timely, efficient and transparent manner. When the underlying technological tools change constantly, it gets challenging and, in some cases, very expensive to adopt. This is especially true for under privileged and less informed populations. When a society's brightest and wealthiest have a singular motivation for creating increasingly complex technologies, the learning curve for the rest of the population gets very steep and as a result, inclusiveness suffers.

Internet traffic (bots or real visitors) is a very expensive commodity controlled and directed by certain well capitalised tech giants for the benefit of the highest bidder. So in essence the true cost of doing business is unknowable and when combined with a steep learning curve for implementing fancy tools it becomes an insurmountable hurdle for progress.

Regulations are at best mis-informed and at worst archaic. This industry is the core of modern knowledge work. For a fast-paced industry such as this, regulations have to be more forward-looking. Enforcement should be focused on identifying and curbing innovation killing practices, ensuring IP protections and preventing aggressive consolidation activities. Further special consideration should be made to promote cross-border e-commerce.

Introduction

One of the great miracles of the last few decades in the business world is e-commerce. It is the direct result of advancements in computer sciences, business requirements for reaching out to new customers and entrepreneurial ingenuity. The early days of the personal computer revolution were primarily about doing small routine tasks quickly and efficiently. Then came the productivity tools, which led to vast amounts of data.

Later, with advancements in internet technologies, connectivity, and cloud computing, the e-commerce case became clear. The advantages of having e-commerce capabilities for a business continue to grow. Newer offshoots such as m-commerce (mobile) and v-commerce (virtual) with the help of artificial intelligence are making waves in recent times.

A select few players dominate the e-commerce landscape in the global economy. To the detriment of true inclusiveness, policymakers and governments are outsmarted by ever-enhancing technology clusters, which act as data silos and knowledge hogs in their operations. In the name of advancement, certain tech corridors with vast resources have effectively rendered applying skills acquired through traditional academic efforts somewhat obsolete.

Broadly e-commerce refers to the ability of interested parties to interact with each other to discharge certain commercial activities in a timely, efficient and transparent manner. When the underlying technological tools change constantly, it gets challenging and, in some cases, costly to adopt. This is especially true for underprivileged and less informed populations. When a society's brightest and wealthiest have a singular motivation to create increasingly complex technologies, the learning curve for the rest of the population gets steep.

As a result, inclusiveness suffers. People in tech circles are familiar with the acronym FANMAG (was FAANG), which stands for Facebook, Amazon, Netflix, Microsoft, Apple and Google (now trading as Alphabet). Other national, regional, and perhaps even local players have some market share. They along with tech peers like IBM, ebay and global counterparts, are setting the pace of innovation and complexity for the rest of the world. Innovation in itself is welcome. But the side effects of highly fast-paced, sometimes meaningless upgrades to existing creations leave large swaths of the population out of its intended societal benefits.

The basic premise of e-commerce tools is anyone can set up a website cheaply and quickly to sell their products. Most websites do not ever receive enough visitors to justify start-up costs or initial learning efforts. Because without a constant stream of visitors, the opportunity for selling anything is quite remote. Internet traffic (bots or real visitors) is a very expensive commodity controlled and directed by certain well capitalised tech giants for the benefit of the highest bidder.

So, in essence, the true cost of doing business is unknown and when combined with a steep learning curve for implementing fancy tools, it becomes an insurmountable hurdle for progress. Then there are many experts offering specialised operations for a variety of intelligent-sounding "smart solutions".

Such solutions can range from special or premium services, hosting services, server-side data analytics, cloud computing, data acquisitions, search engine optimisations, search engine marketing programmes, complex big data analytics-oriented algorithms and a vast array of marketing and advertising tech activities. Even if an average small business person sets up a shop on one of the global e-commerce leader's websites, they are still expected to do these multitudes of operations for additional fees to make a sale.

Business survival is never assured thus contributing to a very volatile existence. It becomes a self-fulfilling prophecy to justify continued investment into these latest and greatest channels for staying ahead of their traditional competitors. With any new channel, there are recognisable advantages. Also, serious gaps, offer room for substantial improvement.

Emerging Businesses are in Sync with Emerging Technologies

It is to be expected that emerging businesses are in sync with emerging technologies. However, the ongoing cost of being in sync is the main question that needs to be evaluated by policymakers and regulators alike.

Regulations are at best misinformed and at worst archaic. This industry is the core of modern knowledge work. Regardless of the size of the entity whether it is at a large corporate or at a Micro, Small and Medium-Size Enterprise or an individual level, innovation in this space is mostly about coming out with an exciting new software programme, creating more advanced process flows, redesigning the hardware to match up with new software plugins/patches/upgrades or utilising creative coding skills to present information in more eye pleasing logical versions. Such things are considered brilliant breakthroughs, which can happen every day. For a fast-paced industry such as this, regulations have to be more forward looking.

Allowing a place for setting up clear parameters within the regulatory framework will save countless future innovators and facilitate upstarts to survive and possibly thrive. When huge amounts of capital resources, either through public capital markets or through other channels, are poured into a select few players who continue to dominate the marketplace or otherwise contribute to an environment that is less than ideal for smaller players to progress, regulators will have a very tough time tracking the missed opportunities.

An important distinction to draw here is between back-end technology and front-end technology. In broad terms, back-end technology tools provide the backbone or working infrastructure related to the speed of processing computing instructions. Front-end tools

enable modestly informed and less tech-savvy users to achieve their tasks. This is accomplished either by self-learning or with the help of technically qualified people.

Many companies that operate in the e-commerce space consider themselves technology companies. Some tend to portray the image as if they are the cutting edge. But in most cases, this is not true. It is essential to differentiate between "users" of technology and "creators" of technology.

For instance, most workers use email or office productivity software programmes. A typical email programme can come with over 100 different features, and most users will never use any of them. Many do not even know such features exist until an advanced user comes along to enlighten them.

Some companies are experts at utilising existing/emerging technologies to create new use cases and open up new markets, and they use it to have a competitive edge.

On the other hand, research-oriented companies create truly amazing technological advancements. But due to their business situations, they cannot fully capitalise on their contributions.

As an example, a start-up can create a great piece of hardware or software. Then a major company in that space can acquire the start-up to gain access to that technology or take it out of the market as a potential competitor. We see these examples quite regularly.

So from a regulation viewpoint, it is perhaps helpful to categorise existing and future participants into innovators/creators, distributors and end-users.

Innovators

The objective of most innovators/creators in tech space is to create logical next steps in their journey of pursuing the best outcomes applicable to a specific industry or problem area. Such outcomes may be related to a business situation or to a whole host of other technical or non-technical scenarios. The best bet for regulators is to simplify registering and monitoring such ideas or concepts free of cost, especially for individuals and smaller entities. Intellectual property protections, acknowledgment or recognition of their contributions and channels for commercialising such ideas can be quite useful. Traditional IP registration processes are considered too slow and expensive for such a fast-moving industry.

Distributors

The distributor's main objective here is to reach the target audience quickly and efficiently. This may be for their business expansion or on behalf of their clients. Here archaic regulations can be burdensome in some scenarios for existing players and sometimes act as a hindrance for newcomers. Some viral tech giants mentioned above operate in this category. Though not exclusively, they have gathered significant market

share in certain areas of e-commerce, most likely due to regulations that have not kept up with the enormous market power gathered by a few.

End-users

The end-users' objective is to do their tasks with the least amount of learning curve. They may run into lengthy legal terms and conditions prepared by skillful legal minds of the highest caliber. Essentially users are guided to opt-in to trade their privacy and data in exchange for access. Here regulators are encouraged to provide strict guidance to players in this space to simplify the terms down to a few lines of the expected code of conduct.

Enforcement should be focused on identifying and curbing innovation killing practices, ensuring IP protection and preventing aggressive consolidation activities.

To expand further on the status of market power gathered by a few, let us look at some notable companies and their market influence

Google

As of 2019*

- More than 2 trillion Google searches per year. In 1999 that number was 1 billion per year
- Google owns 90 percent of the global search market
- Search traffic has grown 2,000 percent in the past 20 years
- Average person performs 3 - 4 google searches per day
- More than 1.5 billion active Gmail accounts exist
- Google maps is made up of 20 petabytes of data, which is equal to 21 million gigabytes
- Google chrome controls 63 percent of the browser market
- There are 5 billion mobile installs of google chrome
- YouTube, owned by Google parent, is the second largest search engine
- Over 1 billion videos are viewed on YouTube each day
- Android controls 85 percent of the Mobile operating system market
- There are more than 2 billion active Android users each month
- Google docs have over 500 million users

Facebook

As of 2021** Facebook dominates social media markets with its offerings of Facebook, Facebook Messenger, Whatsapp and Instagram platforms.

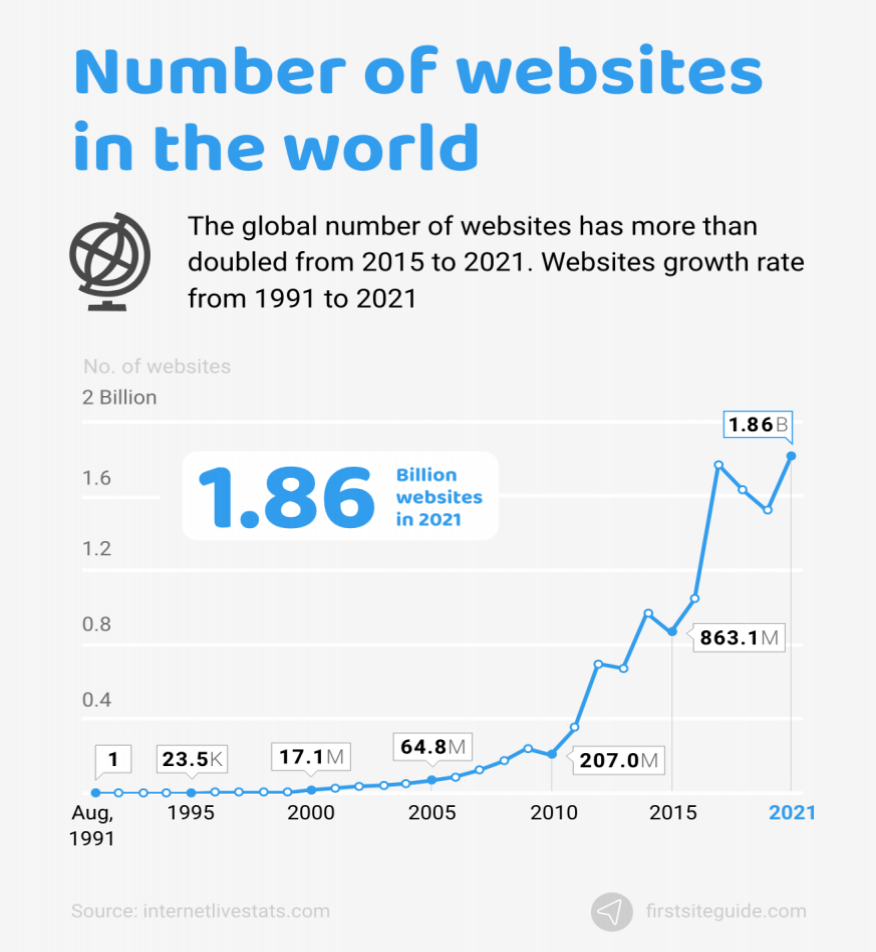
- Facebook has 2.74 billion monthly active users
- WhatsApp has approximately 2 billion monthly active users
- Facebook Messenger has 1.3 billion monthly active users
- Instagram has over 1 billion monthly active users
- Facebook owns many other popular platforms

Amazon

As of 2021*** Amazon.com has

- A catalog of 12 million products across all categories and services. (RepricerExpress, 2021)
- More than 75.1M products are being sold on Amazon
- The largest category in Amazon is Books (57.2M)
- Factoring in the Amazon Marketplace, there are 353 million products available on Amazon (RepricerExpress, 2021)
- As of January 2021, Amazon ranked 9th in global internet traffic engagement. (Alexa, 2021) (Alexa is owned by Amazon.com)
- Interestingly, 63 percent of consumers start searching for a new product on Amazon. On the other hand, 63 percent compared prices on Walmart, 50 percent discovered new products or brands on Google, and 50 percent searched for inspiration on Instagram. (Kantar, 2020)
- 63.5 percent of Amazon traffic comes from the US
- Amazon seller statistics show that there are 9.6 million sellers (including inactive sellers)
- Approximately 2.4 million sellers have a product listed for sale on Amazon
- However, less than 10 percent of active sellers could generate over US$100,000 in annual sales. (Marketplace Pulse, 2021)
- By the end of Q3 2020, Amazon Web Services (AWS) controlled 32% of the global cloud infrastructure services market. (Canalys, 2020)
- As of January 2021, AWS is used in over 16 million websites worldwide. (BuiltWith, 2021)

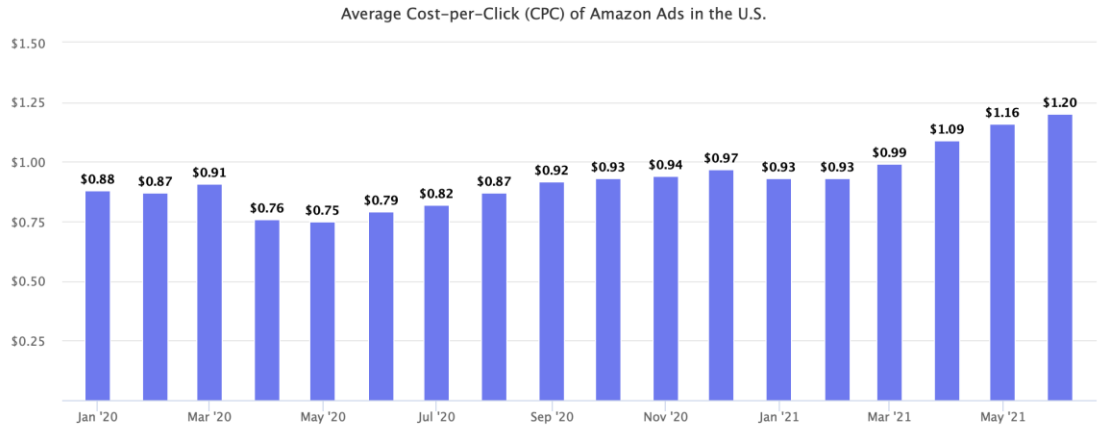
A new trend related to Amazon sellers is private equity firms, cashflow seeking hedge funds and investors are acquiring the top 10 percent Amazon sellers. This further consolidates successful sellers and cripples the rest of the 90 percent in their e-commerce efforts.



Here's how top-level domains are ranked based on the number of domain names they currently have:

1. .com – 151.8 million domain names
2. .cn – 24.7 million domain names
3. .tk – 24.7 million domain names
4. .de – 16.7 million domain names
5. .net – 13.4 million domain names
6. .uk – 10.9 million domain names
7. .org – 10.3 million domain names

According to "BuiltWith" eCommerce usage distribution report, there are currently 19.7 million websites using eCommerce-related solutions. Many sites operate as affiliates of major e-commerce companies or blogs that also offer products from their partner companies. There are new trends such as single product websites, niche product websites, category websites, infomercial sites, which are part of a professional affiliate marketing organisation.



Source: https://www.marketplacepulse.com/articles/amazon-ads-are-getting-more-expensive

Marketpulse.com states, "Advertising adds to the customer acquisition costs (CAC). Before advertising gained prominence, CAC on Amazon was typically 15 percent. The transaction fee it charges for each sale (because of the nature of Amazon, brands usually pay a CAC price for each order, rather than being able to recoup it over second and further orders). However, advertising has now pushed customer acquisition costs well beyond 20 percent, and it will only get higher."

We can comfortably conclude that most prominent e-commerce companies are engaged primarily in advertising activities and support services. When a participating seller cannot sufficiently understand this complex menu of tech offerings, his/her business suffers. This is evident in the case of amazon.com where over 90 percent of sellers can achieve less than US$100,000 in annual sales. The sellers are expected to spend that figure for FBA (Fulfillment-By-Amazon), CAC, AWS cloud services, etc.

Important points to reiterate are

- Google owns 90 percent of the global search market
- Facebook has 2.74 billion monthly active users
- Over 90 percent of active sellers on Amazon generate under US$100,000 in annual sales
    - Customer Acquisition Costs are expected to continue to rise

The regulators may review such facts to provide more equitable and budget-friendly access to the internet traffic and infrastructure, possibly improving inclusiveness.

Cross-border e-commerce is not the same as the currently existing popular version of e-commerce. After almost two decades of experimentation with the B2C model (Business-to-Consumer), the evidence of the shortcomings in achieving cross-border trade goals has become quite apparent. In the B2C version, a multinational platform allows a select group of sellers to sell to consumers of other countries where the platform is accessible.

As a result, it is highly likely for local sellers to lose out either due to a lack of capital or knowledge resources or trade-related legal challenges. Governments are unable to determine the true tax base for such operations. Cross-border e-commerce should be primarily about business-to-business.

There are several barriers to achieving cross-border e-commerce solutions.

- The very first challenge is identifying with the mindset of using a square peg in a round hole approach. Meaning using the existing B2C e-commerce format primarily addresses a different type of business need. Eligible businesses that are authorised to conduct export sales operations have very different needs. No two industries are the same.

  In the international context, no two companies within the same industry or even no two deals within the same company can be identical. So, it cannot be neatly packed into a B2C format. B2B deal formats are markedly more complex. Issues related to product/project compliance, banking related to performance bonds, cross-border payments, currency risks, political risks, product or national image perception risks, order processing challenges, and shipping and delivery channels are some of the long lists of items up for consideration.
- Second challenge is to understand the requirements of the target market. In this regard, several factors need to be carefully considered. Some factors are cultural sensitivities, language barriers, general favourable affinities towards certain products or cultures or expressions versus unfavorable views and the like.
- Third is about developing a sustainable plan for market entry and post-sales service. In a B2B context, these activities can be quite cumbersome and highly diverse to each target market. Businesses will need sufficient capital and intellectual resources internal to their organisations to achieve a good level of understanding in these matters on an ongoing basis to break into a new market and successfully expand. In some cases, many governments are short footed in creating suitable support structures for enabling fledgling export businesses to expand into new territories.

So instead of investing resources in long-term national solutions, most governments look at unsuitable existing channels.

Exporting and importing activities are integral to a nation's growth trajectory. When a nation exports good quality products, it establishes credibility in the international markets. Good quality products are usually the result of high caliber research and development, acceptable manufacturing or production standards that are on par with international standards or expectations and rigorous customer service. All such activities require a lot of capital resources.

As a result, many companies are simply priced out of playing in international commerce. In fact, most companies run out of resources in searching for and securing their initial export orders.

One of the biggest challenges for any business to survive is the constant flow of orders. Achieving export order is akin to finding a needle in a haystack, especially when there are no suitable government assistance programmes. Most government programmes are about providing information, enabling travel permits and introductions in government-sponsored trade event settings. These activities were helpful in the pre-internet era.

Nowadays, information overload is more of a norm. But the type of information, the cost of obtaining that information and how many layers of interpretations exist within that information are some factors, which make a significant difference between wasting time in endless analysis and chasing useful leads, which may turn into potential order. In this regard governments' hands are tied because it is not their purpose or role to invest scarce resources into every possibility that may potentially boost exports. As a result, most governments favour a handful of sectors for generating export activities.

Many other sectors, which may contain sufficient promise, are ignored, thus excluding groups of capable entrepreneurs from participating in cross-border opportunities. Depending on the sector and type of products, there are challenges and significant hurdles to overcome. The unique challenges to dealing with goods exports may not be relevant to services exports.

In this sense solving "services export" use cases is relatively simple, especially from an e-commerce perspective because delivery and transfer of titles can be achieved via the internet quite efficiently. The delivery here is mostly from one IP address to another IP address.

"Goods exports" solutions can be much more complex due to differences in regulations for each sector, product categories and export/import permitting procedures for each country. Solving issues related to safety, security, hazardous materials packaging, sanitary and phytosanitary certifications are important for smooth flow. Since goods are ultimately delivered via air, water or land methods for a successful transaction conclusion, these complexities can get quite enormous.

Until the transactional processes and delivery methods are simplified, this complexity means inclusivity will remain elusive.

Another important factor to consider is data. The data related to cross-border activities should be treated as the most valuable resource at the government level. It is useful for improving the efficiencies for transactional activities related to national policies regarding export/import permitting, resource mobilisation, and aligning transport infrastructure towards supporting cross-border goods movements.

The e-commerce infrastructure, especially for cross-border trade, should be owned and operated by governments or government-owned entities. This would ensure the security of data, the longevity of service, an efficient way of addressing, mitigating, and

eliminating commercial disputes at early stages before they become an international incident and last but not least, the inclusion of additional sectors for export readiness.

My experiments yielded interesting models (particularly for cross-border trades), which can be explored further at www.itrade.bz. To achieve high inclusivity in cross-border trade, the trade community should embrace simple, well-defined steps (as represented below in www.itrade.bz model).

There is always a greater need for researching and finetuning such models, which will lead to more prosperity for future generations of entrepreneurs.

When authorities universally implement such well-defined processes, it alleviates the time spent by exporters and importers in "information gathering" activities and exploring additional cross-border deal-making opportunities.

In conclusion, achieving inclusivity via domestic e-commerce activities is different from cross-border e-commerce activities. In the domestic scenario, the main component for e-commerce enterprises to succeed is the constant flow of internet traffic consisting of potential customers. If regulators can democratise access to internet traffic within domestic B2C settings, more inclusivity can be achieved. In cross-border trades, well-researched process flows like those presented above may be developed into long-term conduits for greater access to traders from all countries.

** Source: https://www.broadbandsearch.net/blog/google-statistics-facts*
*** Sources: Reuters Institute Digital Report 2020 / https://www.digitalnewsreport.org/ https://blog.hootsuite.com/facebook-statistics/*
**** Source: https://financesonline.com/amazon-statistics/*

6
Rethinking Competition Regulation in 'Unhealthy Commodity' Markets
An Analysis of the Harmful Health and Equity Impacts of the Carbonated Soft Drink Market

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Abstract

Background: It is increasingly recognised that the consumer welfare approach to market power and market concentration in competition regulation has contributed to a range of widening socio-economic inequalities. However, limited analytical attention has been devoted to exploring the harmful impacts of mainstream competition policies that typically fail to consider the health and, thus, the welfare of consumers in unhealthy commodity markets.

This paper examined the competitive structure of a large selection of national markets that make up the global carbonated soft drink market, an example of an 'unhealthy commodity' market. The findings were used to inform discussion on the dangers of not integrating public health interests and values into competition frameworks intended to promote and protect consumer welfare.

Methods: We examined market concentration and the estimated effect of common ownership on market concentration across 98 national carbonated soft drink markets. We also discussed the financial performances and the indirect cross-border wealth transfers (from consumers to shareholders) of the industry's two dominant players, Coca-Cola Co and PepsiCo. Data were sourced from Passport, Compustat, Orbis, and Eikon databases.

Results: The global carbonated soft drink market comprises highly concentrated, oligopolistic national markets. Common ownership of the industry's two dominant firms potentially compounds the issue of market concentration to a considerable degree. Both firms have experienced a sustained period of strong financial performance relative to the industry average. They have also considerably increased wealth transfers to their shareholders and investors almost exclusively based in high-

income countries relative to total revenue and capital expenditure. In comparison, both firms appear to be generating more revenue from consumers based in low- and middle-income countries.

Discussion: Our findings highlight how traditional market analysis for competition regulation in unhealthy commodity markets has likely facilitated rather than addressed growing health and other socio-economic inequalities. Fundamentally, public health interests are at odds with the dominant consumer welfare paradigm, both in terms of its promotion of cheap commodities and its neglect of broader issues such as the corporate capture of public health policy and escalating rates of chronic diseases in disadvantaged population groups.

Competition reforms that involve the systematic integration of public health interests and values would likely have considerable potential to protect and promote population health, especially in low and middle-income countries.

Background

It is increasingly recognised that the so-called 'consumer welfare' approach to market power and market concentration in competition regulation has contributed to a range of widening socio-economic inequalities (1-5). However, limited analytical attention has been devoted to exploring the harmful impacts of mainstream competition policies that typically fail to consider consumers' health and, thus, consumers' welfare in unhealthy commodity markets (e.g., tobacco, alcohol, soft drinks, snack foods). Indeed, today's greatest public health risk factors directly relate to unhealthy commodities – every year, for instance, poor diets, tobacco, air pollution, and alcohol are associated with a conservatively estimated 11, 8, 7 and 3 million deaths, respectively, worldwide (6-9).

The social and economic burden of illness attributable to these risk factors disproportionately affect disadvantaged population groups, thereby widening socio-economic inequalities and impeding global efforts related to poverty reduction and sustainable development (10).

In many countries, key unhealthy commodity markets at the national level tend to be dominated by only a few global corporations (7-9, 11). This extensive and far-reaching market dominance's harmful health and equity impacts burden low- and middle-income countries, even as many countries promote and adopt competition policy (12).

In particular, three broad issues of concern are emerging. First, dominant firms in unhealthy commodity markets are increasingly leveraging their power to shape and expand their needs in low- and middle-income countries and, in doing so, are driving the consumption of unhealthy products at the population level[52] (13-17).

[52] This typically occurs for ultra-processed food and beverages at the expense of traditional and naturally healthier alternatives.

Second, the market power of these dominant firms is likely to be readily translated into substantial political power,[53] which is often used to prevent or delay public health policy and regulation (e.g. a sugar tax) intended to curb the consumption of unhealthy products (18). With respect to industries such as tobacco, alcohol, soft drinks, this phenomenon is well described in the public health literature[54](14, 18-23).

Lastly, the overwhelming majority of shareholders and investors of these dominant global corporations are based in high-income countries (HICs), particularly the United States. The flow of corporate wealth to these shareholders likely plays an important role in depriving many social groups and governments, especially those of low and middle-income governments, of the wealth and resources required to address the escalating health-related costs of the unhealthy commodities in question (15, 24).

In light of these considerations, our paper aimed to explore the first (market concentration) and third (wealth distribution) of the abovementioned concerns.[55] Specifically, we examined the competitive structure of a large selection of national markets that make up the global carbonated soft drink market, an important example of an unhealthy commodity market.[56]

Carbonated soft drinks are the core product type of sugar-sweetened beverages (SSBs), which are estimated to contribute to nearly 200,000 deaths and 8.5 million disability-adjusted life years (DALYs) worldwide (25, 26). Low- and middle-income countries are burdened by 76 percent of these deaths and 85 percent of these DALYs (25, 26). SSBs are also an important contributor to the global burden of obesity, which costs the global economy an estimated US$2tn in direct health care costs and lost economic productivity alone (27).

Specifically, we endeavoured to answer the following research questions:

i) How concentrated are carbonated soft drink product markets around the world, including when taking into account the potential effects of common ownership?
ii) To what extent does market power mediate the cross-border corporate wealth distribution of the global carbonated soft drink industry?

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53 See, for instance: Zingales, L. (2017). Towards a Political Theory of the Firm. *Journal of Economic Perspectives*, *31*(3), 113-130; and Teachout, Z., & Khan, L. (2017). Market Structure and Political Law: A Taxonomy of Power. *Duke Journal of Constitutional Law & Public Policy*, *9*(1).

54 For one of many examples specific to the soft drink industry, see: Gómez, E. J. (2019). Coca-Cola's political and policy influence in Mexico: Understanding the role of institutions, interests, and divided society. *Health Policy and Planning*, *34*(7), 520-528.

55 The second issue (political power) has received considerable attention, at least in the public health literature, and thus will not be explored in this paper.

56 The core product manufactured by the global soft drink industry is sugar-sweetened beverages, which are linked with an extensive range of adverse population health outcomes. These include cardiovascular disease, type 2 diabetes, obesity, certain cancers, dental caries, and all-cause mortality. See, for example, the World Bank's (2020) recent knowledge brief entitled, 'Taxes on Sugar-Sweetened Beverages: International Evidence and Experiences' for a brief overview.

The findings were used to inform discussion on how integrating public health interests and values into competition regulation of market concentration and market power, especially about unhealthy commodity markets, could potentially protect and promote population health, especially in low- and middle-income countries.

Methods

From a public health perspective, a range of dimensions and indicators were descriptively analysed to explore market concentration and corporate wealth distribution in the global carbonated soft drink market. We outline these in detail below. Markets were defined as per Euromonitor International's (Passport) categorisation of both product[57] and geographic markets[58] for soft drinks.

Quantitative data were sourced from Passport (market-level data), Compustat (company and industry level data), Orbis (ownership data), and Eikon (ownership data) databases. All-time periods of analyses were chosen based on available data.

Quantitative analysis was used to examine several market structure metrics. First, we looked at the size and growth of the global soft market by revenue. Second, we examined the market share of firms active in each market to determine national market leaders. Following this, we calculated the Herfindahl-Hirschman Index (HHI) by summing the square of the market share of every firm active in the national market. We adapted European Central Bank thresholds and current and historical US Department of Justice thresholds to categorise levels of market concentration(28, 29).[59]

We also calculated the modified Herfindahl-Hirschman Index (mHHI)[60] to estimate the effect of common ownership on market concentration. We specifically looked at the effect of common ownership of the global soft drink industry's two dominant players – the Coca-Cola Company (Coca-Cola Co) and PepsiCo – by institutional investors that

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57 Passport lists nine major soft drink product markets (carbonates; juice; bottled water; ready-to-drink tea; ready-to-drink coffee; energy drinks; concentrates; sports drinks; and Asian specialty drinks) and 16 major packaged food markets (dairy; baked goods; processed meats and seafood; savoury snacks; baby food; confectionery; rice, pasta and noodles; sauces, dressing and condiments; ready meals; sweet biscuits, snack bars, and fruit snacks; edible oils; ice cream and frozen desserts; processed fruit and vegetables; breakfast cereals; sweet spreads; and soup). We acknowledge that some of these product markets are likely defined too broadly, such as dairy, thereby underestimating market concentration.

58 Geographic markets were defined at the national level. We considered this acceptable for this paper's purposes, given that the industry in question was a manufacturing industry, often with distribution and retail strategies implemented at the national level. We accept, however, that for many large countries, the geographic boundary could be defined too broadly, thereby leading to an underestimation when calculating market concentration.

59 We used the following thresholds: low (HHI<1000), medium (1000-1799), high (1800-2499), very high (2500-3499), and extremely high (>3500)

60 The mHHI can be found by adding the estimated *additional* effect of common ownership on market concentration (termed the mHHI delta) to the original HHI value. A comprehensive, step-by-step outline on calculating the mHHI delta, and thus the mHHI, can be found in Appendix A of Lambert, T & Sykuta, M. (2019). The Case for Doing Nothing About Institutional Investors' Common Ownership of Small Stakes in Competing Firms. *Virginia Law and Business Review*, *13*.

held more than one percent share in both firms as per the latest 2020 filings available. The institutional investors selected in the analysis were: BlackRock, Vanguard, State Street, Wellington Management Group, George Holdings, Northern Trust, and Fidelity Management & Research (FMR).[61]

In addition, quantitative analysis was used to examine the long-term market capitalisation and earnings before interests, taxes, depreciation, and amortisation (EBITDA) trends, as well as the shareholder power and shareholder value ratios of Coca-Cola Co and PepsiCo.

Drawing from Hager and Baines (2020), we calculated the shareholder power ratio by dividing the combined value of dividends and share repurchases by capital expenditure (30). Capital expenditure was considered a proxy for the interests of ordinary workers by acting as a gauge for the relative commitment of firms to create jobs, innovate, and advance productivity through long-term investment. Similarly, the shareholder value ratio was calculated by dividing the combined value of dividends and share repurchases by total firm revenue (30).

For the abovementioned analyses, we used the average of food and non-alcoholic beverage firms[62] listed on stock exchanges in the United States (US). All values were adjusted for inflation according to the 2010 US Consumer Price Index (31).

Additionally, we explored indirect cross-border wealth and income transfers from consumers to shareholders made by Coca-Cola Co and PepsiCo by analysing: i) the percentage of traded shares held by investors and shareholders according to their home countries, aggregated by World Bank 2020 income level status; and ii) the annual carbonated soft drink revenue generation in each national market (a proxy for the distribution of consumption),[63] also aggregated by World Bank 2020 income level status.

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61 As of the latest available 2020 filing on Orbis, BlackRock held 6.60% of Coca-Cola Co's and 7.46% of PepsiCo's equity; Vanguard held 7.27% of Coca-Cola Co's and 8.79% of PepsiCo's equity; State Street held 4.39% of Coca-Cola Co's and 4.81% of PepsiCo's equity; Wellington Management Group held 2.53% of Coca-Cola Co's and 1.36% of PepsiCo's equity; George Holdings held 1.29% of Coca-Cola Co's and 1.52% of PepsiCo's equity; Northern Trust held 1.21% of Coca-Cola Co's and 1.41% of PepsiCo's equity; and FMR held 1.16% of Coca-Cola Co's and 1.12% of PepsiCo's equity.

62 We considered food and non-alcoholic beverage firms to be those primarily active in the following Global Industry Classification Standard (GICS) sub-industries: soft drinks (30201030), agricultural products (30202010), and packaged foods and meats (30202030).

63 See, for instance: Gans, J., Leigh, A., Schmalz, M., & Triggs, A. (2018). *Inequality and Market Concentration, When Shareholding is More Skewed than Consumption*. CAMA Working Paper 62. Canberra, Australia. Please note that in our analysis we do not attempt (and, indeed, are unable) to examine the *actual extent* to which wealth and income inequality might be being driven, given, amongst other things. We do not examine price-cost margin data within and across national markets.

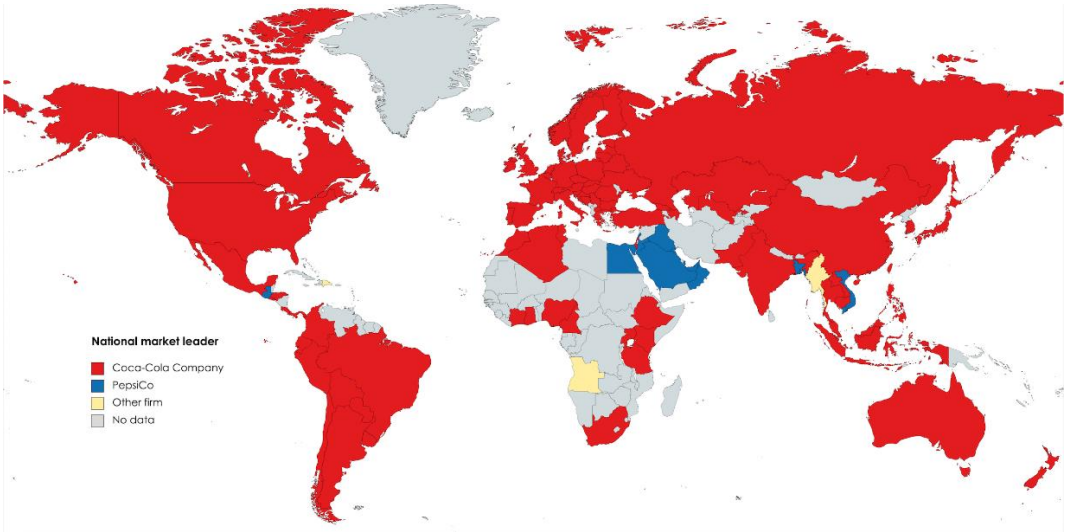
Results

Overview of the Global Carbonated Soft Drink Market

In 2020, the global carbonated soft drink market was worth US$171.9bn, an increase of 65.1 percent (real terms) from 2006. According to Passport, in 2020, the global carbonated soft drink market was the largest global non-alcoholic beverage market and the 6th largest global packaged food and non-alcoholic beverage market.

Coca-Cola Co[64] was the market leader in 83 out of the 98 national markets analysed in 2020 (see Figure 1). PepsiCo[65] was the market leader in 12 national markets, nine of these being in the Middle East and North African region.[66] Coca-Cola Co and PepsiCo held the top two market positions in approximately 70 percent (68/98) of the analysed national markets.

Figure 1: Red or blue state? World map highlighting the market leader of the national carbonated soft drink market, 2020



Data sourced from Passport database. Mapchart.net was used to construct the world map.

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64 According to market research firm Statista, as of May 2021, Coca-Cola Co had a market capitalisation of US$231.3bn, making it the 37th largest publicly listed corporation in the world. Coca-Cola Co generates the overwhelming majority of its revenue from manufacturing finished soft drink products or manufacturing soft drink concentrate, sold to authorised bottling operations worldwide.

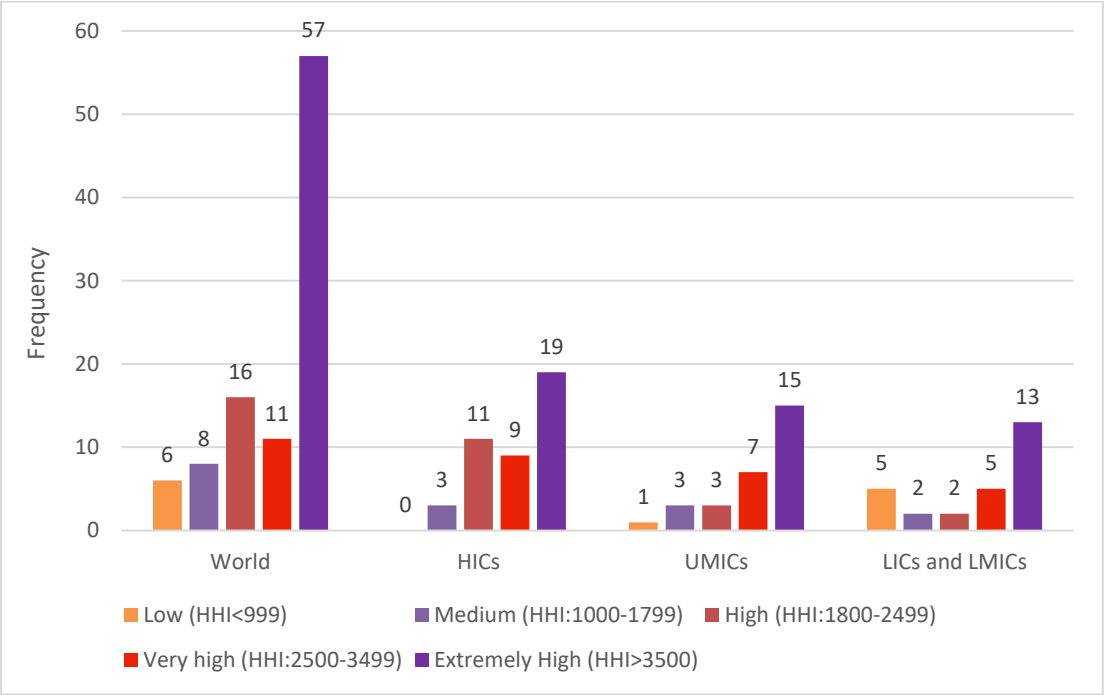
65 As of May 2021, PepsiCo had a market capitalisation of US$199.2bn, making it the 50th largest publicly listed corporation in the world. According to PepsiCo's 2020 annual report, 45% of the firm's net revenue was generated from beverage products, with the rest coming from the sale of food products.

66 It is important to note that from 1968 to 1991, Coca-Cola Co was subject to an Arab League boycott in response to its operations and activities in Israel. This paved the way for PepsiCo to gain market ascendancy in the region.

Market Concentration and Estimated Effect of Common Ownership on Market Concentration

The majority of national carbonated soft drink markets in 2020 were extremely concentrated (58.2 percent), a pattern seen across all country income levels (refer to Figure 2). Five of the six national markets with low concentration levels were low- or lower-middle-income countries.

Figure 2: Market Concentration Levels (HHI) of National Carbonated Soft Drink Markets By World Bank Income Status, 2020

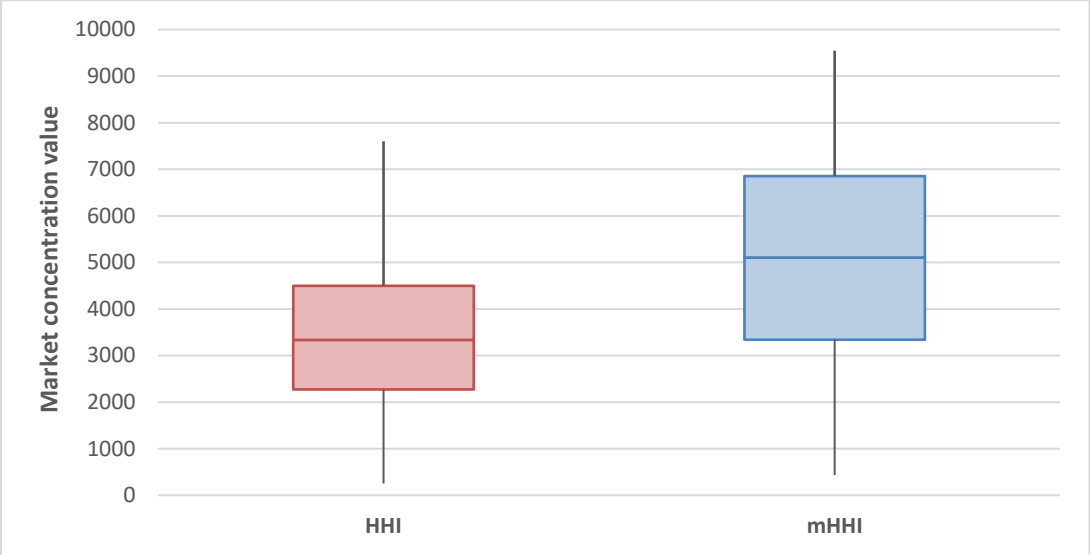


Data sourced from Passport database. Income status based on 2020 World Bank data. HHI = Herfindahl-Hirschman Index. HICs = High-income countries; UMICs = Upper middle-income countries; LMICs = Lower middle-income countries; LICs = Low-income countries.

HHI thresholds are adapted from the European Central Bank and current and historical US Department of Justice thresholds (28, 29).

The estimated effect of common ownership of Coca-Cola Co and PepsiCo on the market concentration of the majority of national carbonated soft drink markets was substantial, with the median HHI value across all analysed markets increasing from 3336 to 5105 (refer to Figure 3a). The extent to which this common ownership potentially compounds market concentration across the 50 largest national carbonated soft-drink markets by revenue can be seen in Figure 3b.

Figure 3a. A box plot illustrating the estimated effect of common ownership* of Coca-Cola Co and PepsiCo on national carbonated soft drink market concentration, 2020



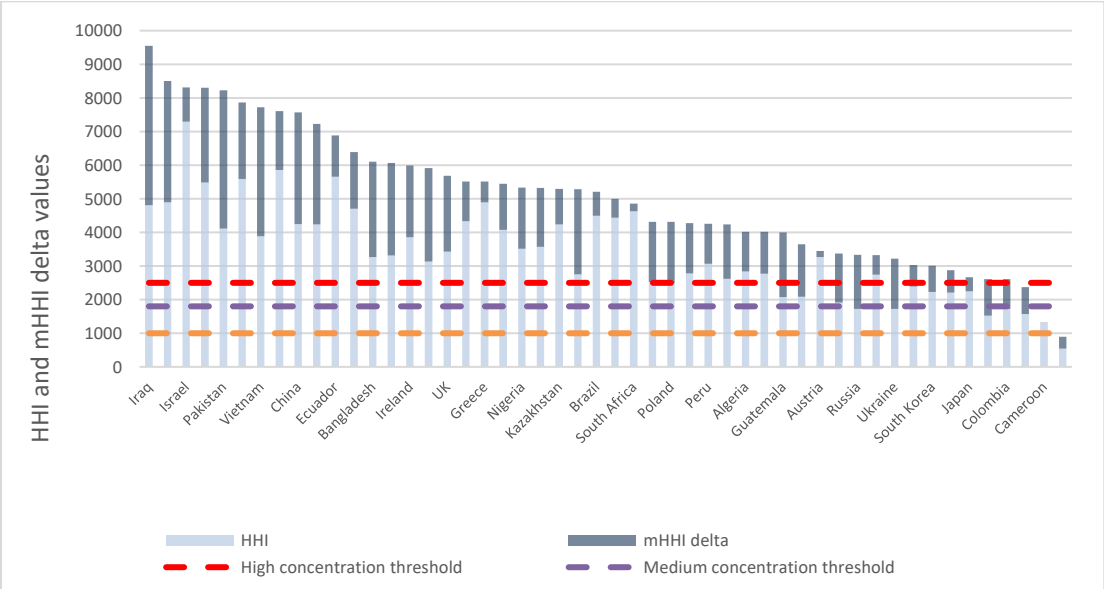
Data sourced from Passport and Orbis databases.

Box plot representing the median (middle line through box), 25th percentile (lower line of box), 75th percentile (upper line of box), minimum value (end of lower vertical line), and maximum value (end of higher vertical line).

HHI = Herfindahl Hirschman Index; mHHI = modified HHI.

*Common ownership by all institutional investors with at least a 1% share of the equity of both Coca-Cola Co and PepsiCo in 2020. These investors were: BlackRock, Vanguard, State Street, Wellington Management Group, George Holdings, Northern Trust, and FMR.

Figure 3b. The estimated effect of common ownership* of Coca-Cola Co and PepsiCo on market concentration of the world's 50 largest national carbonated soft-drink markets, 2020



Data sourced from Passport and Orbis databases. HHI = Herfindahl-Hirschman Index. mHHI delta = the estimated additional effect of common ownership on market concentration. mHHI = HHI and mHHI delta represent the total estimated market concentration, taking into account common ownership.

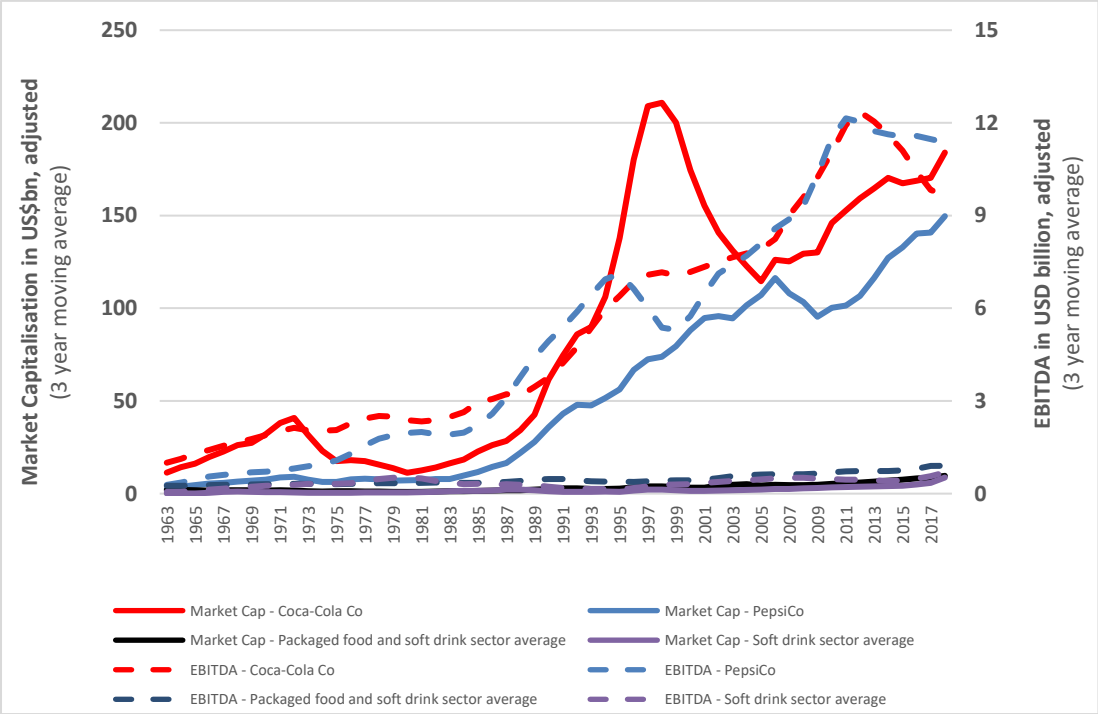
Thresholds based on adapted European Central Bank and current and historical US Department of Justice thresholds (28, 29).

*Common ownership by all institutional investors with at least a 1% share of the equity of both Coca-Cola Co and PepsiCo in 2020. These investors were: BlackRock, Vanguard, State Street, Wellington Management Group, George Holdings, Northern Trust, and FMR.

Financial Performance of Coca-Cola Co and PepsiCo

Based on market capitalisation and EBITDA trends, the financial performances of Coca-Cola Co and PepsiCo were shown to be consistently and substantially stronger than the US-listed food and non-alcoholic beverage industry average over a sustained period (see Figure 4). Both firms have accumulated profits well over the average of the soft drink industry and the combined packaged food and soft drink industry.

Figure 4:Adjusted market capitalisation and EBITDA of Coca-Cola Co and PepsiCo relative to the US-listed food and non-alcoholic beverage industry, 1962-2020



Source: Compustat North America (accessed via Wharton Research Data Services). Values adjusted to USD value in 2010.

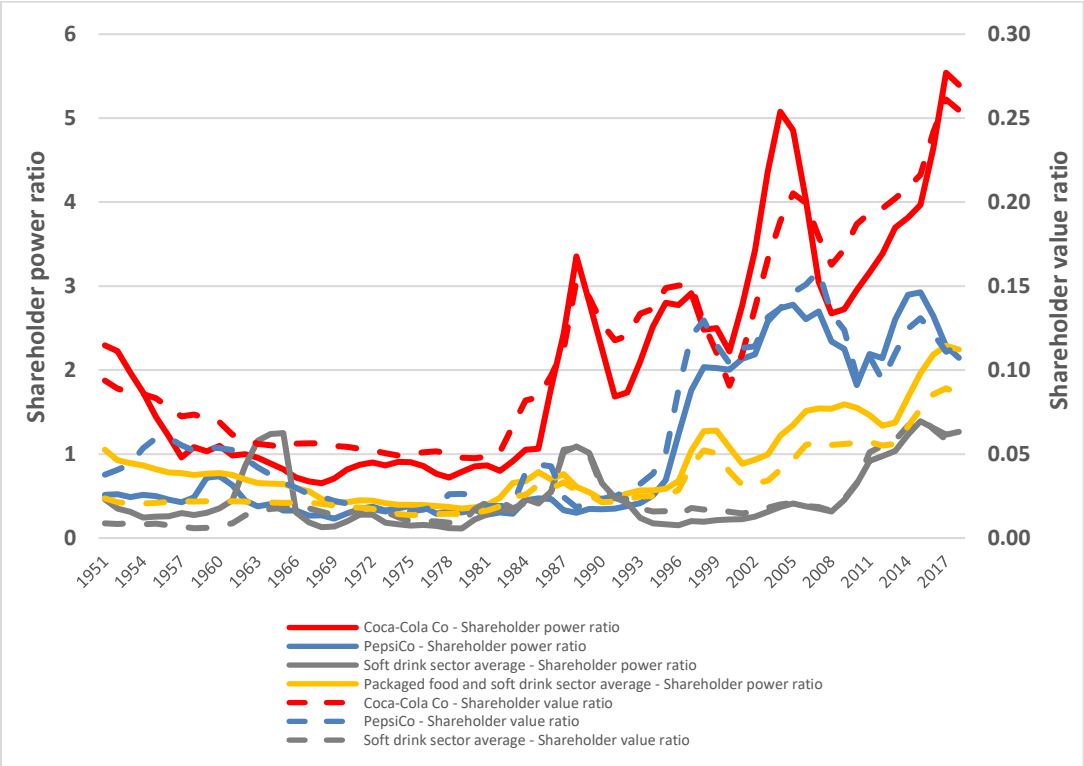
Market capitalisation = Share price x number of shares outstanding. Earnings = Earnings Before Interest, Tax, Depreciation, and Amortisation [EBITDA].

Packaged food and soft drink sector = US-listed food and non-alcoholic beverage firms (excluding Coca-Cola Co, PepsiCo, and their bottlers) listed on US stock exchanges in the Global Industry Classification Standard (GICS) sub-industries for soft drinks (30201030) and packaged foods and meats (30202030). Soft drink sector = US-listed food and non-alcoholic beverage firms (excluding Coca-Cola Co, PepsiCo, and their bottlers) listed on US stock exchanges in the Global Industry Classification Standard (GICS) sub-industries for soft drinks (30201030).

Corporate Wealth Transfer to Shareholders

Since the mid-1980s, Coca-Cola Co, and to a lesser extent PepsiCo, has considerably increased the amount of wealth they transfer to their shareholders relative to capital expenditure and total revenue (refer to Figure 5). The shareholder power and value ratios of Coca-Cola Co, in particular, have been consistently greater than the industry average, a gap that has widened considerably since the mid-1980s.

Figure 5: Shareholder power and value ratios of Coca-Cola Co, PepsiCo, and the US-listed food and non-alcoholic beverage industry average, 1950-2020.



Source: Compustat North America (accessed via Wharton Research Data Services). Adjusted to USD in 2010.

Metrics drawn from Hager and Baines (2020) (30). Shareholder power ratio = [common/ordinary dividends (DVC) + share repurchases (PRSTKC)] / capital expenditures (CAPX). Shareholder value ratio = [common/ordinary dividends (DVC) + share repurchases (PRSTKC)] / total revenues (REVT).

Sector average = US-listed food and non-alcoholic beverage firms (excluding Coca-Cola Co and PepsiCo) listed on US stock exchanges in the Global Industry Classification Standard (GICS) sub-industries for soft drinks (30201030) and packaged foods and meats (30202030). Soft drink sector = US-listed food and non-alcoholic beverage firms (excluding Coca-Cola Co, PepsiCo, and their bottlers) listed on US stock exchanges in the Global Industry Classification Standard (GICS) sub-industries for soft drinks (30201030).

As of June 2021, the majority of traded shares of both firms were held by investors and shareholders based in the US, with almost all traded shares held by investors and shareholders in HICs (see Table 1). None of the traded shares were held by investors and shareholders based in LICs, with only a very small percentage held by investors and shareholders based in LMICs and UMass.

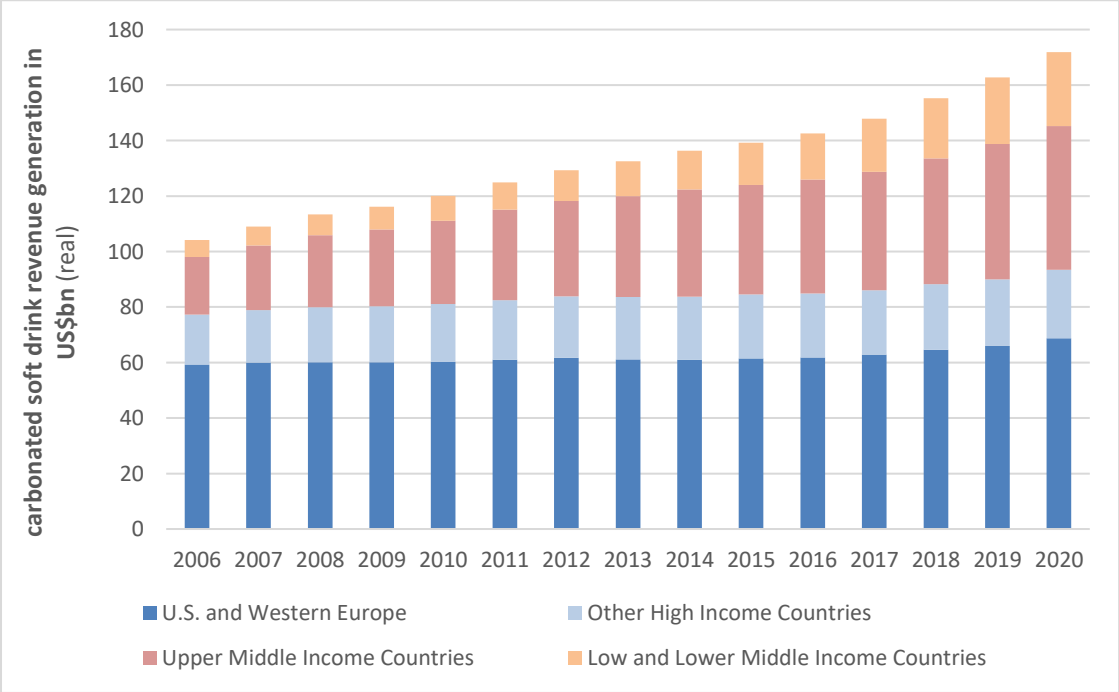
Table 1: Investor location, by World bank income level, of traded shares of Coca-Cola Co and PepsiCo.

	HICs			UMass	LMICs	LICs
	U.S.	Western Europe	*All HICs*			
Coca-Cola Co	82.27%	13.44%	99.95%	0.04435%	0.005094%	0%
PepsiCo	76.55%	17.14%	99.96%	0.03454%	0.008756%	0%

Data sourced from Eikon database, based on 30 June 2021 filings. Income status based on 2020 World Bank data.

An increasing proportion of carbonated soft drink revenue is generated from consumers in LICs, LMICs and UMICs, relative to consumers in HICs (refer to Figure 6). From 2006 to 2020, the total revenue (in real terms) generated in LIC markets increased by 816 percent (US$0.46-3.78bn); in LMIC markets by 403 percent (US$5.68-22.93bn); in UMIC markets by 250 percent (20.74 percent to US$51.82bn); and in HIC countries by 21 percent (77.23 to US$99.40bn).

Figure 6: Distribution of carbonated soft drink consumption, by World Bank income status, 2006-2020.



Data sourced from Passport. Income status based on 2020 World Bank data. Fixed to 2020 exchange rate.

Discussion

Summary of Findings and General Discussion

The global carbonated soft drink market predominately consists of highly concentrated, oligopolistic national markets (Figure 2). Many of these are dominated by Coca-Cola Co and PepsiCo to a lesser extent. Common ownership of these two firms by large institutional investors potentially compounds the issue of market concentration to a considerable degree (Figures 3a and 3b). Due to their significant market power,[67] Coca-Cola Co and PepsiCo have experienced a sustained strong financial performance relative to the US-listed industry average (Figure 4).

Both firms have generated and accumulated vast amounts of profit over a sustained period. Such strong financial performance has likely conferred both firms to divert considerable funds away from production towards non-production activities, some of which are detrimental to population health (e.g., aggressive marketing of unhealthy commodities) (15, 16, 32).

Since the mid-1980s, and consistent with the shareholder primacy model of corporate governance, both firms have substantially increased the amount of wealth they transfer to their shareholders relative to capital expenditure and total revenue (Figure 5) (33, 34). Especially in the case of Coca-Cola Co, this has occurred at a rate much greater than the industry average. With respect to cross-border corporate wealth transfers, the overwhelming majority of the traded shares of both firms are held by investors and shareholders based in HICs, of which most are US-based (Table 1).

The distribution of carbonated soft drink consumption, in comparison, is increasingly skewing toward consumers based in LICs, LMICs and UMICs (Figure 6). In terms of within-HIC country corporate wealth transfers (a consideration not analysed in this paper), evidence suggests that most corporate stocks, including those managed by institutional investors, are held by a small and privileged wealthy elite (35-39). It has also been estimated that, in the US, more than 77 percent of capital income (including dividends and capital gains) flows to the wealthiest 10 percent of the population (40). In comparison, consumers of carbonated soft drinks in HICs are more likely to be people with lower incomes, lower levels of educational attainment, and those who live in disadvantaged neighbourhoods (41-47).

When the wealth distribution trends of Coca-Cola Co and PepsiCo are interpreted alongside evidence highlighting how the global carbonated soft drink market creates and distributes harms,[68] a 'double burden of maldistribution' pattern becomes evident – that

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[67] It has been argued that the vast majority of the value of publicly listed companies comes from their market power. See, for example, Zurtz (2017), 'On the Formation of Capital and Wealth: IT, Monopoly Power and Rising Inequality, SIEPR Working Paper, No. 17-016.

[68] See, for example, Wood et al. (2021), 'The wealth of few versus the health of many: an economic analysis of the global soft drink industry's misallocative and maldistribution impacts' for an overview. Mounting evidence highlights, for instance, how the carbonated soft drink industry is a key driver of

is, the wealth of the shareholders of the market's dominant corporations, a group over-represented by a small and wealthy elite, is being maximised mainly at the expense of the welfare of the lower socio-economic classes of HICs, the citizens and governments of LMICs, the environment, and indeed, future generations.

The market power of Coca-Cola Co and PepsiCo is likely a crucial mediator of this double burden of maldistribution. Therefore, the failure of competition regulation to curb market power in these markets represents the failure of a key government regulatory regime to protect the health and well-being of society.

Scope for Competition Regulation of Concentrated Carbonated Soft Drink Markets

The scope for most current competition frameworks, especially in low and middle-income countries, is limited to intervening in the concentrated carbonated soft drink market to better public health. Particularly in smaller national markets, merger control, in general, is often viewed as unnecessary. As an impediment to the restructuring of firms attempting to compete in regional and the world, markets facilitate growth and expansion (48).

This view has influenced competition regulatory decision-making in the soft drink market, as illustrated by the case in which Coca-Cola Co was authorised to acquire Cadbury Schweppes' soft drink brands in Zimbabwe in 1998. Although Zimbabwe's Competition Commission determined that Coca-Cola Co's post-merger market share would be close to 90 percent, the proposed merger was not blocked based on predictions that it would create considerable benefits, including in the form of the generation of foreign exchange from the scaled export of local soft drink brands to neighbouring countries (48).

Similarly, in Zambia, Coca-Cola Co was allowed to acquire Cadbury Schweppes Zambia, despite the concern that the transaction would virtually eliminate competition and consolidate the power of Coca-Cola Co in the domestic market. The need for Cadbury Schweppes Zambia to be re-capitalised was instead given priority (48).

The scope for vertical merger control in the carbonated soft drink market is also considerably limited. For instance, dominant soft drink manufacturers tend to use franchising systems,[69] rather than vertical integration via ownership to obtain control of the production and distribution functions of the soft drink value chain (49, 50).

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diet-related non-communicable disease and contributes to the deaths and disabilities of millions of people, now mostly in LMICs, every year. Combined, Coca-Cola Co and PepsiCo also produce at least 5.3 million tonnes of plastic packaging every year, a considerable proportion of which ends up in marine ecosystems; emit over 60 million metric tons of GHGs every year; reportedly extract valuable water resources in water-scarce regions of the world; and require a large amount of land for the production of agricultural commodities, such as sugar and corn, that displace healthier and more sustainable crop production.

[69] According to an OECD report entitled, 'Competition Policy and Vertical Restraints: Franchising Agreements', many Member countries generally consider many non-price vertical restraints established in franchising agreements, such as territorial restrictions, exclusive dealing arrangements, and refusals to deal, to be acceptable.

Despite the numerous competition concerns about franchising systems in concentrated markets, such as the increased cost of entry for potential competitors in cases where the distribution system of incumbent franchisors has economies of scope, these tend to receive little competition scrutiny (51).

Similarly, dominant soft drink manufacturers routinely deploy practices that could be interpreted as unfair trading practices or vertical abuses of power, in many cases without facing scrutiny from competition agencies (13). The use of many of these practices could be contributing to the creation and maintenance of unhealthy food retail environments, which play an important role in shaping diet-related chronic diseases at the population level (13, 52-55).

The use of certain practices by Coca-Cola Co has come under scrutiny in some jurisdictions (56, 57), such as in Mexico, wherein Coca-Cola Co was found to have used exclusive dealing contracts and 'refusals to deal' to exclude one of its rivals from fairly competing (58). However, many other practices used by dominant soft drink manufacturers that likely serve a similar purpose (e.g., 'category captaincy', the use of 'slotting fees', calendar marketing agreements)[70] are generally overlooked (13, 59-62).

Current competition frameworks also fail to address many of the cross-border distributive impacts of market power and market concentration, an issue that is particularly problematic for low- and middle-income countries. As has been argued by several scholars, one of the important reasons for robust competition regulation in low and middle-income countries is that it offers a way of undoing, at least in part, the colonial and imperial legacies of systematic exploitation, as well as today's neo-colonial systems of transnational exploitation (16, 24, 63, 64).

As mentioned earlier, acquisitions by global corporations in emerging national soft drink markets have been authorised – despite clear concerns about market power – on the premise that they will likely boost foreign exchange. Yet, as our findings highlight (Figure 5 and Table 3), these global corporations are increasingly shifting their wealth to their investors and shareholders predominately based in HICs (notably the US).

This distributive concern is further compounded in unhealthy commodity markets, such as carbonated soft drinks because the respective country is deprived of the wealth and resources needed to address the escalating health, social and ecological-related costs externalised by the market (24, 65, 66).

Considering the abovementioned concerns, we propose two ways for current competition regulatory regimes to better recognise public health interests and values,

[70] Category captaincy refers to when retailers give food manufacturers leading category management roles, allowing them to arrange and control retail shelf space. 'Slotting fees' are payments that are made for optimal retail positions. Calendar marketing agreements are payments for preferential treatment by retailers, such as exclusive in-store advertising, during a specified period.

especially with respect to competition regulation of unhealthy commodity markets. First, public health policy should be considered in implementing a national competition policy.

The example of South Africa's integration of welfare considerations related to disadvantaged population groups into the implementation of the nation's competition policy suggests that the consideration of public health policy in competition enforcement is not beyond the realms of possibility in low and middle-income countries (67).

Similarly, current attempts by the European Commission to integrate concerns about environmental sustainability into competition policy suggest that broadening the scope of antitrust policy is at least on the agenda in the European Union, a move that could provide leverage for public health interests in the future (68).

Second, competition regulation should be subject to general human rights as they are recognised. For food and drink markets, in particular, competition regulation should be subject to the 'right to food,'[71] which, when introduced in the 1948 UN Declaration of Human Rights, was considered a component of the 'right to a standard of living adequate for the health and well-being of [oneself] and [one's] family' (69).

Given that food value chains across most global economies are structured as networks of markets, competition regulatory regimes are arguably well placed to implement the 'right to food' (70). This could be operationalised by requiring competition agencies to choose the option that best upholds the right to food while also preserving the process of competition when faced between different interpretations of competition law (70).

Regarding the carbonated soft drink market, the human rights approach to competition regulation would likely justify the stricter regulation of vertical abuses of power by dominant soft drink corporations, as it would likely preserve competition whilst also respecting the right to (adequate) food by preventing retail food environments from being dominated by a handful of cheap and unhealthy branded beverage products.

Competition Regulation of Common Ownership

The issue of common ownership is a competition-related concern that generally falls outside the scope of competition enforcement. Common ownership refers to institutional investors owning shares in some firms active in the same market (71, 72). From a competition perspective, concerns have been raised about how common ownership in concentrated markets may incentivise dominant firms to distort competition (71, 73-76).

Potential mechanisms for this market distortion have been proposed, including increasing the incentive for commonly owned rivals to tacitly collude; facilitating the coordination of collusive conduct between commonly owned rivals; and increasing the

[71] This right encompasses the right to adequate amounts of *quality* food (added emphasis on the quality component).

risk of vertical foreclosure, as commonly owned firms may be more likely to trade with each other rather than non-commonly owned firms (76).

To date, limited work has been devoted to identifying and examining the anti-competitive effects of common ownership in the global carbonated soft drink market. Our findings highlight that the potential for common ownership of Coca-Cola Co and PepsiCo to impact the competitive structure of this market at the national level is likely to be considerable (Figures 3a and 3b).

Public Health's 'Antitrust Paradox'

Public health has its very own 'antitrust paradox', which largely stems from public health's understanding of consumer welfare being fundamentally different from that of the adherents of Robert Bork's consumer welfare paradigm (77).

The paradox is particularly evident in (although not exclusive to[72]) unhealthy commodity markets, as public health scholars would likely argue that the increased output and low consumer prices of unhealthy commodities ultimately lead to an overall decrease, not increase, in consumer welfare.[73] That is to say, the subsequent increase in adverse population-level health outcomes – just one of many welfare considerations – would more than counter any aggregated short-term economic gains by consumers in unhealthy commodity markets in which there is consumer surplus.

However, a key tenet of the consumer welfare paradigm is that it is not the role of competition policy to consider 'public interest' issues beyond that of consumer surplus and economic efficiency (77). The goal of promoting and protecting consumer surplus in unhealthy commodity markets propagates chronic disease epidemics, such as diabetes, certain cancers, and cardiovascular disease, would therefore be perceived as largely irrelevant.

Of fundamental concern, though, is that such a belief validates the use of many power-consolidating practices by corporations because these practices might lead to consumer benefits (in neoclassical terms) via economies of scale and increased innovation (at least according to Schumpeterians, although this is a very contested topic).[74]

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[72] The public health 'antitrust paradox' related to contrasting interpretations of consumer welfare is not limited to the consumption of unhealthy commodities, and includes broader socio-economic effects of market power and market concentration, such as wealth and income inequalities; the driving and reinforcing of gender, racial, and intergenerational inequalities; decreased investment in innovation that provides social benefits; and the corporate-led exacerbation of climate change and environmental degradation.

[73] See, for instance, how then-U.S. Federal Trade Commissioner Christine Wilson describes the consumer welfare standard in a Keynote Address made in 2019: "Under a simple rule of reason test employing the consumer welfare principle, one would have to consider whether the challenged practice creates a sufficient inference of lower market-wide output and higher prices. If so, it is presumptively unlawful." As suggested by numerous OECD reports on competition, the consumer welfare principle, whether through the consumer or total welfare standard, plays a decisive role in the economic analysis of markets in most jurisdictions.

[74] See Baker, J. (2007). Beyond Schumpeter vs. Arrow: How Competition Fosters Innovation. *American University Washington College of Law*, 74.

Thus, consumer welfarism tolerates, legitimizes, and even tacitly encourages the ongoing concentration of corporate power (78, 79). Whether deliberately or inadvertently, it also completely fails to consider that other policies and regulatory regimes left to address the broader impacts of concentrated corporate power are often captured by the very corporations allowed to accumulate power via relaxed competition regulation (78, 80-85). Indeed, with respect to unhealthy commodity markets, this 'Catch-22' like phenomenon is well described in the commercial determinants of health literature, an emerging field within public health (86).

Increasing evidence illustrates, for instance, how dominant corporations active in unhealthy commodity markets often exercise their power to block, delay, or reverse public health policy and regulation unfavourable to corporate interests (18, 20, 22, 87-96). The case of dominant soft drink manufacturers using their power to influence the implementation of sugary drink-related taxes is one such example (20, 97).

Concluding Remarks

Reformed competition regulation will not be the silver bullet that addresses all public health harms related to oligopolistic markets and concentrated corporate power. Indeed, competition regulation will likely need to be integrated with other government policy and regulatory regimes designed to disperse, democratise or dissolve corporate power,[75] including those intended to fairly redistribute wealth (e.g., tax and welfare policies); regulate corporate structure and governance (e.g., corporate law), and help workers and smaller businesses build countervailing power (e.g. policy supportive of unionisation, industry policy) (5, 98, 99).

Nevertheless, the public health community can no longer ignore the threat posed by current competition regulatory frameworks that promote and contribute to the creation of cheap commodity markets without any regard to social and ecological sustainability, the concentration of corporate power, and the oligopolisation of the political economy (3-5).

Clearly, it is a major public health concern that 13 of the world's 100 largest companies (as of April 2021) are actively involved in producing and marketing commodities (i.e., fossil fuels, tobacco, alcohol, and unhealthy foods and soft drinks) that directly relate to today's largest global health risk factors (i.e., air pollution, tobacco smoking, alcohol consumption, and unhealthy diets).[76]

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[75] We borrow the 'disperse, democratise, and dissolve' categorisation of government action from Meagher (2020). *Competition is Killing Us: How Big Business is Harming Our Society and Planet - and What To Do About It*. Penguin Group.

[76] According to Statista, as of June 2021, the following companies were in the world's top 100 by market capitalisation: Saudi Arabian Oil Company (US$1,987.2bn); Nestlé (US$333.2bn); ExxonMobil (US$239.9bn); Coca-Cola (US$231.3bn); PepsiCo (US$199.2bn); BHP Group (US$186.1bn); McDonald's (US$173.8bn); Reliance Industries (US$158.8bn); NextEra Energy (US$158.8); Royal Dutch Shell (US$152bn); Unilever (US$151.1bn); Philip Morris International (US$144.8bn); Anheuser-Busch InBev (US$134.1bn).

The market power of at least some, if not all, of these enormous corporations, lies behind and sits upon an extensive patchwork of oligopolistic market structures, which mainstream competition practitioners typically view as 'efficient' economic institutions that acceptably allocate society's resources. Of course, the distributive impacts of this power – leveraged to maximise corporate shareholders' wealth mainly at the expense of the health and welfare of disadvantaged population groups, future generations, and the environment – are largely ignored (5, 100).

Fortunately for public health, several proposals for competition reform have been suggested that have the potential to promote and protect population health to a much greater degree than competition regulation underpinned by Chicago School's consumer welfare paradigm. We have briefly touched upon some of these already, such as reforming competition law so that it is sensitive to a diverse range of values and interests, including those connected to public health and human rights (70, 101, 102).

In addition, there are calls from broader anti-corporate power movements, including the 'Neo-Brandeisian' movement, to restore competition law as a key regulatory regime to decentralise and disperse concentrated private power in the economic sphere (4, 5, 103).

The public health community should also be encouraged by the political momentum that appears to be building behind some of these ideas, especially in the US, including the recent appointments of Jonathan Kanter[77] to run the Competition Division of the US Department of Justice, and of Lina Khan[78] to chair the US Federal Trade Commission.

The challenge, though, for the public health community will be to ensure that public health values and interests are considered in scholarly and political discussions related to reforming competition regulation – a regulatory regime with great potential to protect and promote population health, especially in low and middle-income countries, from some of the harms associated with unregulated markets and excessive corporate power.

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[77] Kanter was quoted as saying the following during a 2018 US Federal Trade Commission hearing on Competition and Consumer Protection: *"It is bad history, bad policy and bad law to exclude certain political values in interpreting the competition laws. By political values, I mean, first, a fear that excessive concentration of economic power will breed antidemocratic political pressures, and second, a desire to enhance individual and business freedom by reducing the range within which private discretion by a few in the economic sphere controls the welfare of all."*

[78] Khan is a key member of the Neo-Brandeisian anti-monopoly movement, named after Justice Louis Brandeis. The latter served on the US Supreme Court between 1916 and 1939, calling for the revival of competition as a regime focuses on the dispersion and distribution of power in the political economy.

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7
Concentration of Economic Assets by Big Business Groups, Involvement in M&As and Competition
An Inquiry from India

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Abstract

Currently, competition regulation is based on the principles of the market mechanism, which is expected to generate maximum consumer welfare. The competition regulation is often based on the narrowly-defined product level market, which ignores the aggregate level concentration. Though the trade-off between efficiency creation and market concentration is discussed as part of the competition regulation, it seldom addresses the ownership level concentration at the aggregate level.

This study aims to unravel the likelihood of concentration of economic power in the context of the Competition Act, 2002. It is observed that Indian business groups' involvement in M&As is substantial. The synergy creation through M&As is much more for business groups than the standalone firms due to the existence of multi-products and affiliates across various regions. From the policy point of view, apart from the general implications of M&As reflected in market competition, the ownership-wise synergies are important in efficiently utilising the resources under a common umbrella of business, which will not be reflected in the narrowly-defined markets.

The study suggests that business groups strategically use M&As to become globally competitive through deriving horizontal and vertical linkages. At the same time, the regulators need to ensure that it is not leading to the concentration of assets in a few hands at the aggregate level, which is likely to harm market competition across various products in the future.

** This study is based on the research project on M&As and Business groups in India submitted to the Indian Council for Social Science Research.*

The Context

Globally, the concentrated distribution of wealth is a widespread socio-economic phenomenon. For a long time, both income and wealth inequality have seen an aggravation in most countries, albeit at a disparate speed. These different patterns in inequality are considered to be the product of disparate policy and institutional atmosphere of the countries in purview. Nevertheless, the competition regulation in its current form mainly concentrates on the concept of 'economic efficiency' and does not comprehensively address the 'social fairness' concept (Lianos, 2020).

Competition regulation is based on the principles of the market mechanism, which is expected to generate maximum consumer welfare. The competition regulation is often based on the narrowly-defined product level market, which ignores the aggregate level concentration. Though the trade-off between efficiency creation and market concentration is discussed as part of the competition regulation, it seldom addresses the ownership level concentration at the aggregate level.

Often, the Business groups have a presence in multiple products and markets. Further, the business groups own not only business power but also economic, social, and political power, the net effect of which is immeasurable.

In India, the concentration of economic assets in the hands of big business groups had been an important policy issue during the MRTP regime.[79] However, with the amendment made in 1991, the concentration of economic power was de-emphasised, and the new competition regime, i.e., Competition Act, 2002 implemented in the country from 2009 onwards. Many times, Mergers and Acquisitions (M&As) are used to consolidate various business operations across different product lines, which ultimately increase the concentration of economic assets of the concerned business owners.

This is not to undermine the fact that M&As are also a tool for restructuring and competence building, which can create and strengthen strong backward and forward linkages within the group. In this background, this study examines to what extent the business groups engaged in consolation activities such as M&As to grow their size and competitiveness and how it reflects on the product market competition in the selected sectors.

Effects of Business Group Consolidation on Competition

The literature on M&As identifies three types of consolidation activities. They are (i) the horizontal deals, (ii) the vertical deals, and (iii) the conglomerate of unrelated deals. The horizontal deals are how firms producing similar products consolidate their operations. In comparison, vertical deals occur when the firms in buyer-seller relations consolidate their operations.

[79] The MRTP Act (1969), Government of India.

These two types of deals are considered to be more important when a competition assessment is made. This is because the likelihood of creating market barriers is higher in these two cases, and the competition authorities generally treat these deals with special caution.

The third, i.e., conglomerate deals, occur in unrelated business activities. Hence, these deals may not directly pose a challenge to the existing level of competition. However, it is possible that in some circumstances, these firms can cut the production of unprofitable areas of business operations, which may adversely affect the existing consumers for those products, especially when there is no or less alternate supplier for those products. Even in conglomerate deals, synergies may be created in the marketing, advertisement, and distribution channels.

Similar to the above discussion on M&As, the literature on business groups identifies three types of diversification. They are (i) related, (ii) linked, and (iii) unrelated diversification (Kakani et al., 2015). The group branched out into new, closely related products and product lines in the related line. For example, the coconut hair oil company diversifies into hair care, refined oil, personal care, etc., under the same business umbrella. Here the synergy creation is much more since the raw materials used and production is closely related. The effects of related diversification are similar to the horizontal M&As discussed above. This enables them to strengthen their competitiveness in their core area of production.

In the second case, business groups diversify into vertical business activities, i.e., in the buyer-seller relationship. Such integration may be forward or backward. This is mainly applicable when the firms procure raw materials and other intermediary goods from others. When the group firms engage in such lines of business, it becomes easy to procure such items, and the synergy creation is also high in the process. In this way, the firms can control the cost significantly. For example, groups that focus on automobiles, basic metals, etc. Here the metal requirement of the automobile firm can be met by the same affiliate group firm.

Similarly, the group may also enter into the following output level: consumer demand. The third line, conglomerate, is where the affiliated firms engage in different business lines, which doesn't have any linkages or buyer-seller relation. For example, affiliated firms engage in pharmaceutical production and the automobile sector. Here, the degree of diversification increases in the case of a conglomerate line of business. In contrast, the specialisation or product concentration increases in the case of related/horizontal deals, which are less diversified.

Even in a conglomerate structure, synergy creation may be possible. For instance, in the case of the above example of the pharmaceutical and automobile business, it is possible to derive synergies in marketing and distribution.

From the above discussion, it can be seen that the purpose behind the creation of business groups and consolidation activities is somewhat similar when analysed from the producers' point of view.[80]

Under both situations, one of the major businesses' interests is to reduce production costs and thereby increase profitability. This can be achieved by generating synergies using both the group affiliation channel and the consolidation of the business. In addition, consolidation enables these groups to further strengthen the market power of various products. These deals may also help the group to lessen future competition by taking over potential competitors, both experienced firms and start-ups, in vertical and horizontal lines. This is not to undermine that each deal is different, which needs to be assessed separately.

It is also possible that certain consolidation activities increase competition, especially when the deals are undertaken by the incumbent firms, which ultimately increase competition among the top firms in the relevant sector. This may result in increased consumer welfare, either through reducing prices or increased quantity/quality of products or services.

Need to Distinguish Market Power and Economic Power

The Monopoly Inquiry Commission Report (1965) clearly stated that the concentration of economic power is a central problem. The monopolistic and restrictive practices can be considered the two major 'functions' of such a concentration of economic power. Two important kinds of concentration of economic power exist in the industries. They are, (i) product-wise concentration and (ii) 'country-wise concentration[81]. MIC found the prodigious existence of both country-wise and 'product-wise concentration.'

MIC found that, out of the 100 selected products, which are important for ordinary consumers, a high concentration exists for 65 products, a medium concentration was found for 10 products, a concentration was low for eight products, and in 17 products, a concentration was nil.[82]

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80 Acquiring ownership control is another important goal. Here we are focusing more on the market competition side.

81 Product-wise concentration occurs where, 'in respect of the production and distribution of any particular commodity or service the controlling power whether because of ownership of capital or otherwise is in a single concern or comparatively limited number of concerns or though in a fairly large number of concerns, these concerns themselves are controlled by only a single-family or a few families or business houses.' It can also be called 'industry-wise' concentration if the industry is engaged in producing one product. The second term, country-wise concentration, occurs when a large number of concerns engaged are in the production or distribution of different commodities in the controlling hands of one individual or family or group of persons, whether incorporated or not, connected closely by financial or other business interests. Here the concentration of economic power is considered to exist. Hence, MIC distinguishes both product-wise and ownership-wise concentrations while defining the concentration of economic power.

82 MIC used sales-based three-firm concentration ratios (C3) for reflecting the product-wise concentration. If the ratio is 75 percent or more, concentration is considered to be High; if C3 is between 60 to 75 percent, concentration is medium; 50 to 60 percent is low; and if it is less than 50 percent, concentration is nil.

High concentration was registered for essential consumption items such as medicines, automobiles, rubber, footwear, etc. Low concentration was found mainly for textile and food items. In 41 products, the maximum number of firms engaged in production was less than or equal to four. Table 1 shows the details of product-wise concentration across various broad categories.

Table 4: Product-wise Concentration across Various Products as per MIC Report

Sl. No	Sector	High (≥75)	Medium (60-75)	Low (50-60)	Nil (<50)	Total
1	Food	3	1		5	9
2	Clothing			2	7	9
3	Fuel	2			1	3
4	Household Goods	12	4	4	2	22
5	Conventional Necessaries	9				9
6	Medicines	18	1			19
7	Transport Goods	19	3	1		23
8	Building Materials	2	1	1	2	6
	Total	**65**	**10**	**8**	**17**	**100**

Source: Author's compilation from Monopoly Inquiry Commission Report, 1965

In order to understand the extent of country-wise concentration, MIC prepared a list of industrial houses and the affiliated companies based on secondary sources of information and circulated it to the respective house to correct it.[83]. MIC's final list consists of 75 business groups with more than Rs. 5 crore asset size, which again consists of 1536 affiliated companies with more than Rs. 1 crore asset size. MIC found the asset share of these groups in all non-government and non-banking companies is 47 percent, while the share based on paid-up capital is 44 percent. It can be seen from the table that large affiliated companies constitute the major portion of the assets of the groups (see Table 2).

In addition, MIC noted 16 companies with country-wise concentration. They are not part of the 75 groups mentioned. They are engaged in diversified activities. Many of these companies' asset sizes were even higher than those of the group assets.

[83] Then the MIC examined the share structure, mode of management, and Board of Directors (BoD) composition. If more than 50 percent of equity capital is controlled by one particular industrialist or his close relatives, then the firm is considered to be controlled by one industrialist. Similarly, if companies A and B control more than 50 percent of the equity shares of company C, and the business house X is found to control both companies A and B, then company C is also considered to be part of business house X. Besides, the information on BoD composition and managing agency used to derive the final list. Jointly controlled firms, foreign subsidiaries, and banking sector firms were excluded from the list.

Table 5: Asset share of large affiliated companies in the Total group

Group	Affiliated Companies (AC) (No.)		Share (%)	AC's Assets (in Rs. Lakhs)		Share (%)
	Total	with ≥ Rs. 1 crore		Total	with ≥ Rs. 1 crore	
Tata	53	27	51	41772	38499	92
Birla	151	54	36	29272	27104	93
Martin Burn	21	9	43	14961	14471	97
Bangur	81	15	19	7791	5836	75
ACC	5	3	60	7736	7599	98

Source: Author's compilation from Monopoly Inquiry Commission Report, 1965

MIC also discussed the existence of monopolistic and restrictive trade practices, social and economic consequences of concentration, etc. MIC recommended establishing a permanent body to protect the country from the future threat of the concentration of economic power in private hands and eliminate monopolistic and restrictive trade practices. Overall, the MIC's stand was not against big business but to ensure that it is not misusing the concentration of economic power. It is also to be mentioned that MIC took a balanced approach towards M&As as well.

It is mentioned that '*it is wrong to look upon mergers and amalgamations to be per se harmful to the public interest. A cautious approach is therefore desirable*'. When M&As of dominant enterprises are involved, their positive and negative effects need to be evaluated and approved the deal only if the positive elements are higher than the adverse effects.

There is a need to distinguish between business and economic power (Goyal, S.K, 1979). Business power and concentration can be quantified using various indicators, whereas economic power is a qualitative concept, and its extent depends on various additional factors. Though the control of assets by particular business ownership reflects the relative size of the business empire of that house, it seldom reveals the actual control of that house on various strata of the society and the country.

Chaudhuri (1975) says the disproportionate influence exerted by the top business groups is not measurable statistically with some simple statistical concentration ratios. Many times, even minority ownership is sufficient to gain such control. Hence, the controlling block is not always necessary. Such indirect control is operationalised through interlocking directorship and inter-corporate investment instruments.

Data and Methodology

Data on both business groups and M&As are troublesome. In the absence of better alternate data sources, we have used the PROWESS database of Centre for Monitoring Indian Economy (CMIE) to collect data on business groups. To get information on the M&As undertaken by business groups, we have used the Venture Intelligence database. There is no direct database on the M&As undertaken by the business groups.

We have identified it case by case. The period of study is 1990 to 2019. To understand the depth of M&A activity among business groups, we have selected the top 50 business groups covered by the PROWESS database. PROWESS identified the top 50 business groups based on the size of their assets. We have identified the transactions related to all the selected 50 business groups from the M&A database of Venture Intelligence through screening each transaction based on the name search of the groups and affiliated companies. Data on M&As cover the period January 2004 to 19 July 2019. Out of the top 50 business groups identified from PROWESS, data for M&As is available for 43 groups from Venture Intelligence. Simple statistical techniques are used to understand the intensity of M&As undertaken by the business groups. The study examined the product market competition with ownership criteria.

Major Observations from the Study

M&As undertaken by Business Groups

The 43 groups or affiliated companies appear in 1083 transactions as per the data collected. Out of this, 352 transactions are minority deals or sales of various assets. The rest of the 731 transactions can be counted as majority acquisitions. The Tata group undertakes the maximum number of transactions with 144 transactions.

Out of that, 38 are the sale of assets/minority deals and 106 majority deals. Reliance is the next top deal maker with 116 transactions. Out of that, 69 are the majority of deals. Mahindra is third with 105 transactions. If we count by majority deals, Mahindra comes second with 82 majority deals. Next, Birla has 67 transactions, of which 44 are majority deals. Essar (Ruia) and Wipro have 55 transactions each, out of which 23 and 32 are minority and majority deals.

L&T and Godrej have 35 each majority transactions. Other consolidation intensive groups are OP Jindal (45 transactions, 28 majority deals); Piramal (45, 21); TVS (44, 31); HCL (40, 26), Hero Munjals (29, 19), and so on.[84]. Groups like Mafatlal, Lalbhai, and Chidambaram MA involved little consolidation activities.[85]

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[84] Data in parenthesis shows the total number of deals and the number of majority transactions, respectively.

[85] A more detailed discussion on M&As undertaken by business groups is available in Saraswathy, B (2019).

When we look at the major sectors in which the top business groups engaged in consolidation activities, the IT and IT-enabled sector (IT & ITES) consists of 18 percent of all transactions (134 out of 732 majority deals). Automobiles is the second top sector with 92 transactions (13 percent). Next coming sectors are basic metals (48, 7 percent), energy (45, 6 percent), banking and financial service (41, 6 percent), food and beverages (39, 5 percent), engineering & construction and telecom (30, 4 percent) each, machinery (29, 4 percent), pharmaceutical (25, 3 percent), media and entertainment (22, 3 percent), shipping & logistics (22, 3 percent) and so on.

Regarding who was the top dealmaker within these preferred sectors, the study observed that in IT and ITES, HCL and Wipro are the top dealmakers with 22 and 20 deals, respectively. Mahindra also has 19 deals in the sector. L&T and Tata are the other top deal makers with 12 and 10 deals, respectively.

In the automobile sector, Mahindra and Tata are the top transaction makers, who accounted for more than 50 percent of all transactions in the sector. Mahindra is engaged in 26 transactions, making 32 percent of all transactions in this sector. Tata is 16, which is 20 percent of all transactions in the sector. Hero Munjals Kalyani Bharat Forge and the Essar (Ruia) are the next coming deal makers in the sector. 25 out of the 48 deals belong to Tata and OP Jindal (OJ) groups in basic metals. Tata has 14 and OPJ has 11 transactions. Essar (Ruia) is next with 7 deals. All others have a minimal presence. The next important sector is banking, financial services, and insurance, for which Reliance and Mahindra share the top position with 7 transactions each. L&T is 5.

It is interesting to note that we have information out of the 38 sectors. Tata consolidated in 23 sectors, Birla in 22 sectors, Reliance in 16, and Mahindra in 14. L&T, TVS, Piramal, OP Jindal, and Godrej consolidated in 12, 11, 9, 9, 9 sectors each. This needs to be read in the context of the diversification and conglomerate characteristics of the Indian business groups.

We have further examined the type of consolidation in which the top business groups are involved. The data reveals that the top business groups remained as acquirers rather than as targets. Out of the total 106 transactions of Tata, except for 22 transactions, for 73 transactions, Tata remained as the acquirer, which makes 69 percent of the transactions involved Tata. In the case of another 10 transactions, Tata remained as both target and acquirer. In other words, it was a consolidation within the group. Hence, this needs to be taken as related transactions.

In Mahindra's case, in 80 percent of the transactions, Mahindra was in acquiring role, and in 10 percent (8 transactions) it was in the target role and the rest was related transactions. A similar trend is seen in the case of Reliance, Essar (Ruia), Godrej, etc. Reliance was in acquiring role in 74 percent (51) of the transactions and in the target role in 19 percent (13) of the deals. Related transactions are 7 percent of the deals (5). In Birla's case, only 51 percent of the deals (23) are made in acquiring roles. Target 12 transactions and another 10 transactions, it was related transactions.

Similar trends are visible for other top groups as well. In Wipro's case, out of 32 deals, in 31 cases, Wipro was in acquiring role. In only one case, it remained in the target role. Hence, in general, it can be said that the top business group's involvement in business transactions remained mainly to acquire other companies or to complement the existing resources by purchasing the assets of other companies.

The next important question is where the groups are consolidating their operations? Are they engaged in foreign transactions or domestic transactions? How many of them are acquiring firms abroad? We tried to answer such questions with the available information. It is seen that the top consolidation intensive groups like Tata, Mahindra, Reliance, Godrej, Wipro are engaged in a large number of outbound transactions, along with their inbound and domestic presence in consolidation activities.

Interestingly, the number of groups in inbound transactions is much less than in domestic deals and outbound transactions, which may indirectly indicate that the group affiliation enables firms to withstand competition from foreign firms compared to their independent standalone peers. There were 266 outbound acquisitions undertaken by the top groups, while the number of inbound acquisitions is only 83.

Mahindra has undertaken 42 outbound transactions, whereas it is involved only in 4 inbound acquisitions. Tata has made 41 outbound transactions and 15 inbound transactions. Wipro has 24 outbound transactions, whereas no inbound transaction was noticed. Reliance and Godrej have 18 outbound transactions each, and that of inbound is only 12 and 4, respectively. Within the domestic deals, the dominant groups involved are Tata (50 deals), Reliance (39), Mahindra (36), Birla (32), L&T (23), Essar (Ruia) (22), and so on.

In general, it is observed that many unlisted firms in India are involved in the consolidation scenario. Saraswathy B (2016) observed that 95 percent of the cross-border M&As in India belong to unlisted firms. However, such a large-scale involvement of unlisted firms is not visible in the case of the top group's consolidation. The frequency of unlisted firms is 42 percent of all transactions in the case of Tata, 16 percent for Mahindra, 36 percent for Reliance, 60 percent for Birla, 79 for Essar (Ruia), 23 for Godrej, and so on. The same trend is applicable to other groups as well.

Product-wise Concentration with Ownership Characteristics

Usually, the product market concentration is measured in firm-level concentration, i.e., the share of sales or assets held by the top firms in the relevant sector. This is one of the crucial indicators for competition assessment, which the competition regulators also use globally. Here, the ownership of firms is not emphasised while analysing the competition. Most business groups have multiple affiliate group companies in the same industry group. This is also noticed by earlier studies on business groups such as Mazumdar S (2008).

Further, many group companies are present in multiple sectors.

In this context, the point made by Chaudhuri (1975) regarding localised or product-wise concentration becomes relevant. Chaudhuri (1975) observed that, though product-wise concentration is important and reveals glimpses of the nature and extent of the concentration of economic power, it is inadequate for a full understanding of the problem.

As the economy grows, the product-wise concentration may show a declining trend. And most importantly, the economic power exercised by the top business groups is not only on a particular product or group of products but over a large number of economic activities simultaneously.

The study examined the product market concentration with ownership criteria for three sub-sectors discussed earlier, i.e., basic metals, machinery, and automobiles. To give a clearer view, we have further disaggregated the sub-sector in some cases. For example, ferrous metals are examined from basic metals; and from the automobile sector, (i) automobile parts and accessories and (ii) other transport equipment are examined. Major observations from the data analysis are as follows.

Table 3 shows the share of Tata and OP Jindal in ferrous metals over time. Tata and OP Jindal have many firms operating in the ferrous metals segment. Tata had a sales share of 15.4 percent in the 1990s, which peaked at 16 percent in 1993. After that, Tata's share was gradually declining and became 10 percent in the year 2015. From there, again started its growing trend. In 2019, the share was 14 percent.

On the other hand, OP Jindal had a meagre 3 percent in 1990, increasing to 22 percent in 2019. When we do a firm-level analysis, the top Tata group firm in the ferrous sector, i.e., Tata Steel, has only a 9.5 percent share in 2019, whereas the same for Tata as a group in the ferrous segment is 14 percent. Similarly, the share of JSW Steel, the top OP Jindal group firm in the sector, was only 10 percent in 2019 (Table 4), and that of OP Jindal as a group is 20.7 percent, as can be seen in Table 3.

The combined sales share of the Tata and OP Jindal group in ferrous metals is 34.7 in 2019 compared to 18 percent in 1990. This shows a clear increasing trend over time and the strong presence of the two groups in the ferrous segment. The two groups control 35 percent of the sales generated and 42 percent of the total assets in the segment. Asset-wise also there has been an increasing trend compared to 1990s.

In 1990, the combined presence of these two groups was only 17 percent, much of which was contributed by Tata, which increased to 42 percent in 2019. In 2019, the contribution of Tata increased to 20 percent compared to the 1990 share of 15 percent. For OP Jindal, the assets share was only 2 percent in 1990, now 22 percent. The increasing presence of Tata and OP Jindal is shown in Figure 1. The next coming groups

are Essar (Ruia) and Godrej. When we add these two groups, the top 4 groups' presence in the sector, based on sales share, becomes 41 percent.

Table 6: Ferrous Metals: Ownershipwise Concentration of Sales and Assets by Tata and OPJ(%)

	Tata Group		OP Jindal Group		Tata + OP Jindal	
	sales	assets	Sales	Assets	Sales	Assets
1990	15.4	15.2	2.9	2.0	18.3	17.2
1991	15.2	11.2	2.7	1.7	17.9	12.9
1992	15.7	13.0	2.4	2.0	18.1	14.9
1993	16.1	14.0	3.0	2.6	19.1	16.6
1994	15.2	13.7	3.5	3.9	18.7	17.6
1995	14.6	11.9	4.0	8.4	18.6	20.3
1996	15.2	12.2	5.6	7.2	20.7	19.4
1997	15.1	12.0	5.4	8.8	20.5	20.8
1998	15.8	11.8	5.5	10.7	21.3	22.5
1999	14.1	12.0	6.4	13.6	20.4	25.6
2000	14.0	13.0	6.1	15.4	20.0	28.4
2001	14.1	13.1	9.3	16.5	23.4	29.6
2002	14.3	13.1	9.8	18.1	24.0	31.2
2003	13.6	12.6	13.6	18.9	27.2	31.5
2004	13.1	12.9	13.6	19.8	26.7	32.7
2005	12.4	12.4	13.5	17.6	26.0	30.0
2006	12.4	11.8	13.0	19.1	25.4	30.8
2007	11.3	14.9	14.7	17.6	26.1	32.5
2008	10.4	19.2	14.3	17.1	24.7	36.3
2009	10.8	19.4	13.3	17.2	24.0	36.6
2010	10.6	18.2	15.7	16.3	26.3	34.5
2011	11.2	19.1	15.4	16.8	26.7	35.9
2012	11.2	18.6	16.7	17.2	27.9	35.8
2013	11.5	18.5	17.3	16.6	28.9	35.1
2014	11.0	18.6	17.1	16.1	28.1	34.7
2015	10.7	17.8	16.9	16.6	27.6	34.4
2016	11.4	17.5	16.1	18.6	27.5	36.1
2017	13.0	18.4	19.1	18.5	32.1	36.9
2018	13.5	18.7	20.2	20.2	33.8	38.9
2019	14.0	19.7	20.7	22.0	34.7	41.7

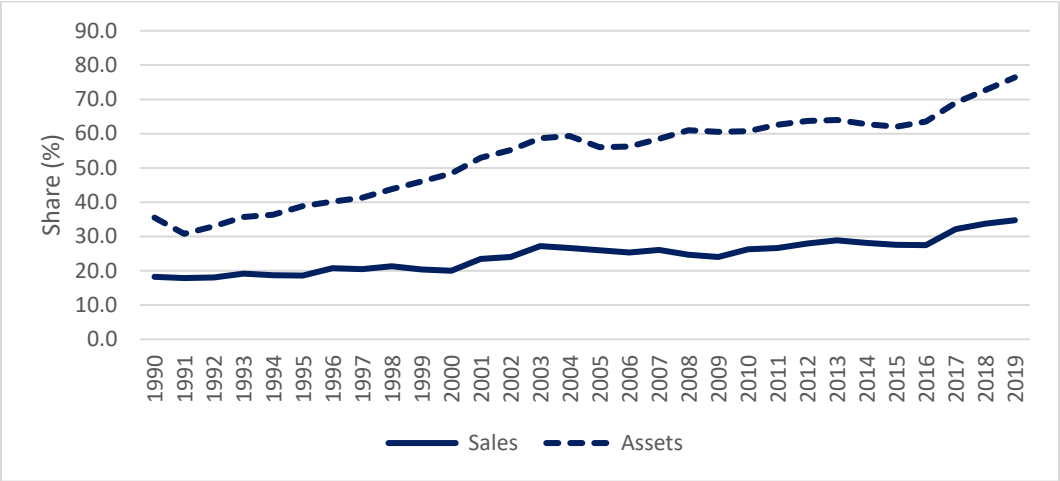
Source: Calculated using PROWESS, CMIE

Table 7: Market Share of Top Group's Affiliated Companies in Ferrous Metals (2019)

Company	Sales (Rs. Mn)	Market Share (%)
Tata steel	706109.2	9.50
JSW steel	767640	10.32

Source: Calculated using PROWESS, CMIE

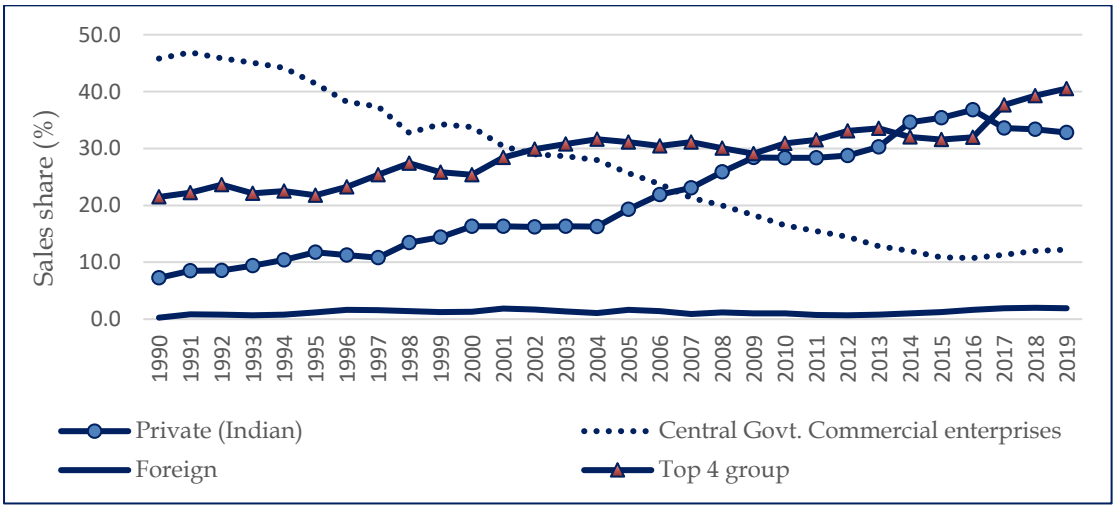
Figure 1: Tata and OP Jindal groups in Ferrous Metals



Source: Calculated using PROWESS, CMIE

This sector has got a strong presence from public sector units too. The Central Government's commercial enterprises controlled 46 percent of the market in 1990. However, the share of public sector enterprises is gradually declining, and now it has got only around 12 percent sales-based market share (Figure 2). The increasing presence of top business groups and standalone domestic firms is visible in the figure, and here, the presence of foreign firms is limited.

Figure 2: Ferrous Metals: Presence of Foreign Firms and Groups



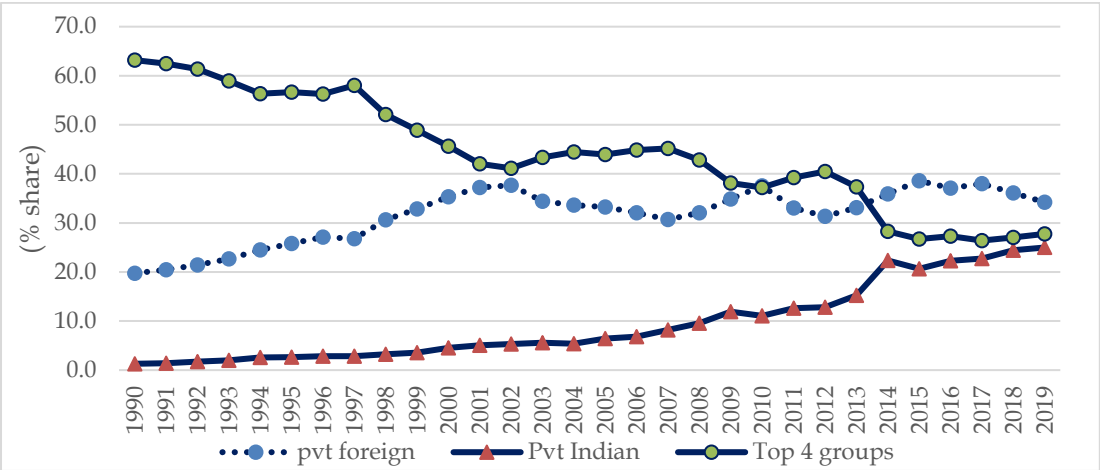
Source: Calculated using PROWESS, CMIE

Next, the study examined the automobile sector. Unlike the basic metals sector, there has been a declining trend in the value of sales and assets of the top groups for automobiles. The combined share of the top 2 groups in 1990 was 43 percent, which declined to 21 percent in 2019. The top 4 groups' shares declined to 28 percent from 63 percent for the same period. It is noticed that the presence of foreign-owned firms is increasing in this sector over time (Figure 3).

This indirectly indicates the competitive pressure exerted by foreign firms on traditional Indian business groups. The major firms that come under the foreign category are Maruti Suzuki, Hyundai Motor, Toyota Kirloskar, Honda Cars, etc. This is also true that the standalone private Indian firm's presence in the sector is also increasing gradually. This sector is classified as less moderately concentrated (Saraswathy, B, 2020).

The share of Tata, Mahindra, Hinduja (AL), and TVS Iyengar declined compared to their presence in 1990. This declining trend is visible for assets-based analysis too. Maruti Suzuki comes to the top with around 12 percent market share when the firms are taken separately. Tata Motors comes second with about 10 percent share. Mahindra & Mahindra is the third, with a 7 percent share. Hence, the market shares become even less when the affiliated companies are taken separately. Being part of the group gives more stranglehold in the sector through multiple firms.

Figure 3: Motor Vehicles Trailer and Semi-Trailer: Market Share of Foreign and Indian Owned Firms



Source: Calculated using PROWESS, CMIE

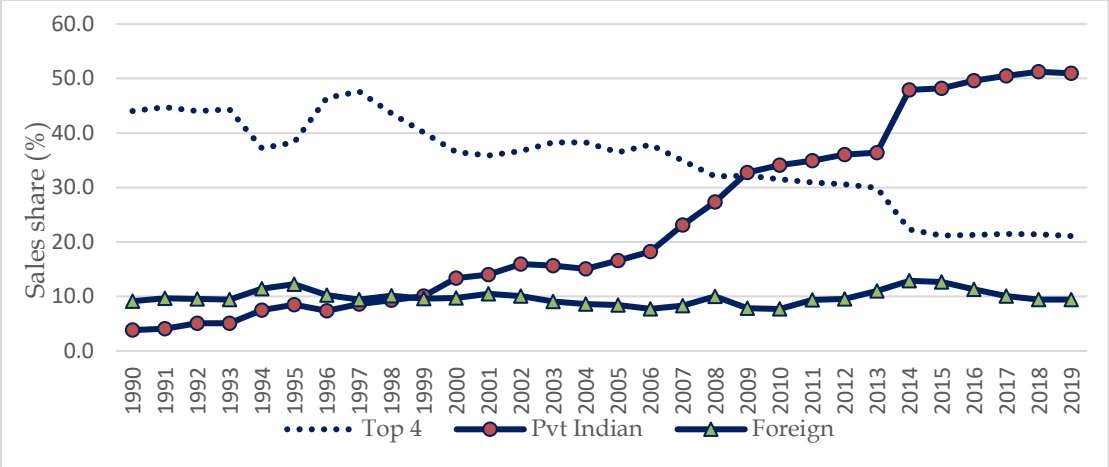
The study examined the sales-based concentration levels with ownership categorisation for the motor vehicle's parts and accessories. This product generally comes under the less concentrated category (Saraswathy, B, 2020). In this segment, the current top groups are TVS Iyengar, Samvardhana Motherson, Tata, Hero (Munjal), and Anand DC. The share of top 2, top 3, top 4, and top 5 groups is declining.[86]

[86] Table available on request.

However, individual groups like Motherson and Tata improved their position compared to the 1990 figures. During the early 1990s, the presence of Motherson was minimal through Motherson Sumi Systems. New companies affiliated from the mid-1990s, and now the share is 5 percent compared to near-zero in 1990. The presence of Tata is also the same as that of Motherson in this segment.

Figure 4 shows the market shares owned by foreign firms, private standalone Indian firms, and the top Indian business groups. It can be seen that the share of top groups is declining over time, whereas the major gainers are standalone domestic firms. The share of foreign firms is more or less the same over time. Hence, it is mainly the entry and expansion of the domestic Indian firms that increase competitive pressure on top business groups.

Figure 4: Motor Vehicles Parts and Accessories: Presence of Foreign Firms and Domestic Groups



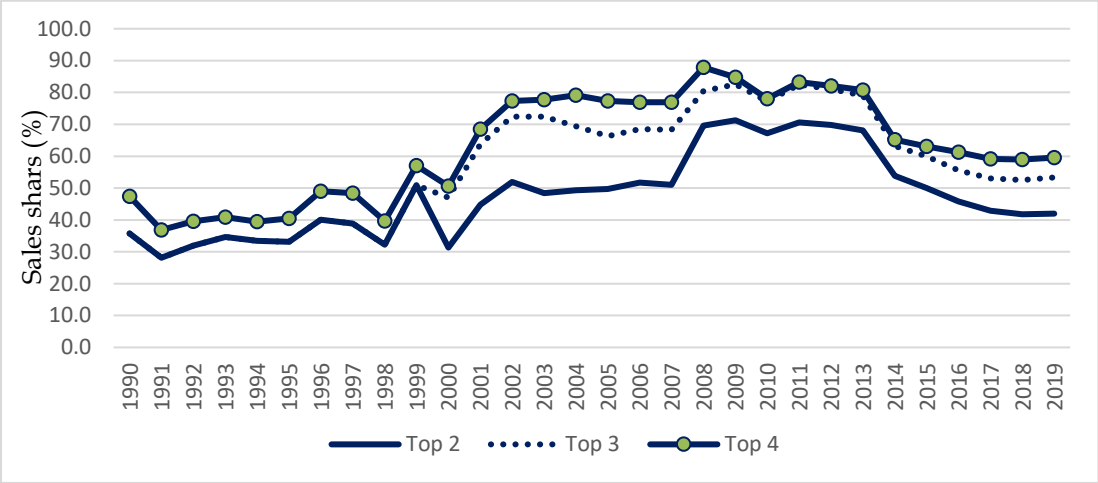
Source: Calculated using PROWESS, CMIE

A similar estimate is done for the other transport equipment, which includes the manufacture of railway locomotives, manufacture of air and spacecraft & related, manufacture of weapons and ammunition, the building of ships and boats, and manufacture of other transport equipment. Here, the share of the top 2 groups was 36 percent, which increased to 42 in 2019. This showed an increasing trend till the 2010-11 period. It was as high as 71 percent in 2010-11, which declined to 42 percent in 2019.

Similarly, the share of the top 3 groups was 36 percent in 1990, which increased to 53 percent in 2019. The share was very high in some years. For example, in 2011, it was 82 percent. The top 4 groups currently control 60 percent of the segment's sales revenue. This was only 47 percent in 1990. Hence, unlike the motor vehicle production segment, the picture of other transport equipment is more concentrated when the top groups are considered together[87] (Figure 5).

[87] Table available on request.

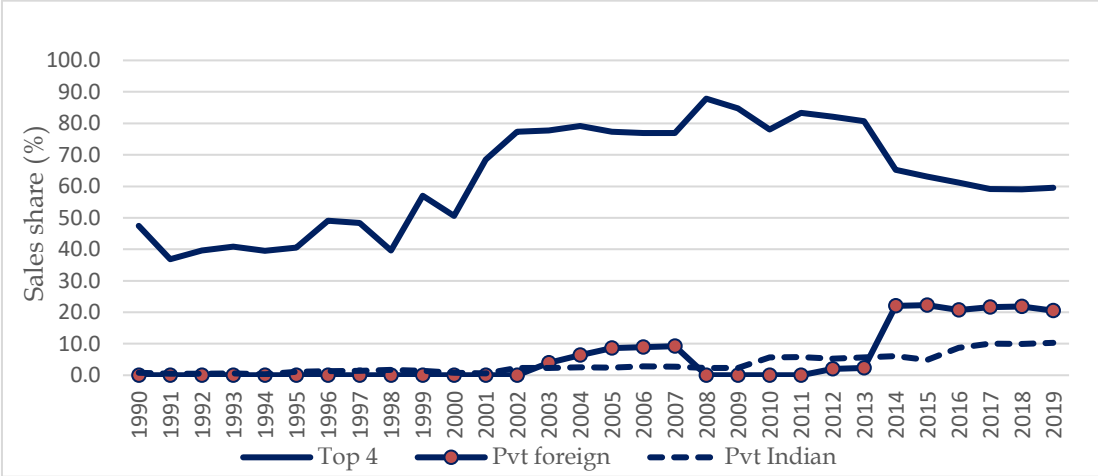
Figure 5: Transport Equipments: Groups' Share in Sales (%)



Source: Calculated using PROWESS, CMIE

When we look at the foreign presence in this segment, it was minute till 2013. After that, it shows an upward presence (Figure 6). It is visible from the figure that the top 4 groups own a substantial market of these products, though the share has been declining in recent years. Private Indian standalone companies' share is also very low, but it is presenting an increasing trend in recent years. Hence, the declining presence of top groups in recent years is explained by the upward movement of both foreign and standalone firms.

Figure 6: Transport Equipments: Presence of Foreign Firms and top groups



Source: Calculated using PROWESS, CMIE

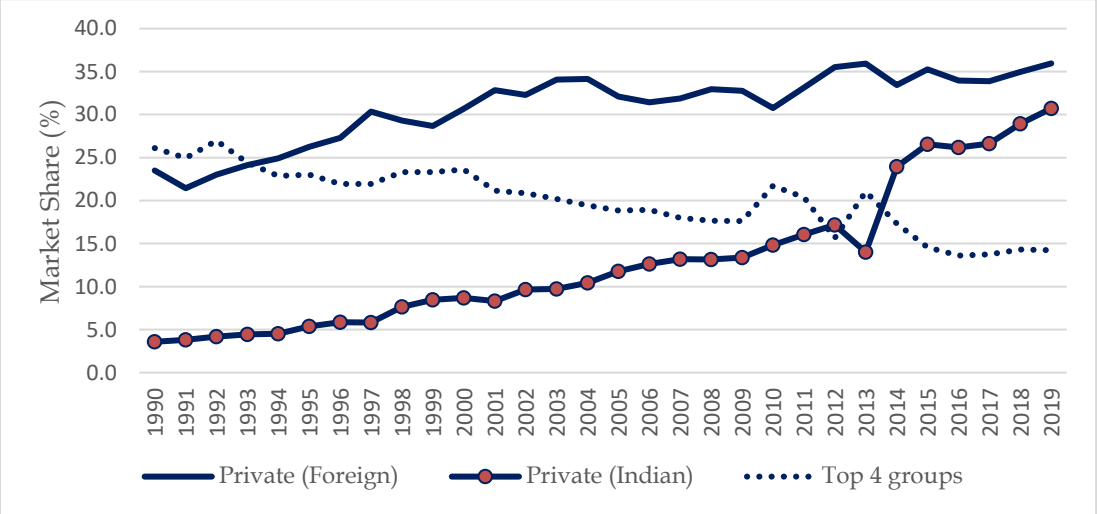
Next is the machinery sector, in which the top groups are Tata, Amalgamation, Kirloskar, and Escorts. This sector generally comes under the less concentrated sector (Saraswathy, B, 2020).

Likewise, the traditional groups are also facing stiff competition in the automobile sector. The current top 2 groups had only around 13 percent hold in 1990 in this sector,

now about 10 percent. The corresponding figures for the top 4 groups are 26 and 14 percent respectively for 1990 and 2019. All four groups mentioned above lost their market shares over time compared to the 1990 figures[88]. More important to note is the increasing presence of foreign firms (Figure 7).

In 1990, foreign firms controlled only around 24 percent of the market in this sector, which is 36 percent in 2019. Similarly, there has been an increase in other standalone domestic firms' shares. The share of standalone private Indian firms was nearly 4 percent in 1990, which increased to 31 percent in 2019. At the same time, the share of top business groups declined during this period. Thus, the competition in the sector increased with the increasing pressure from foreign firms and domestic standalone firms, which may be the reason for less concentration in this sector.

Figure 7: Machinery: Market share of Foreign Firms and Top Business Groups



Source: Calculated using PROWESS, CMIE

Conclusions and Policy Points

In brief, what emerges from the preceding discussion on product level concentration of top business groups is that the presence of business groups is increasing in products like basic metals and other transport equipment. Wherever the presence of top groups is increasing, the presence of foreign firms is less. In less concentrated sub-sectors like motor vehicles and machinery, the market shares owned by the top business groups are declining.

Standalone firms are also increasing their presence in these areas. This may be the reason for a less concentrated structure in these sectors. Further, it is observed that the market shares are higher when we consider the affiliate companies as a group rather than as

[88] Table available on request.

individual firms. This may be why these firms could sustain in the market compared to the standalone firms.

In its current form, the competition regulation mainly focuses on 'economic efficiency' and does not comprehensively address the 'social fairness' concept. The involvement of business groups in consolidation activities results in multiplier effects as they are already part of a diversified and well-structured umbrella of business with horizontal and vertical linkages. It is seen from the study that many affiliated companies of the business groups are operating in the same business activity. All of them are not contributing to the substantial sales revenue for the same segment. It is also noticed that many of these affiliated companies provide forward and backward linkages in the production within the same sector.

Apart from the general implications of M&As reflected in market shares and market competition, these types of synergies derived through ownership are essential in efficiently utilising the materials and other resources under a common umbrella of business. This was crucial to withstand competition from foreign firms and emerging standalone firms. Competition regulators need to consider the ownership characteristics, i.e., the 'group' effect, and the resultant synergies more carefully in the future rather than simply focusing on the 'narrowly defined 'product markets, which often undermines aggregate level concentration.

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8
Inequities in COVID -19 Vaccinations in India
Reflections through Inequity Indices

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Abstract

Vaccination for COVID -19 has been adopted all around the world. However, the studies indicate that the benefits of the various COVID vaccines have been unevenly distributed. On the one hand, richer countries are better off in this regard relative to many poorer countries. On the other hand, in our country, despite aggressive campaigning by the government, many gaps between states, rural and urban areas, as also in genders- male and females, have been noted.

This paper addresses the inequities in vaccinations, which are attempted in terms of inter-country and interstate inequities. We also investigate the causes of these vaccination inequities regarding socio-economic variables like income levels, awareness of information across rural-urban areas and mobility differences between males and females.

A variety of factors causes the inequity in vaccination. To highlight both the global and interstate factors, we adopt the methodology of the inequity index. Our research questions are twofold: First, what is the extent of global inequity in vaccination and intercountry disparity? And second, what are the various factors leading to inequitable vaccination benefits in the Indian states and their contribution to overall inequity as estimated by our inequity index.?

Our methodology involves scanning the causes and factors for inequity in vaccination by literature review. This is followed by constructing the inequity index using available government and individual researcher's publications. We make an intercountry and interstate comparison utilising the information and computing the inequity index. Finally, we suggest how better management of different factors will reduce inequitable vaccination benefits. Thus, we bring out valuable insights into public health policy to make it more welfare-oriented.

Introduction

Vaccination for COVID 19 has been adopted around the world. However, it appears that the benefits of vaccines have been unevenly distributed (WHO 2021; Moosa et al. 2021). If we investigate the trends, we observe that richer countries are better off in this regard relative to many poorer countries (Unicef.org 2021).

More than 100 crores have got at least one dose in India with laudable speed to date. However, despite aggressive campaigning by the government, many gaps have been reported by newspaper media. Their focus is based on different journalistic assessments[89] that suggest some vaccination gap between states in rural and urban areas or between males and females (Unwomen.org 2020).

Unlike many reports in popular dailies, only a very few articles have appeared in either journals or edited volumes or reports by international NGOs. We attempt to investigate these few studies.

The study by Mahendru, Khan and Wankhede (2021)[90] is based on an index prepared by the authors, which ranks the states based on highest Reduced Inequalities to lowest Reduced Inequalities. According to this study, States like Meghalaya, Mizoram and Telangana have the highest scores and the States of Arunachal Pradesh and Uttar Pradesh have the lowest scores.

This prevailing inequality affects access to health services and quality care. Confirmed cases of COVID-19 have a negative relationship with this index. They interpret this as indicating that the confirmed cases will also decline with more inequality reduction. Thus, the states attempting to reduce inequalities in the past few years have also experienced fewer COVID-19 positive cases.

Further, it has been observed by the same study that there exists a weak negative relationship between confirmed cases and expenditure on health. This implies that states with higher expenditure on health as a percentage of GSDP witness lower confirmed cases of COVID-19.

Similarly, there is a positive relationship between recovered cases and expenditure on health. This indicates that states spending more on health also witness a higher recovery from COVID-19. The researchers may attribute this as a reflection that the marginalised also have poor health-seeking behaviour, and often evade seeking medical treatment due to poor access to affordable and quality healthcare. Higher expenditure on health addresses these concerns. The same study suggests that the Indian vaccination drive ignores the digital divide in the country.

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[89] It includes popular dailies like the Indian Express, Times of India, Financial Express, Hindustan Times, etc.

[90] In chapter 6: Inequality Amidst a Health Emergency Apoorva Mahendru, Khalid Khan and Vikrant Wankhede in Inequality Report 2021: India's Unequal Healthcare Story, OXFAM, India.

At the pandemic, only 15 percent of rural households had an internet connection and smartphone users in rural India were almost half of that of urban India. More than 60 percent of women across 12 States had never used the internet. SCs and STs with smartphones stood at 25 and 23 percent, respectively, 43 percent of the upper caste had access to smartphones.

Another collated view in a collection-based article in Economic and Political Weekly (September 21, 2021)[91] discussed different aspects of the Indian COVID 19 vaccination programme. This ultimately led to intermittent vaccine shortages and revealed vaccine hesitancy which has changed with various vaccines approved in India and a rapid pace of vaccination overcoming the hesitation.

Yet another opinion-based publication by USAID (March 2021)[92] suggests that we should ensure that each community has enough information to make informed decisions. Understanding the information needs of the community should precede listening. Thus, "Agency builds ownership. Build systems to listen and engage regularly and to involve the community and their preferences in the design of vaccination communication activities and the vaccine rollout".

Also, it should be conveyed to the community that "the vaccine is not THE solution: Avoid talking about the vaccine as 'the solution,' but rather that is 'part of the solution'. Pair any vaccine discussion with information to manage expectations that preventative measures are here to stay, at least in the short-medium term."[93]

Further, Ferriera's (June 2021) paper suggests that given the educational and labor market dynamics, it now appears plausible that even unweighted inequality between countries may well be on the rise in 2021. The unequal spread of vaccination allows countries, such as the US, the UK, and parts of developed Asia to recover much more rapidly than India, Latin America, and a major part of Africa.

Yet, another study by Ghosh (2021)[94] points out that the production and distribution of COVID-19 vaccines have exposed and intensified global inequality. Still, there has also been a vaccine 'grab' by rich countries. This implies that most of the world would get safe and approved vaccines only in 2022, and in some cases, not even until 2024 (Unicef.org 2021).

This study also suggests that WHO's approval process is heavily skewed in favour of vaccines developed in the rich countries and as such, this greatly prolongs the time taken before vaccines from other countries are approved. This study emphasised that "Overall,

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91 Covid-19 Pandemic: Shortages, Hesitancy and Pricing Plague India's Covid-19 Vaccination Programme, September 08, 2021

92 Why vaccine inequality is our biggest COVID-19 communication challenge yet, USAID, March 2021

93 See also, Ghebreyesus TA (2021)

94 Ghosh Jayti (2021)" The Political Economy of Covid-19 Vaccines" www.TheIndiaForum.in, pp.1-8, March 05, 2021

domestic distribution of vaccines has mostly mirrored the global distribution: unequal, unjust, and incompetent."

Methodology

A variety of factors may cause inequity in vaccination. To highlight both the global and interstate factors, we follow the method of inequity index. For this purpose, we focus on three inequity indices: coefficient of variation, Gini coefficient, and deviations from the aggregate population-weighted average.

Our methodology involves scanning the causes and factors for inequity in vaccination by a literature review (Oxfam briefing paper 2021). This is followed by constructing the inequity index using available data from government and individual researcher's publications. We make an intercountry and interstate comparison utilising the information and computing the inequity index. Finally, we suggest how better management of different factors will reduce inequitable vaccination benefits. Thus, we bring out valuable insights for public health policy to make it more welfare-oriented.

For the computation of global inequity, we compute the weighted average of the population vaccinated. For this aspect, we have included 21 countries which are the United Kingdom, France, Spain, Belgium, Brazil, New Zealand, India, Canada, Austria, Argentina, Italy, Denmark, Sweden, Switzerland, Ireland, Norway, Cambodia, Chile, United States, Peru and Poland. The GDP per capita PPP in US$ in 2020 for these countries vary from the lowest 4422.045 (for Cambodia) to the highest 164964.518 (for Ireland).

In the case of country-level data, it is the average of the number of vaccinated persons multiplied by the respective population of these countries. This is followed by deviations of the vaccinated population of a country from the 21 counties population-weighted aggregate average. Our dependent variable is these deviations of country-level vaccinations from the 21 countries' population-weighted average. Our research questions for country-level data are: what is the extent of global inequity in vaccination and intercountry disparity? (Joseph Stiglitz 2020),

For the Indian context, the state-level data points out the various factors leading to inequitable vaccination benefits in the Indian states and their contribution to overall inequity. The state-level data used for India includes the states namely, Andhra Pradesh, Assam, Bihar, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Punjab, Tamil Nādu, Telangana, Uttar Pradesh, Uttarakhand, and West Bengal.

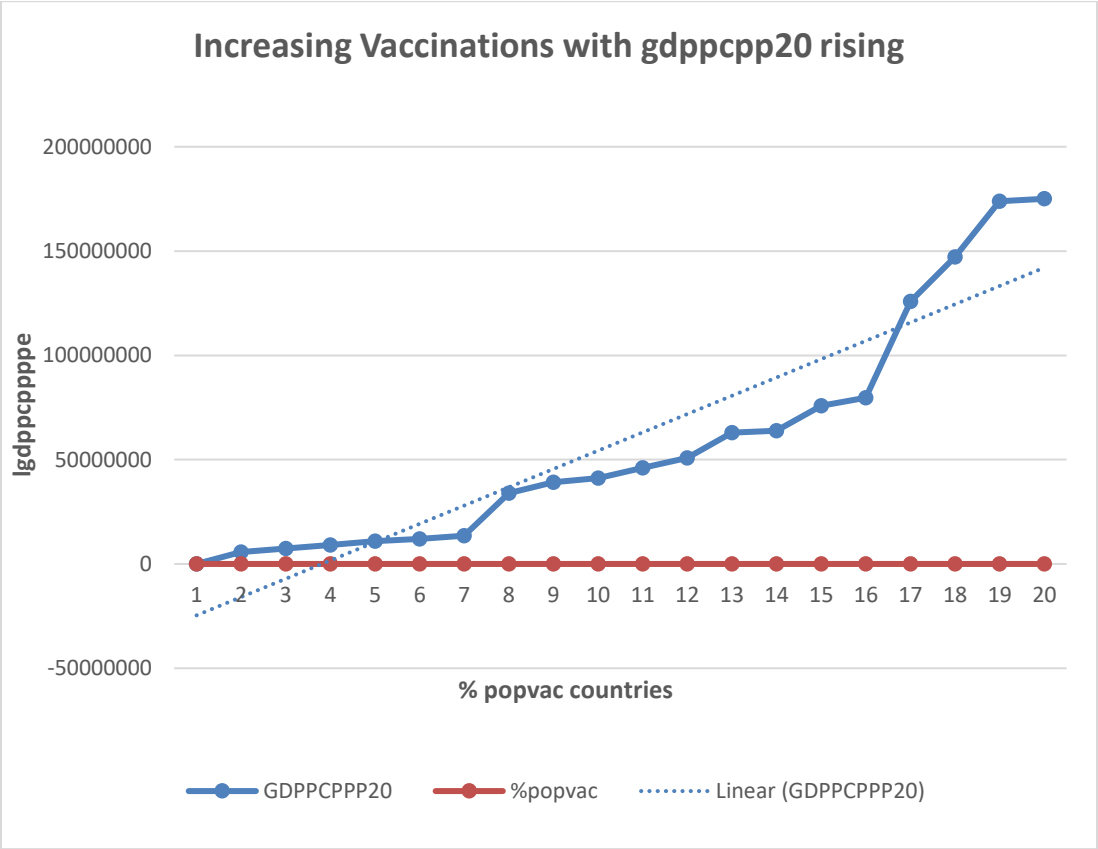
The per capita income in 2018-19 for these states varies from the lowest (Rs.31626 for Bihar) to the highest (Rs.376215 for Goa). Weighted total vaccinations and deviations from the weighted average are calculated from these state data. The deviations from the weighted total vaccinations of individual states are taken as the dependent variable.

The results of Factor analysis are presented for country-level data and state-level data in the Tables below from Tables 2 (a)-2 (c) and 4(a)-4(c)

Analysis of Global Results

At the global level, a pattern across countries indicates that richer countries have got a larger share of vaccinations relative to poorer ones. This pattern is notable in Figure 1, where the graph depicts increasing numbers of vaccinations with per capita GDP rising.

Figure 1: The Disparity in COVID Vaccinations at the Global level



Source: https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/

The Gini coefficient and coefficient of variation using country-level data are presented in Table 1. The value of the Gini coefficient for the total population vaccinated is very high (=.925802) and is statistically significant at 10 percent level. Likewise, the coefficient of variation is also 3.904. Both values corroborate our diagrammatic presentation in Figure 1 and reinforce higher inequality across countries in covid 19 vaccinations.

Table 1: Gini Coefficient and Coefficient of Variation: Country Data Population Vaccinated

	No. of Observations	Index Value	Std. Error	P-value
Gini coefficient country data population vaccinated	21	0.925802	0.457162	0.0571
Coefficient of variations population vaccinated for country-level data	21	3.904253		

Source: Our Estimates

The factorial analysis results as presented in Tables 2(a) to 2(c) indicates that one could delineate six factors for the deviations of a country from the weighted world average represented through these 21 countries in our sample. These are based on the availability of requisite and reliable information as given in World Covid Tracker and other socio-economic variables obtained from World Bank publication.

These six factors, as numbered from 1 to 6, have loadings from different variables. This includes life expectancy in 2019, air pollution exposure in micrograms, population density, unemployment in 2020, medical beds per thousand population, female labour percent 2019, GDP per capita at PPP, and rural population percent in 2020 (Table 2(a). These factors are rotated to orthogonality to have zero collinearity. The rotated factors explain the adequate variation in the dependent variable we have considered, namely deviations of a country's average from the global weighted average Table 2(b)).

Out of these six factors, three factors explain more than 88 percent of variations (Table 2(b)). Generated factor scores based on these results have been used further in our causal analysis. These results are presented in Table B 1 in Annexure B. These results indicate that factors 1 and 2 are only statistically significant. Factor 2 is also significant slightly above 10 percent level (Table Tab B1, Annexure B).

But if we consider population vaccinated as a dependent variable, then factors 1 and 2 are significant at respectively 1 percent and 5 percent levels. Thus, we focus on these factors' respective loadings presented in Table 2(c). Thus factor 1 has a high loading (more than .80) from three variables. The latter include air pollution exposure in micrograms, female labour percent in 2019 and rural population percent in 2020.

Out of these air pollution exposure in microgram and rural population percent in 2020 have a negative influence and female labour per ent 2019 has a positive impact. For factor 2, two variables, namely life expectancy in 2019 and GDP per capita at PPP, have higher loadings, and both variables have a positive and increased influence on factor 2. These results suggest that these five variables have primarily influenced the pace and magnitude of vaccinations.

Factor Analysis for Country-level Data

Table 2(a): Factors delineated at the global level

Factor deviations from global weighted average, life expectancy in 2019, air pollution exposure in microgram, population density, unemployment in 2020, medical beds per thousand population, female labour percent 2019, GDP per capita at PPP, rural population percent in 2020
(obs.=20)

Factor analysis/correlation Number of obs.= 20*
Method: principal factors Retained factors = 6
Rotation: (unrotated) Number of params =36
LR test: independent vs. saturated: chi2(36) = 159.31 Prob>chi2 = 0.0000

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	4.70722	3.27293	0.6789	0.6789
Factor2	1.43429	1.0212	0.2069	0.8858
Factor3	0.41309	0.10265	0.0596	0.9454
Factor4	0.31044	0.09271	0.0448	0.9901
Factor5	0.21772	0.14783	0.0314	1.0215
Factor6	0.0699	0.08167	0.0101	1.0316
Factor7	-0.01177	0.06255	-0.0017	1.0299
Factor8	-0.07432	0.05875	-0.0107	1.0192
Factor9	-0.13308	.	-0.0192	1

- **One observation for Cambodia is dropped due to non-availability of data on medical beds: Source: our estimates**

Table 2(b): Rotated factors at a global level

Rotate

Factor analysis/correlation Number of obs. = 20
Method: principal factors Retained factors = 6
Rotation: orthogonal varimax (Kaiser off)
Number of parameters =36

LR test: independent vs. saturated: chi2(36) = 159.31 Prob>chi2 = 0.0000

Factor	Variance	Difference	Proportion	Cumulative
Factor1	3.90399	2.49067	0.5631	0.5631
Factor2	1.41332	0.60799	0.2038	0.7669
Factor3	0.80533	0.27766	0.1162	0.8831
Factor4	0.52767	0.1206	0.0761	0.9592
Factor5	0.40708	0.3118	0.0587	1.0179
Factor6	0.09527		0.0137	1.0316

Source: Our estimates

Table 2(c) Rotated factor loadings (pattern matrix) and unique variances: Global level

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Uniqueness
deviations from global weighted average	0.8558	0.222	0.0987	-0.0928	0.1833	0.2231	0.1165
life expectancy in 2019	0.65	0.6459	-0.0508	0.0522	0.1169	0.1686	0.1129
air pollution exposure in microgram	-0.9016	-0.3495	0.0604	0.2262	-0.0746	0.1081	-0.0071
population density	-0.5062	-0.0467	0.2413	0.6319	0.0385	-0.0038	0.2826
unemployment in 2020	0.05	-0.2475	-0.7337	-0.1625	-0.0956	-0.0077	0.3623
medical beds per thousand population	0.2932	0.1524	0.2316	0.0766	0.5076	0.0189	0.5733
female labour percent 2019	0.9295	0.2738	0.0842	-0.1674	0.0994	-0.0078	0.0161
gdp per capita at PPP	0.289	0.8119	0.2768	-0.0613	0.0319	-0.0473	0.1736
rural population percent in 2020	-0.8025	0.062	0.2355	-0.0425	0.2741	0.0513	0.2171

Source: Our estimates

Inequity in Vaccinations: Analysis for India

In Table 3, two inequity indices for the vaccinated population are presented. This Gini coefficient is statistically highly significant, but its value is less than .50, thus indicating low inequity in the vaccinations across Indian states. Likewise, the coefficient of variation is also very low and less than unity, which reinforces low inequity.

Table 3: Gini coefficient and coefficient of variation: population vaccinated India

Index	No. of obs.	Index value	Std. error	p-value
Gini	21	0.362394	0.021857	0.0000
Coefficient of variation for total vaccinations		0.66631		

Source: Our estimates
Primary data source: https://www.mygov.in/covid-19

The factorial analysis for Indian vaccinations data is presented in Tables 4(a) to 4(c). Six factors are delineated. However, for orthogonality, the factors are rotated. Only three of them are retained as these combinedly explain more than 91 percent of the deviations of states from the population-weighted total average. The regression analysis results are

presented in Table B2 (Annexure B) using the generated factor scores. The results indicate that only factor 2 is statistically significant. Thus, we focus on underlying loadings for this factor presented in Table 4(c). This factor has taken a little higher loading (-.4051), about percent of the BPL population percentage. This indicates that poverty has to some extent, might have led to transport constraints due to low income and also the lack of digital literacy.

Table 4(a): Factors Delineated using data for the Indian States:

factor deviations from 21 States weighted average, sex ratio GSDP per capita at constant prices, BPL population percent, unemployment rate August 21, rural percent population
(obs.=21)
Factor analysis/correlation Number of obs. =21
Method: principal factors Retained factors = 3
Rotation: (unrotated) Number of params =15
LR test: independent vs. saturated: chi2(15) = 37.39 Prob>chi2 = 0.0011

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	1.97906	1.18723	0.7186	0.7186
Factor 2	0.79183	0.33043	0.2875	1.0061
Factor 3	0.4614	0.50096	0.1675	1.1736
Factor 4	-0.03956	0.11194	-0.0144	1.1593
Factor 5	-0.15149	0.13566	-0.055	1.1043
Factor 6	-0.28715		-0.1043	1

Source: Our estimates

Table 4(b): Rotated Factors: Indian states

rotate
Factor analysis/correlation Number of obs.=21
Method: principal factors Retained factors = 3
Rotation: orthogonal varimax (Kaiser off)
Number of params =15

LR test: independent vs. saturated: chi2(15) = 37.39 Prob>chi2 = 0.0011

Factor	Variance	Difference	Proportion	Cumulative
Factor1	1.71879	0.91613	0.6241	0.6241
Factor2	0.80266	0.09182	0.2914	0.9155
Factor3	0.71084		0.2581	1.1736

Source: Our estimates

Table 4(c) Rotated factor loadings (pattern matrix) and unique variances: Indian states

Rotated factor loadings (pattern matrix) and unique variances				
Variable	**Factor1**	**Factor2**	**Factor3**	**Uniqueness**
deviations from 21 states weighted average	-0.1409	0.6992	-0.0096	0.4912
Sex ratio	-0.214	0.1072	0.5811	0.5811
gsdp per capita at constant prices	-0.8183	0.3208	0.0655	0.2231
Bpl population percent	0.4813	-0.4051	0.1185	0.5902
gsdp per capita at constant prices	0.01	0.1795	-0.5692	0.6437
rural percent population	0.8671	0.055	-0.082	0.2384

Source: Our estimates

Discussion

Viewing these results of inequity indices in the Indian context, we further investigate some of the other causes that have been cited in newspaper media. It has been reported, for instance, that there is a skewed pattern in covid 19 vaccination coverage, which has favoured the urban population. Thus, we plotted total vaccinations and the rural population in 21 states covered by us. Figure 2 shows uniformity and pattern of vaccinations synchronises smoothly with variations in rural population percentage.

Likewise, it has also been asserted in some reports that more density of population might have become a constraint in vaccination coverage. However, Figure 3 seems to refute this. The plot indicates that vaccinations have moved smoothly with population density variations. Another assertion in news media relates to the male-female differential in vaccination, suggesting a pattern of male bias. Again, Figure 4 plotting sex ratio and vaccinations do not corroborate this.[95]

[95] There is some opinion that literacy levels might have been related to vaccination pace. However, we observed by plotting the graph between literacy and population vaccinated which indicates no pattern between these two variables.

Figure 2: Total vaccinations and rural population percent Indian states

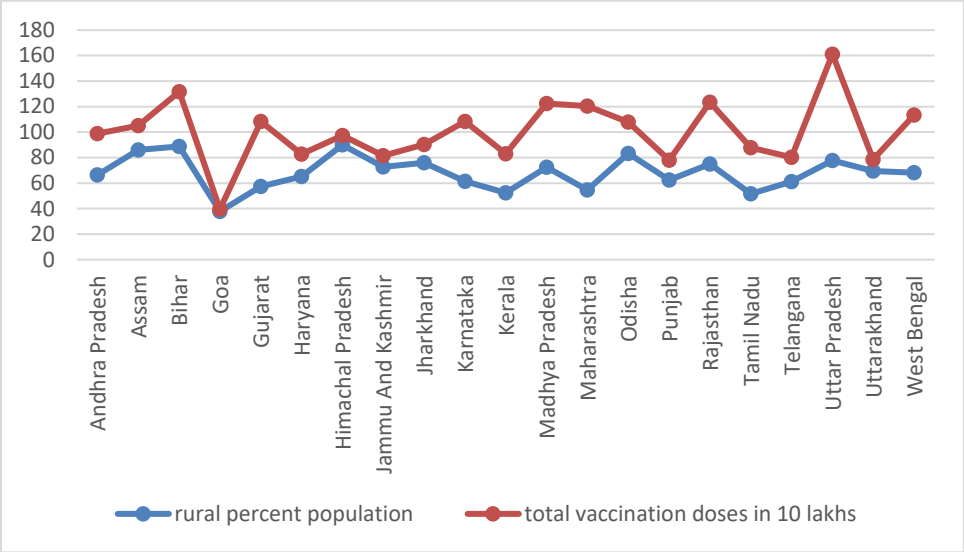


Figure 3: Total vaccination doses and Population density Indian states

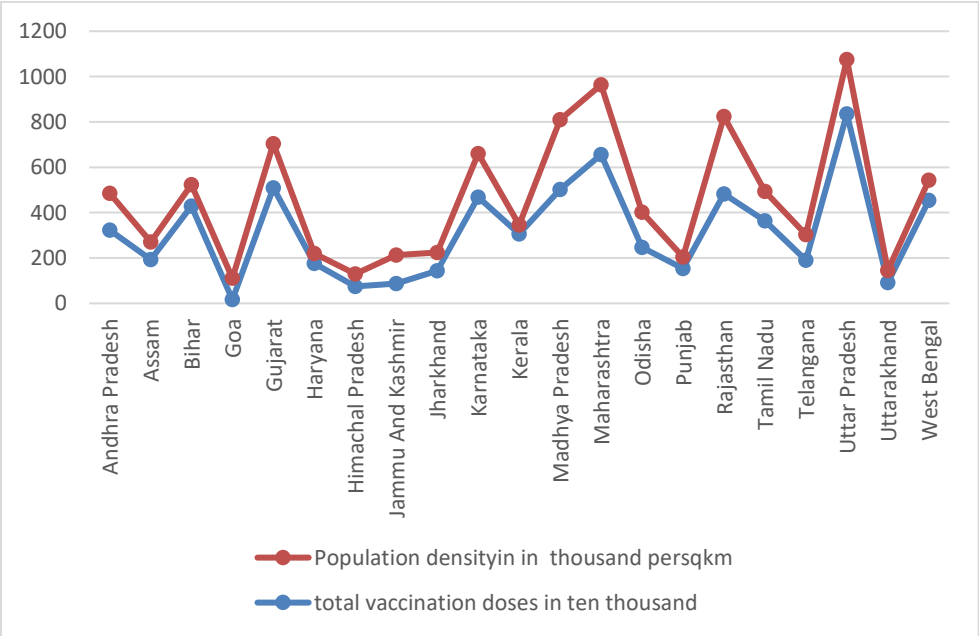
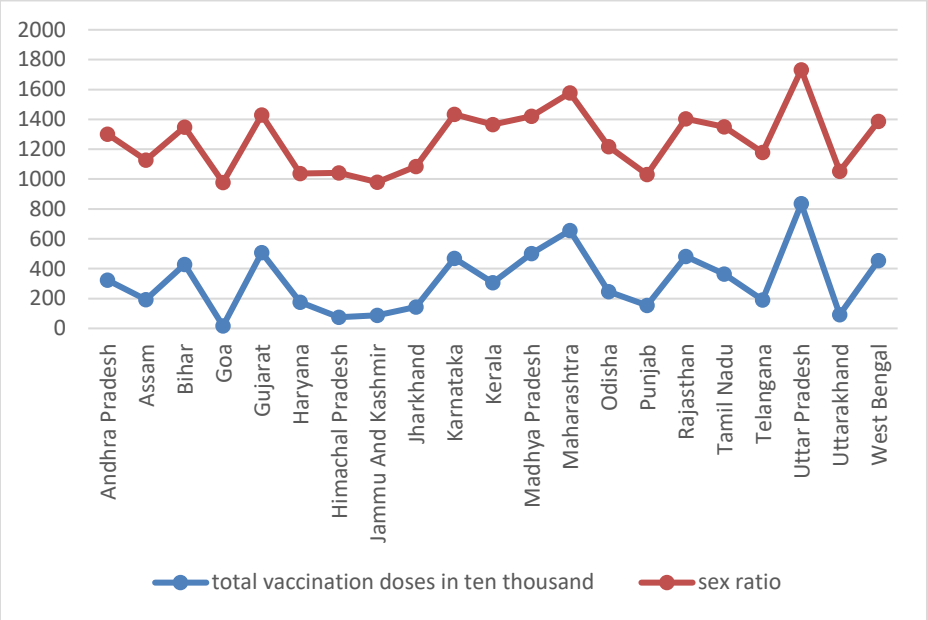


Figure 4: Total Vaccination doses and sex ratio Indian states



Overall Indian vaccination drive does suggest a better equity relative to global country-level data. This lies in a uniform policy guideline for all the states in India, which is part of national pandemic control measures. Secondly, the central procurement of vaccines has put a less financial burden on the states; thus, only the individual state's vaccination drive and pace of injections are the factors that, to some extent, led to state-level differences in vaccinations. Thirdly, unlike at the global individual country levels where many nations depended on the export of vaccines, the large production by Indian manufacturers of the two most distributed vaccinations across the country, namely, Covaxin and Covishield, reduced the requirement for imports of an outside vaccine.

Finally, to add to these factors, the keenness of both the Centre and states to save lives at the fastest pace also helped a faster inoculation drive and more equity. At times, these efforts have been partly nullified due to non-adherence to social distancing norms, either due to ignorance or mixing of crowds due to social functions and festivals.

Conclusions

Thus, our results throw light on inequity in vaccinations. These indicate that in India, such inequities are less. The country has achieved better equity in vaccinations due to various policy factors. Yet it is noteworthy that many bottlenecks appeared in the implementation of the vaccination drive. These suggest that there could be better management of vaccination driven by innovative services like mobile check-ups and vaccination units on wheels for reaching the remote areas and digitally illiterate population and the people who do not own smartphones.

Besides it, a good deal of better management of hospitals and material supplies is required, which has been indicated by temporary beds and oxygen supply shortages that led to losing precious lives in India.

However, the global country-level data shows a more inequitable vaccination pattern. The latter has resulted from variations in countries' per capita income, resulting from inequity indices like the Gini coefficient and coefficient of variations. The other variables that have led to these inter-country variations include air pollution exposure, percentage of female labour and rural population percentage. Out of these air pollution exposure and rural population, the percentage had a negative influence and female labour proportion had a positive influence.

Likewise, two variables, namely life expectancy and per capita income, had a positive and high influence globally. These results thus suggest that these five variables have primarily influenced the pace and magnitude of vaccinations worldwide. Therefore, the need is to adopt a better policy strategy by considering these factors that may lead to higher equity at the global vaccination level (Katie Gallogly-Swan and Rachel Thrasher 2021).

By contrast, the Indian vaccination strategy might be helpful for future planning. It should keep in view the possibility of a third COVID 19 wave, new strains of COVID viruses, efforts for children vaccination coverage, and more media focus on the need for administering requisite vaccination doses by individuals and careful adherence to social distancing norms (ECLAC-PAHO 2021).

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Annexure A

STATE/UTS	Total vaccination doses*	Total population	Deviations from 21 states weighted average	Sexratio	GSDP per capita at constant prices	BPL population percent	Unemployment rate august 21 (%)	Population density persqkm	Rural percent population
Andhra Pradesh	32258985	49100000	-14855274	978	121015	15.8	6.5	162968	66.51
Assam	19259207	26655528	-27855052	935	68562	19.7	6.7	78438	85.92
Bihar	42928375	82998509	-4185884.04	919	31626	41.4	13.6	94163	88.7
Goa	1653475	1347668	-45460784	961	376215	5.09	12.6	94163	37.83
Gujarat	50873185	50671017	3758925.963	920	175630	16.8	1.6	196024	57.42
Haryana	17607642	21144564	-29506617	861	188288	14	35.7	44212	65.21
Himachal Pradesh	7424999	6077900	-39689260	968	161882	10	3.7	55673	89.96
Jammu And Kashmir	8773666	10143700	-38340593	892	80173	5.4	13.6	125535	72.79
Jharkhand	14433888	26945829	-32680371	941	60513	40.3	16	79714	75.95
Karnataka	46855806	52850562	-258453.037	965	166373	25	1.5	191791	61.43
Kerala	30664417	31841374	-16449842	1058	161374	15	7.8	38863	52.28
Madhya Pradesh	50160067	60348023	3045807.963	919	63850	38.3	3.5	308245	72.37
Maharashtra	65581976	96878627	18467716.96	922	167581	30.7	4.4	307713	54.77
Odisha	24648371	36804660	-22465888	972	86447	46.4	2.2	155707	83.32
Punjab	15410956	24358999	-31703303	876	129873	8.4	6	50362	62.51
Rajasthan	48203186	56507188	1088926.963	921	88645	22.1	26.7	342239	75.11
Tamil Nadu	36365615	62405679	-10748644	987	160865	22.5	6.3	130058	51.55
Telangana	19075649	35193978	-28038610	988	160175	0	4.7	112077	61.12
Uttar Pradesh	83492874	166197921	36378614.96	898	50129	32.8	7	240928	77.72
Uttarakhand	9129241	8489349	-37985018	962	173121	39.6	6.2	53483	69.45
West Bengal	45378377	80176197	-1735882.04	934	75132	24.7	7.4	88752	68.11

Source: covintrackker.gov.in, September 09, 2021, and other statistical publications and our estimates

Annexure B

Table B1						
Reg dev from tot average						
source	ss	df	MS		No. of observation	=20
Model	1.3759e+17	3	4.5862e+16		F(3,14)	=23.32
Residual	3.147e+16	16	1.9670e+15		Prob.>F	=0.0000
Total	1.690e+17	19	8.8978e+15		Adj. R square	=0.7789
Dev from wtaverage	Coeff.	Standard error	t values	P>(t)	95% conf. Interval	
F1	8.33e+07	1.04e+07	7.99	0.000	6.12e+07	1.05e+08
F2	1.90e+07	1.12e+07	1.70	0.109	-4760785	4.28e+07
F3	1.29e+07	1.16e+07	1.11	0.283	-1.17e+07	3.76e+07
constant	2.26e+08	9917149	22.75	0.000	2.05e+08	2.47e+08

Reg popvc f1 f2 f3						
source	ss	df	MS		No. of observation	=20
Model	2.748e+35	3	9.1606e+34		F(3,14)	=69.36
Residual	2.113e+34	16	1.3208e+33		Prob.>F	=0.0000
Total	2.9595e+35	19	1.5576e+34		Adj. R square	=0.9152
PVC	Coeff.	Standard error	t	P>(t)	95% conf. Interval	
F1	-1.20e+17	8.54e+15	-14.06	0.000	-1.38e+17	-1.02e+17
F2	-2.08e+16	9.19e+15	-2.26	0.038	-4.02e+16	-1.28e+15
F3	8.72e+14	9.53e+15	0.09	0.928	-1.93e+16	2.11e+16
constant	3.28e+16	8.13e+15	4.03	0.001	1.55e+16	5.00e+16

Table B2						
Reg dev from tot average1 f1 f2 f3						
source	ss	df	MS		No. of observation	=21
Model	7.8036e+15	3	2.6012e+15		F(3,17)	=36.08
Residual	1.2257e+15	17	7.2103e+13		Prob.>F	=0.0000
Total	9.2093e+15	20	4.5147e+14		Adj. R square	=0..8403
Dev from wtaverage1	Coeff.	Standard error	t values	P>(t)	95% conf. Interval	
F1	-632205.9	2128875	-0.30	0.770	-5123740	3859328
F2	2.62e+07	2551555	10.25	0.000	2.08e+07	3.15e+07
F3	1609669	2731304	0.59	0.563	-4152880	7372218
constant	1.52 e+07	1852958	8.20	0.000	1.13e+07	1.91e+07
Source for Tables B1 and B2=our estimates						

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Creating Gender Equitable Economic Opportunities in Post COVID-19 World

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Abstract

Though every individual is equally exposed to the COVID-19 virus, the impact of COVID-19, economically and socially, has not been gender-neutral. Women economic participation is shaped by their socio-cultural settings. And these socio-cultural settings are, in turn, shaped by the prevalence of sexual division of labour. Feminist scholars have challenged the existence of sexual division of labour; nevertheless, it continues to shape women economic participation.

The COVID-19 has further strengthened the sexual division of labour, where women are burdened more to perform tasks at home. Moreover, given nature and extend in the economic sphere, they face uncertainties in their economic participation. In such a background, the rise of women entrepreneurs has provided women with an opportunity to participate in the economic sphere.

Introduction

Though every individual is equally exposed to the COVID-19 pandemic, the impact of COVID-19, economically and socially, has not been gender-neutral. Their socio-cultural settings shape women's economic participation. Moreover, these socio-cultural settings are, in turn, shaped by the prevalence of sexual division of labour. Feminist scholars have challenged the existence of a sexual division of labour; nevertheless, it shapes women's economic participation. COVID-19 has further strengthened the sexual division of labour, where women are burdened more to perform tasks at home. Moreover, given the nature and extent of the economic sphere, they face uncertainties in their economic participation.

However, despite such a background, the rise of women entrepreneurs has allowed women to participate in the economic sphere. Women entrepreneurship helps women contribute to the family income with flexible timing conditions, which allows them to maintain work and life balance. As per the sixth economic census, around eight million

women entrepreneurs in India. The given study attempts to analyse the impact of the COVID-19 pandemic on women entrepreneurs in Delhi. Various analysts and scholars have referred to the impact of crises as a "she-cession". Nevertheless, there is hope as women entrepreneurs have adopted innovative and adaptive ways to continue their survival.

Research Questions

- In what ways the economic opportunities for women are shaped by their socio-cultural settings?
- Are women entrepreneurs challenging the existing gender economic inequalities?

Research Methodology

The paper is a qualitative study and has adopted the snowball sampling method to identify the sample. For the given study, telephonic structured open-ended interviews of 10 homemakers and 10 women entrepreneurs of Delhi were conducted in September 2021. The methodological approach to understanding the women's socio-cultural setting is symbolic interactionism. However, the author understands the limitation of the sampling method and the potential lack of representation within this approach. Also, the limitation of developing an in-depth understanding via telephonic interviews is well acknowledged.

Women Economic Participation in India

Women constitute around 48 percent of the population in India but contribute only 17 percent of the GDP. The 2020 Global Gender Gap Report by World Economic Forum has ranked India at 112 position and raised concerns about the worsening of economic opportunities for females. Female Labour Force Participation (FLFP) rates had declined from 34.1 percent in 1990-2000 to 27.2 percent in 2011-12 to 23.3 percent in 2017-18. Variations also exist between rural and urban areas. In rural areas, the participation of women decreased while the same has increased in urban areas.

In addition to lower participation in the labour market, women workers are paid 43 percent less than men for performing the same job with the same qualifications. Oxfam Report (2019) reasoned that the patriarchal ideology and socio-cultural traditions restrict women's participation in the economy.[96] Some trends categorises women's involvement in a few activities.

The update by Sher Verick (International Labour Organisation 2014) suggests that the participation of women in the labour force is an outcome of various economic and social

[96] *Divya Dutta (2019), Mind The Gap: The State of Employment in India, Oxfam India, New Delhi. Available at: https://d1ns4ht6ytuzzo.cloudfront.net/oxfamdata/oxfamdatapublic/2019-03/Full%20Report%20-%20Low-Res%20Version%20%28Single%20Pages%29.pdf*

factors that interact at both household and macro levels.[97] In India, discussions on falling trends have focused on four key reasons. First, there is a rise in the educational enrolment of young women. Second, there are lack of employment opportunities. Third, the effect of the household income on participation, and fourth, women's work is either undocumented or measured in official accounts. Finally, women account for their activity status as attending to domestic duties, 35.5 percent in rural areas and 46.1 percent in urban areas in 2011-12 (ILO 2014).

Taking care of domestic duties is considered the primary responsibility of women. This is due to the sexual division of labour that shapes the socio-cultural setting and impacts women economic participation. Thus, the sexual division of labour refers to the specialised gender roles of male breadwinner and female housewife; or, in the terminology of Talcott Parsons (Family, Socialisation and Interaction Process, 1956), the 'instrumental 'and 'expressive 'roles. The sexual division of labour relegates women's primary responsibility to providing goods and services to the family.

According to the functionalist perspective, division of labour by sex has gained specific recognition based on physical strength and the responsibilities of childbearing and rearing. According to Murdock (1949), the universality of marriage and the prevalence of nuclear family has led to the sexual division of labor, which attributes husband and wife into mutual dependencies.

Women consider domestic duties as their primary responsibility. This is evident from the interviews conducted on 20 women homemakers and women entrepreneurs of Delhi, who consistently mentioned the roles they performed at the household level as their primary responsibility. However, it can always be debated whether it is their choice or forced to perform domestic duties. Despite performing domestic duties, women entrepreneurs in Delhi did not consider it as a hindrance but rather a responsibility. The acceptance of household duties as their responsibilities emerges from the values and norms of a patriarchal society, which relegates women to be socialised with the performance of domestic tasks.

The feminist perspectives, however, contradict these perspectives. For example, Nerlove (1974) introduced a new perspective on nursing, where women adopt alternative means for nursing, such as introduction to early feed, which can effectively reduce the constraint of nursing on women's activities.

Gary Becker (1965) proposed a general theory of allocating time to understand the division of work at home. He laid the foundations of the 'new home economics '' including economic analyses of time allocation, marriage, divorce and fertility. While in the traditional labour supply model, all non-market time is spent in leisure; in Becker's

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[97] *The update was prepared by Sher Verick and Ruchika Chaudhary of the ILO Decent Work Team for South Asia. Sher Verick (2014), Women's Labour Force participation in India: Why is it so low?, ILO. Available at: https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/genericdocument/wcms_342357.pdf*

model, all non-market time is spent in household production. Young children are viewed as a time-intensive commodity. Thus, at any point in time, the probability that a woman will participate in the labour force is expected to be inversely related to the number of small children present.

Early studies highlighted that the unequal distribution of household labour reflected how women's greater participation in domestic work relates to the inequality of women's position in society (Oakley 1974). The Industrial Revolution and the rise of capitalism in the early 18th century led to the emergence of nuclear families. There was a shift in the workplaces from homes to factories and men had to migrate out of towns to work in these factories. This d to the disintegration of extended families and the rise of nuclear families. Within these nuclear families, men went out to work in the public sphere and the women stayed at home to take care of children and carry out household work.

With the coming of the 20th century, women's economic participation rates have increased due to a rise in educational qualifications, decreasing birth rates, and increased availability of alternative child care arrangements. Similarly, women in Delhi are in advantageous positions, with greater access to educational and economic opportunities and a social environment. The social climate here means that women in Delhi have higher decision-making power in terms of childbirths and access to alternative childcare arrangements.

However, the increasing participation of women in economic activities has raised the debates on the way gender divisions of labour at the household level are organised. Women's increased involvement in the labour market means they face a heavier burden of combining their paid work with domestic work and childcare. Globally, women perform thrice as much unpaid labour in the home as men. According to the ILO report, "Care work and care jobs for the future of decent work", reported, "women in Asia and Pacific perform 4.1 times more work than men."

Impact of COVID-19 on Women's Economic Participation

Based on existing literature, it is argued that the impacts of crises are never gender-neutral. The COVID-19 crisis has impacted women economically and socially. During the crises, women are often forced out of jobs as men's employment is considered the primary concern. This was evident in the 2008 economic crisis and the recent economic crises caused due to COVID-19. The loss of income has a multiplier effect on women.

For example, girls' access to school is restricted; according to an estimate, an additional 11 million girls may leave school by the end of the COVID-19 crisis. The lack of education and economic insecurity also increases the risk of gender-based violence. In an interview with one of the entrepreneurs, the issue of domestic violence was discussed. It was stated that women are at a higher risk of being harassed and assaulted as men lose their jobs and are constrained at home. Due to increasing frustration and confinement at home, women are exposed to the risk of domestic violence.

The gains in women's economic participation and empowerment since the 1970s were rolled back due to these crises. Women are more exposed to risk due to the nature and extent of their economic participation. According to the ILO, women are involved in temporary employment part-time with no social security. Women are the first ones to be laid off due to the transient nature of their employment. The ILO report has projected that women's employment is 19 percent more at risk than men. Also, women constitute a significant part of informal workers.

Globally, 58 percent of employed women work in the informal sector. According to statistics, informal workers globally lost an average of 60 percent of their income within the first month of the pandemic.

Furthermore, women are overrepresented in the service-based occupations or industries, which are hardest hit by COVID-19, such as beauty salons, food services, hospitality, and retail and entertainment. Domestic workers had been hit hardest. Worldwide, around 80 percent of domestic workers are women, and about 72 percent of domestic workers lost their jobs.[98]

Another report by Mckinsey states, "Women's jobs are 1.8 times more vulnerable to this crisis than men's jobs. Women constitute 39 percent of global employment but account for 54 percent of overall job losses". One principal reason for the regressive effect of the crises on women is that the burden of unpaid care has increased due to the pandemic. In India, women made up 20 percent of the workforce before COVID-19; their share of job losses resulting from the industry mix alone is estimated at 17 percent, but unemployment surveys suggest that they account for 23 percent of overall job losses.

The Mckinsey report identifies that the gendered nature of work across industries is one-fourth of the disproportionate impact on women. Women are concentrated in few sectors, which are often characterised by the pink-collarisation of jobs.[99]

The four sectors that are most affected due to the pandemic and have a majority presence of women are — accommodation and foodservice, retail and wholesale trade, other services, including the arts, recreation and public administration and education and healthcare.

The other reason for the gender gap in vulnerability to job losses is the burden of unpaid care. Mckinsey's *Power of Parity* research highlighted that the share of women in

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[98] *UN Women, COVID-19 and its economic toll on women: The story behind the numbers, 16 September 2020. Available at: https://www.unwomen.org/en/news/stories/2020/9/feature-covid-19-economic-impacts-on-women*

[99] *Bidisha Mondal, Jayati Ghosh, Shiney Chakraorty, Sona Mitra (2018), Women Workers in India, CSE Working Paper 2018-3, Azim Premji University. Available at: https://cse.azimpremjiuniversity.edu.in/wp-content/uploads/2018/03/Mondal_et_al_Women_Workers.pdf*

unpaid-care work is inversely related to female labour force participation rates and chances of participating in professional and technical jobs or leadership positions.

Women's unpaid work increased due to the COVID-19. The majority of the women interviewed have reported an increase in domestic responsibilities due to COVID-19. The responsibilities to take care of the kitchen, home and the children and elderly point to the fact that women remain responsible for the major share of domestic chores and care work.

The measures to contain the pandemic, such as quarantines and closures of schools, further contributed to additional household work and responsibility. In addition, due to the demand for increasing sanitation and lack of essential services, such as water availability, women's unpaid workload has increased. Also, poverty is the major contributor to women's unpaid work.

Ginette Azcona, the lead author of UN Women's latest report, *From Insights to Action*, has stated that due to COVID-19, globally, countries are again reeling under poverty, and the progress achieved in the last 22 years has reduced. According to the report, "the pandemic will push around 47 million women and girls in extreme poverty out of the total 96 million people affected by 2021".

"She-cession" - Women Entrepreneurs and the Pandemic

Women constitute 13.3 percent (8 million) of the total 58.5 million entrepreneurs in India, according to the Sixth Economic Census (2013). Around 77.6 percent of the establishments are engaged in non-agricultural activities, and the manufacturing and retail trade are the dominant sectors. Similar characteristics were noted among women business owners in Delhi, India. Out of the total, the majority were occupied in manufacturing crafts, jewelry making, delivering services such as bakeries, art and craft.

Further, more than one-third of all the establishments are home-based establishments. Similarly, women business owners in Delhi were home-based. Out of the total, eight had set up their establishments within the home. For example, Radhika Gulati constructed a separate kitchen on a different floor within her house to support their domestic needs. Also, few women cited that they were enterprising because of their interests and hobby and not for supplementary income for the household. Meenakshi Ramesh, for instance, started her business because of her passion for clay jewelry *Matiqa*. Anubha Kartik termed herself as *Homepreneur*.

According to the sixth economic census, around 83.19 percent of women-led establishments were without hired workers. Similarly, within Delhi, most women entrepreneurs were operating their businesses single-handedly, and only three women entrepreneurs had hired outside workers for support. For example, Radhika Gulati employed around seven employees for her business.

By setting up their enterprises, women have enhanced their participation in the economic sphere. Earlier, if women were solely taking care of household activities, they were now devoting less time. For example, Aditi Jamwal, owner of *My Kitchen Essence,* stated that she used to devote around six to eight hours to household activities; however, she devoted around two hours after setting up her bakery.

Various scholars and analysts have used the term "she-cession" to refer to the pandemic's gendered economic and social impacts. Globally, the Mckinsey report has reported significant impacts of COVID-19 on female entrepreneurs. First, the shutdowns and quarantine measures impacted the women-owned enterprises as women most likely operated in adversely affected sectors, such as wholesale/retail trade, beauty salons, hospitality, food and beverages, etc. The demand for such services was muted.

Second, female entrepreneurs have fewer capital reserves to survive in these times of crisis. Various literature has suggested that women have less access to financial resources, and they mostly start their businesses by investing their own money. Thus, female entrepreneurs are more likely to confront an operational crisis due to the financial crunch.

The third and most crucial challenge faced by female entrepreneurs during this crisis was maintaining the work-life balance. Schools and alternative care centres closures increased children's responsibility at home. Female entrepreneurs who could continue their operations often faced the challenge of additional workload.

Within India, United Nations Development Programme (UNDP) India's Accelerator Labs and Women's entrepreneurship team researched on challenges thrown up by COVID-19 on women-led start-ups. The research concluded that the COVID-19 crises are compounded by persisting women's social and financial barriers. They used the Mural tool to virtually identify the most 'felt 'issues for women entrepreneurs.[100]

Another report by Bain and Company revealed that 73 percent of women-run enterprises in India were negatively impacted by COVID-19. At the same time, the revenue of almost 20 percent of women entrepreneurs dwindled to zero. Even in cases where businesses did not see an immediate decline in revenue, growth has remained relatively muted. Due to the reprioritisation of expenses, expenditure on products like garments and crafts took a back seat.

Meenakshi Ramesh, the owner of *Matiqa*, cited zero orders due to the impact of COVID-19 as people were spending on essential and health-based needs. And now, with the revival of the economy, people's demand for these products has increased again.

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[100] *MURAL tool is a "space to collaborate visually and problem-solve faster with an easy-to-use digital canvas."*

The findings are supported by various existing literature. Under the UdyamStree campaign, the Centre for Monitoring Indian Economy stated that 57 percent of women entrepreneurs reported a decline in their businesses because of the pandemic. This is because the customer base had diminished, supply chains were disrupted and financing crunch within the family.

The Krea University study identified the impact of COVID-19 on 2,083 women entrepreneurs across Bihar, Chhattisgarh, Madhya Pradesh and Odisha. Out of the total sample studied, 44.6 percent reported that their businesses were partially interrupted, and 36 percent said they had temporarily closed. And, 10.9 percent stated that they had to shut down permanently. Similar findings were reported by Microwave. They highlighted that around 82 percent of women-owned MSMEs reported a decrease in their income, as compared to 72 percent of male-owned enterprises.

The majority of the women entrepreneurs interviewed in Delhi also stated the initial slowdown or temporary shutdown of their businesses due to the pandemic. For example, Meenakshi Ramesh, the owner of *Matiqa*, reported no income for almost two years (the business revived two months back). Vaani Hiremath, a partner in *Vermmillion Communication*, reported a reduction in demand as brands reduced their businesses. Radhika Gulati, partner at *Rosarté Chocolates,* stated that the bakery was non-operational during the lockdown.

Therefore, the businesses faced a halt in cash flow due to lower sales and delayed payments.

Another factor that has impacted the functioning of the women-led businesses is that they are usually one-woman operations. Globally, only one-quarter of female entrepreneurs have employees. Within India, as stated earlier, around 83 percent did not have any hired employees. With this business model, it is not easy to maintain strict boundaries between work and home life. Such a trend was also visible among women entrepreneurs in Delhi. Most of them operated their businesses single-handedly and from home. The pandemic increased pressures at home and challenged female entrepreneurs to maintain a work-life balance.

Few entrepreneurs also noted that the supply chains were disrupted due to shut down and restricted movements and therefore, the operations were halted. Operational challenges also impeded workforce availability and productivity. For instance, Anubha Kartik, the owner of *Splash Art Colour Life,* stated that the deliveries were delayed due to delays in courier services. Similarly, Aditi Jamwal, the owner of *My Kitchen Essence*, stated that one of the major challenges during COVID-19 was supply chain disruptions, as double time was wasted receiving the raw material.

Adapting to the 'New' Normal

Nevertheless, few opportunities are also created under the impact of COVID-19, which helped women entrepreneurs advance their businesses via online activities and other means. Women entrepreneurs reinvented and swiftly adapted to the 'new normal' and witnessed a revival in their businesses. The EdelGive conducted a study on women entrepreneurs across 13 states in India with a sample size of 1,200 women.

The study concluded that 19 percent of the entrepreneurs noted an increase in financial gains. The gains were recorded due to an increase in relevance of specific products and services because of the crisis and realignment of the business model to address immediate needs. For instance, the study recorded the story of Maharashtra-based Savita Dishe, who used to sell brooms at weekly *haats*, quickly adapted WhatsApp as a marketing tool, and shifted to making Mumbai-style *vada pao*. By shifting to the online platform for sourcing, marketing and selling, Dishe earned more than what she did previously.

The COVID-19 pandemic also acted as an eye-opener for the currently employed women under different organisations. A case worth mentioning is of Garima Bansal, who was previously employed. After the pandemic, she considered it an eye-opener and started her own working space. She was working previously as a physiotherapist, and after the pandemic faced the problem of working for longer hours. She started her operation under Lifespring Physiotherapy and Rehabilitation banner and started freelancing. The COVID-19 pandemic provided her with the opportunity and the required push to start her enterprise in July 2022 and her earnings increased consequently. She started taking online sessions and with the freelancing work she was able to maintain work and family life balance.

Up-skilling Themselves

Up-skilling became a vital tool for women to continue their survival and increase their success prospects. It is important to note that women entrepreneurs interviewed for the study were all educated and had completed higher studies. The role of education to boost skills and give avenues to learn more, cannot be negated. Anubha Kartik, the owner of *Splash Art Colour Life*, stated that she used YouTube to up-skill herself and utilised the time to learn new art forms.

Diversifying Services and Products

Radhika Gulati launched a range of packaged cake mixes and baking kits. Radhika also started online workshops to increase her marketing. Also, few entrepreneurs changed their direction or implemented new services; for example, art classes moved to online classes. Garima Bansal also started giving online physiotherapy sessions. In partnership with Suniti Gupta, the owner of Young Plum, Anusha Sharma, stated that despite starting online courses, fewer people were willing to pay and considered art and design courses a luxury. However, now slowly, more people are pursuing these online classes. The flexibility provided by these online classes helped people to adjust their studies as per their demands.

Relevance of specific products or services

At the same time, COVID-19 has provided opportunities for entrepreneurs to innovate and produce relevant products and services for their existing baskets. Remote working models are now accepted by the need to maintain sanitation and prioritize fewer interactions. Women business model of being home-based and one-woman operation made them flexible, more versatile and adaptable.

For example, demand for hygienic food items increased. For instance, Aditi Jamwal, the owner of *My Kitchen Essence*, reported that COVID-19 positively impacted her business as her faith in hygienic products increased. The remote, home-based model reinforced the belief in hygienic and safe food.

Instagram as a New Advertising Tool - Networking and Diversifying Market Base

The social networking platforms like Facebook and WhatsApp have become marketing tools for women entrepreneurs, enabling them to connect with their existing customer base while scaling outreach to geographies beyond their purview. Women entrepreneurs have had no choice but to adopt digital business models in the face of the pandemic. They retain most of their old clients but have also helped them reach markets hitherto untouched. For example, Radhika Gulati expanded her business in Delhi, NCR and pan-India.

India is the second-largest online market in the world. And, women entrepreneurs in Delhi made full use of this potential. Anubha Kartik, for instance, stated that she earlier had an Instagram page for her business, but she actively used it after the COVID-19 pandemic. Through her Instagram page, she gained access to new selling groups.

Support via Digital Financial Inclusion

India started on the journey of digital financial inclusion much before the COVID-19. However, since the onslaught of COVID-19, digital financial inclusion has become a necessity. In the larger picture, digital inclusion means that women who do not have access to markets and are burdened with unpaid labour at home and have limited mobility could now access markets and networks.

Therefore, it is pertinent to bridge the digital divide to ensure women entrepreneurs continue to operate their businesses. All the women entrepreneurs interviewed have stated their transition journey to the digital economy with UPI payment platforms such as PayTM, BHIM, Google Pay and WhatsApp Pay. And those who had adopted it earlier have shifted entirely to these modes.

Therefore, entrepreneurship has become more accessible to women in the ways mentioned above, in which women have adapted to the new normal. These shifts towards virtual or remote interactions can enable women, who often face competing responsibilities that constrain mobility.

Findings and Way Forward

Existing literature has suggested numerous solutions to the current crises. Initiatives of research projects such as Bain's ongoing initiative on women's entrepreneurship in India, in collaboration with Google, the study by Krea University, United Nations Conference on Trade and Development (UNCTAD) and UN Women and many more have provided solutions to the current situations. For instance, UN Women has identified five steps that governments and businesses can take to ease the negative impacts of COVID-19 on women's economic participation.

Similarly, the Mckinsey Global Institute (MGI) released a report on "COVID-19 and Gender Equality: Countering the Regressive Effects" and suggested promoting women's economic participation.[101]

On the basis of existing studies and insights gained from the telephonic interviews, the study suggests three significant initiatives that the governments can adopt to increase women's economic participation and ease pressure on women entrepreneurs.

Firstly, it is essential to address the current social and economic gender gaps. None of the women entrepreneurs have reported any gender-related constraints (except one entrepreneur who stated that the vendors do not take women's orders seriously). It is pertinent from existing literature that the socio-economic conditions shape women's economic capabilities. Since the sample size was limited and worked in a referral manner, the study cannot comprehensively represent the challenges faced by women entrepreneurs.

Therefore, creating equitable social and economic conditions is quintessential for women-led establishments. For instance, access to digital tools is essential to increase women's participation in the post-pandemic world.

Secondly, women-owned businesses should be supported with market linkages programmes. One of the key concerns for women was to access the broader market, and this would ensure adequate demand and supply of their goods, thereby increasing their financial gains and security. The gender-responsive schemes should be adopted and the sectors and industries with a large proportion of women workers should be targeted.

And finally, there should be a reconciliation of paid and unpaid work. The awareness regarding equitable distribution of care and domestic work between men and women must be created via public campaigns. The MGI has determined that the value of care

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[101] *The estimates in the study are built on the McKinsey Global Institute's (MGI's) Power of Parity work since 2015. The research maps 15 gender-equality indicators across four categories: equality in work, essential services and enablers of economic opportunity, legal protection and political voice, and physical security and autonomy. https://www.mckinsey.com/featured-insights/future-of-work/covid-19-and-gender-equality-countering-the-regressive-effects*

work done by women is US$10tn, or 13 percent of the global GDP. Furthermore, 77 percent of mothers have taken on more household work since the pandemic started, according to research by LeanIn.Org and SurveyMonkey.

Therefore, there is an urgent need to bring about a change in societal norms. Based on the interviews, it can be stated that family support can influence characteristics of women-led establishments, such as the location of the businesses, time spent on business activities, and networking. The husbands have played a positive role by sharing domestic responsibilities and giving equal opportunities for women to make decisions at both domestic and professional levels.

The Indian government and other institutes must act proactively. The Mckinsey report has identified three potential scenarios of GDP in 2030, which highlight that the value is at stake from greater gender equality. In the first scenario, the study has predicted that if no action is taken to counter these effects, we estimate that global GDP growth could be US$1tn lower in 2030. In the second scenario, if measures are taken now to advance gender equality, it could add US$13tn to global GDP by 2030.

Lastly, the third is, 'wait to take action' scenarios continuing until the economic impact of COVID-19 subsides, that is, countries would start taking actions only in 2024. Across our six focus countries (including India), the increase ranges from 8 to 16 percent. By taking the actions now, around 230 million new jobs for women globally can be created, compared with the do-nothing scenario in 2030.

The Government of India has focussed on up-skilling programmes for women entrepreneurs and providing them with mentorship. In collaboration with the Indian Institute of Management, Bangalore, the National Commission of Women conducted an online training programme to promote the digital learning of 5,000 aspiring women entrepreneurs. The Niti Aayog had set up the Women Entrepreneurship Platform (WEP), a single-window platform for women entrepreneurs to provide information about government schemes, funding and marketing assistance for their businesses.

The government has also started market linkage support programmes such as 'Hunar Haat' for artisans and self-help group-based women entrepreneurs. UN Women has collaborated with the State Bank of India (SBI) and launched a Women Livelihood Bond scheme to provide financial support. The SBI raises low-cost funding and promotes the private sector to invest in women-led enterprises. Due to the pandemic, Amazon has made efforts to launch women-owned businesses exclusively in association with UN Women.

The study identifies that the socio-cultural settings shape women and their economic opportunities. The literature review states that women are doubly burdened with performing tasks in the domestic (private) and public spheres. However, the domestic duties restrict their ability to participate in economic activities, and women's time

devoted to household activities is much more than men's. This unequal sexual division of labour, guided by the biological division of labour, is challenged by feminist scholars.

The study evaluated the impact of COVID-19 on tasks performed by women at the domestic level and workplace. The impacts have been widespread, where women are again burdened with performing more tasks at home. Additionally, their jobs are vulnerable, as explained by the ILO study. This research aims to understand these impacts on homemakers and entrepreneurs in Delhi.

These findings can inform relevant policy and industry decisions regarding relief and recovery programmes to support these businesses. These insights on women-led enterprises and their challenges are crucial to understanding their ability and potential, which are sometimes constrained. However, the study is informative as it has highlighted how women-led businesses gained from the COVID-19 impact and adopted to the 'new' normal. These examples could act as role models and encourage more women to enhance their economic opportunities. Moreover, these examples could be used to guide the government policies and the international and national organisations working for the cause of gender equality.

2020 marked 25 years of adopting the Beijing Declaration and Platform for Action, so it is the right time to walk the talk. India has progressed in a few aspects of gender equality, such as maternal mortality and political representation. However, the level of female labour force participation has declined. Women-led establishments or enterprises allow us to increase women's economic participation. And increasing economic opportunities for women is the key to achieving the vision outlined in the UN Sustainable Development Goals (UN SDGs).

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10
Building an Infrastructure for a Competitive Job Market

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Abstract

To create more opportunities, we need to be competitive. To be competitive, we need to embrace change. To embrace change, we need to survive a crisis. History is proof of that. After every major crisis, mankind has come back stronger. The COVID-19 pandemic has been a unique catastrophe in recent times. Millions of people have lost their lives and the end is still not in sight. While the world battles this pandemic, financial inequality is one glaring aspect of the crisis. The growing uncertainty affected the job market significantly.

The physical impact of COVID-19 was universal, but the economic impact of the virus has been highly skewed. We have seen the widening divide between the rich and the poor.

Many industries have been severely affected. The world will be very different in the post-COVID era, with businesses changing significantly in operating. Several businesses have found ways to cut costs and many may have changed forever. With automation, remote working and a shift in focus towards digital working, there is a considerable risk of low-skilled labour becoming outdated.

Using the internet and understanding digital platforms, which were considered additional skills, may become mandatory. This causes unemployment and results in a large section of the people becoming unemployable, and it could drive society towards extreme inequality, which is dangerous.

Governments are currently concentrating on fighting the virus, but very few are looking at the bigger picture. In the long run, people have to survive and also be employed. With a changing global job market, there is an urgent need for upskilling in addition to job retention schemes. There is an urgent need for digital skills for the masses to make them competitive and even access job portals and other crucial information.

To enhance income opportunities and develop the economy, the labour force needs to be competitive. Knowledge of basic digital products will become as necessary as being literate soon. This will change the job market, making jobs more accessible and flexible. With more competition, the bar will be raised for the bare minimum requirement for employability. Governments must identify the critical skills for the masses and build an infrastructure to ramp up the basic skill levels of the population before it is too late. The economies that come out more successful after this crisis will be the countries that take a step toward upskilling the masses.

Research Questions: The paper aims to answer the following questions. This is a continuation of my previous publication, 'The long-term impact of COVID-19 to inequality'. With the risk of people becoming unemployable, the below questions are critical.

1. What are the factors that risk making people unemployable?
2. What are the essential skills that will help them to stay employable?
3. How do governments plan large-scale upskilling of the at-risk labour population?

Introduction

The COVID-19 pandemic has been a unique catastrophe in recent times. It has impacted so many different aspects of human life. Experts are still evaluating the damage with the end nowhere in sight and they have been forced to deal with newer variants of the virus. While the physical impact of the pandemic has been the same universally, the economic impact has been skewed. Different people have coped differently and several people have faced wage erosion and even unemployment.

While the world is making a significant change in how businesses operate, the landscape has changed for many professions. In addition to losing jobs, there is a risk of skill erosion and becoming outdated. Many people face the risk of being unemployable soon. While governments are spending differently to help people overcome this pandemic, very little is being spoken about upskilled people. Governments must start building an infrastructure to help people stay competitive in the post-COVID-19 world. This needs to be done immediately or run the risk of a large part of the population becoming unproductive.

Continuing on my earlier publication titled, 'The Long-Term Impact of COVID-19 to Inequality,'[102] this paper identifies ways in which governments can use the current situation as an opportunity to upskill people using a two-pronged approach to build a resilient workforce. Job losses are temporary, and becoming outdated is permanent and often irreversible. We cannot let this happen to a large part of the global workforce.

[102] *https://www.ijser.org/onlineResearchPaperViewer.aspx?The-Long-Term-Impact-of-Covid-19-to-Inequality.pdf*

Unemployment and COVID 19

The ILO reports[103] that the employment losses during the coronavirus pandemic were also due to rising inactivity rather than just job cuts. Many businesses were poorly hurt and a few had to shut down, but people being confined to their homes was another factor for job losses. People could not travel to their work locations and inactivity accounted for two-thirds of the total employment losses as per the report.[104]

The majority of the countries in the world experienced workplace closures. One of the reactions to this has been a change in the norm for businesses. The recovery from this period has been skewed. A few businesses have seen positive job growth (information technology, communication, banking and insurance), while hard-hit sectors (travel, aviation and hospitality) have seen massive losses. The ILO states that despite income support, low-skilled and low-paid professions have faced job destruction, which has caused an uneven recovery[105]. Policy responses have mostly been reacting to the damage. This has included income support, job-retention schemes and public health measures, including vaccinations.

Universal support programmes were essential when the pandemic struck but as we recover from the crisis, we need to identify households with a risk of losing employability. Failure to do so will result in crippling these households financially and professionally. The former represents temporary job losses, but the latter is dangerous.

If people cannot get employment, they cannot earn, which takes away their ability to support themselves. With a sizable population in most economies belonging to this category, it is vital to building a competitive workforce. These are low-income and low-skilled people who need immediate attention and help avoid extreme inequality.

Changing Business Landscape

Several businesses have embraced the change. With more than a year to recover, several business processes have adapted to working remotely. The technology-based industries have been huge beneficiaries of this change, cutting costs and ensuring continued operations. The manufacturing industry has suffered a lot from mandates to close workplaces and the need to restrict people's exposure. At times, they have been forced to work with reduced capacity. They have also incurred additional costs for ensuring social distancing norms and health mandates. The pandemic has also crippled several other tourism, hospitality, and aviation businesses. Recovery is not even, but every business will recover differently.

Across all businesses, there is an effort to be more digital. For example, teaching, which was unthinkable without a classroom, has now embraced digital technology. Schools have functioned entirely online for more than a year in many places. This has also

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[103] *ILO Monitor: COVID-19 and the world of work. Eighth edition*
[104] *ILO Monitor: Covid-19 and the world of work. Seventh Edition*
[105] *Ibid*

included co-curricular activities. Digital learning has evolved during this crisis. Several industries are thinking about permanent remote working for specific roles. Not everything is gloomy. Certain skills have increased demand, which has caused wages to increase manifold. People who were not employed due to their reluctance to move have been empowered in this period. When people can work remotely, it does not matter where they stay. Skills like videoconferencing, teleconferencing and preparing presentations have become essential in today's world.

Some professions will go back to how it was, and some will change forever. One thing is for sure. The business landscape will never be what it was before the pandemic. People have found ways to perform work never expected to be done remotely. Necessity is the mother of invention. With the invention, life as we know it changes.

Embracing digital technology has now become a requirement for people in any profession. While it may not be said aloud, this knowledge will become as rudimentary as the ability to read and write shortly. Millions of people continue to live their lives without access to the internet, and this may become a severe disadvantage soon. Limiting human interaction has forced several policymakers to use audio, visual, and digital media for information exchange during the pandemic. With people exposed and growing accustomed to this scenario, there is a lot of potential in exploring this option long-term. When the pandemic began, there was a sharp reduction in jobs across all sectors and skill levels. As the recovery began, we saw the demand increase for high-skilled labour. People are talking more about automation than they were before. In my paper on the long-term impact of COVID-19 on economic inequality, I stated how low-skilled and low-income groups were suffering more than the high-income and high-skilled labour. There is an imminent threat of widening the divide between the rich and poor.[106]

Disproportionate Impact

The impact of unemployment has been different based on income-levels[107], skill levels and even gender.[108] The high-income and high-skilled part of the workforce in a few sectors have found ways to improve their financial health. Most people have been unable to spend on luxuries during this period, and this money has boosted their savings. Savings is the safety net for salaried professionals. Being unemployed during this period without a safety net can be detrimental to people. They have to deal with inflation of food items[109], rising medical expenses and difficulty in seeking employment. Whether or not people have a job, life continues to move on. Life is impossible without basic expenses.

People working in manual labour and low-skill jobs also risk their skills deteriorating, and this requires a period of adjustments when work resumes. Working at home and

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[106] *COVID-19 leaves a legacy of rising poverty and widening inequality (worldbank.org)*
[107] *Supra Note 2*
[108] *Gender equality in the workplace remains elusive - ILOSTAT*
[109] *Food Inflation and Food and Nutrition Security Situation in Developing Asia During the COVID-19 Pandemic | Asian Development Bank (adb.org)*

other restrictions related to travel have hurt people in unintended ways. Working professionals have had to juggle childcare and work, which is more pronounced for people who depend on childcare facilities.

During the pandemic, childcare for working professionals rests entirely on the individuals due to social distancing norms forcing schools to go digital and day-care centres to shut down. Children require constant attention and being cooped up riles up even adults. Further, childcare and professions both require full and undivided attention as both have high levels of responsibility. The increase in responsibility shoots up stress levels and causes breakdowns[110] for several people.

According to several surveys, in addition to affecting low-income and low-skilled workers, women have been affected disproportionately.[111] Balancing work and family obligations during the pandemic is especially hard on primary caregivers. The primary caregivers in many families are women and the burden on them has been immense. It is not just about working women. Homemakers have also been overloaded as working from home is a usual business for them, and they have not changed their work-life.[112]

The divergence in impact is manifold in this matter. People from different income classes[113] have faced unexpected job losses. Very few have had adequate savings to meet the current expenses. Many people have been forced to dip into their retirement savings. When the present is uncertain, most people cannot afford the luxury of thinking about the future. While some people have managed debt and other commitments well, many have lost their savings or sunk into debt. This has raised the critical question of growing economic inequality. This needs to be addressed systemically and this paper proposes an approach to do that.

Growing Inequality

The pandemic was accompanied by an increase in inflation[114], which was an unintended consequence. The people who were hurt the most by this were those who had to face wage erosion. The necessities and healthcare are unavoidable expenses and it becomes mandatory for all. While expenses have increased across the spectrum, the savings pattern divergence. When we look deeper at spending patterns and their impact on savings,[115] we see that the inequality divide has widened. Initially, people began to spend only on essentials.

Spending on luxury had come down significantly, but this is not seen across the spectrum. There were job losses across different income levels, to begin with, but the

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110 *Is Work From Home Causing Breakdown For Employees- BW Businessworld*
111 Supr*a Note 2*
112 *Caring for Caregivers - UNICEF*
113 *Inequality and COVID-19 – IMF F&D*
114 *Supra Note 8*
115 *Economic Fallout From COVID-19 Continues To Hit Lower-Income Americans the Hardest | Pew Research Center*

impact was more in lower-income level jobs as they had lesser savings. A few people remained insulated from the damage and continued to have jobs, and they have also begun to save more from working remotely.

On the other extreme, people were dipping into their retirement savings to survive. A few governments even allowed such withdrawals with tax exemption, but this could have a long-term adverse impact on their retirement plans. In the aftermath of the crisis, the global billionaire's wealth increased by US$ 3.9tn while the global workers' combined wealth fell by US$3.7tn.[116]

There is nothing wrong with the wealth of billionaires rising, but the poor must be given a chance to afford their lives. One section of the population cannot grow richer while the other section starves to death. That is the first step in battling inequality, which is in danger of turning extreme in many situations[117].

Inclusive and Resilient Economies

An economy being healthy is not just dependent on the wealthiest person. A resilient economy is one in which even the poorest can afford the necessities with minimal government support.[118] Failure to build an infrastructure to nurture a competitive workforce will result in the government spending more on necessary but unproductive expenses. There is a clear difference between supporting people during stress and supporting people during normal times. During a scenario like the current pandemic, governments have been providing support in free or subsidised rations and cash. This is essential, but governments can not do this forever. In the long-term, public spending should focus on development. The key to that is ensuring that people can earn their living. When people are given the skills to support themselves, they automatically become potential participants in economic growth. Creating that opportunity is the only way to be inclusive in the long run.

Creating opportunity is a long-term solution to ensure economic development and public welfare. People need to be made competitive to create opportunities. Being competitive will foster welfare and drive growth, and it will also empower them to be independent. While competition laws are mainly targeted toward businesses, the time is ripe for governments to build a competitive workforce. Focusing on digital transitions and automation needs to be prioritised or we risk a significant part of the workforce becoming obsolete.

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[116] *Billionaires made $3.9 trillion during the pandemic - enough to pay for everyone's vaccine | Business Insider India*

[117] *COVID-19 leaves a legacy of rising poverty and widening inequality (worldbank.org)*

[118] *What makes one economy more resilient than another? (theconversation.com)*

Policy Responses

Most governments have tried to provide an environment for investment to counter the effects of the pandemic.[119] For the economy to face the shock, governments have had to take the necessary steps to minimise job losses.[120] Many central banks have cut lending rates[121] to boost business. Measures to support the people include income support, free rations, job retention strategies, and mass vaccination.

One key area of focus for many policymakers must ensure no long-term effects on the low-paid and low-skilled workers. There is a risk of such workers becoming obsolete if policymakers do not take the necessary steps. Many professions where automation is a key focus will need low-skilled labour to pick up additional skills to stay employable. The minimum requirements for many such jobs will increase soon.

Basic digital skills need to be a part of education. In addition to teaching this at schools, existing labour needs to be reskilled. To create a competitive job market, the government needs to keep a closer eye on the unemployment pool. Gap in skills must be identified and filled by skilled people. New skill requirements must be identified reactively in the present and proactively soon. This can create an infrastructure that can prepare the workforce for newer challenges.

To begin with, governments can incentivise people who take part in the effort to skill themselves. The failure to implement such a scheme could be catastrophic. People risk becoming irrelevant in the job market and face the prospect of abject poverty. People need awareness about this situation, which will create the intent for people to consider improving their skills. This is a combined effort. While governments can lend a hand, the public must understand why this is being done and reach out. Together, society as a whole can become more productive.

Technology, Reskilling and Adapting

The dependence on technology in the post-Covid era is going to be enormous. This was already the case, but the pandemic has accelerated the efforts involved in adopting technology, reimagining strategies and revising business models. Reskilling was seen as a priority even before the pandemic, and now it is necessary.

In addition to automation, working remotely provides a new dimension to opportunities for many people who have been away from the active workforce. Location is no longer a constraint in a few professions. For instance, people who choose to stay in rural areas can work remotely for urban employers. Working remotely will empower homemakers to take up jobs, which they had renounced for family commitments. This could prove to

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[119] *Policy Responses to COVID19 (imf.org)*
[120] *Job retention schemes during the COVID-19 lockdown and beyond (oecd.org)*
[121] *A global database on central banks' monetary responses to Covid-19 (bis.org)*

be a cost-saving option. In locking us down, the pandemic has allowed us to break constraints that have held us back.

LinkedIn's 2020 workplace report[122] provides a relevant insight regarding reskilling efforts in the industry. There is almost a unanimous belief that if skill gaps are not closed soon, there could be an erosion of growth. Almost 50 percent of learning and development experts recommended reskilling and upskilling efforts. Upskilling and reskilling have added benefits as business knowledge is carried forward. While the report is focussed on formal sectors and their requirements, the same applies to informal sectors. Every job requires the pandemic has now impacted a specific set of skills and all essential requirements.

From my own experience, I work in an industry where we have spent more than 15 months working remotely. We have found ways to manage operating with the same or higher efficiency during this period despite losing our workplace. During this period, we have found ways to work better. While it has been a difficult period where we temporarily lost the boundary between life and work, we have picked up new skills and improved the process. It has made us think of ways to improve existing processes and identify opportunities for increasing efficiency. This is a continuous process, but the results have been an eye-opener.

Bringing skills to a large section of the workforce is not an easy job, and this takes a lot of effort and planning. Through this paper, I propose a two-pronged approach to improve skills.

A Two-pronged Approach to Skills Development

While several large companies are looking for ways to work remotely, we do not see the same pace in the informal sectors. There is a lot of opportunity to identify ways to improve the accessibility of low-skill and low-income jobs. These are jobs that people cannot afford to lose, and these are people who do not have a safety net.

Instead of dealing with this problem reactively, public spending needs to prepare people to handle crises. As harsh as it seems, the government must prioritise development over appeasement. Job loss is the symptom, and the real problem that must be addressed is the lack of adequate skills.

Certain jobs cannot be done remotely. This constitutes a significant chunk of labour-intensive jobs. One of the major problems during the COVID-19 pandemic was the immobilisation of the workforce. This consisted of people who had to travel for work and to find work. The lockdown took away their jobs and affected their ability to find work. This must serve as a learning for governments. With restrictions on travel, people cannot travel with just the possibility of finding work. Providing the facility to search

[122] https://learning.linkedin.com/content/dam/me/learning/resources/pdfs/LinkedIn-Learning-2020-Workplace-Learning-Report.pdf

for jobs from anywhere will empower people. Many of us have found immense benefits by using online job boards. It saves time and effort. The same must be extended to other professions.

Many governments are investing in online job boards. This makes the process transparent and can aid millions. The investment will be small compared to the economic benefits this can provide in the long run. Inclusion can become a reality. Applying for jobs becomes a more straightforward process with a clear employment record. This is not complicated, but it involves a lot of effort in data collection and management.

A two-pronged approach should be used to increase the skill levels of the masses. The first is to bring the people the skills by more traditional methods, and the second is to bring the skills to people by leveraging technology. Let us look at each of these approaches in detail.

Bringing People to Skills

The most common approach will be to set up classroom sessions. With the pandemic changing our lives forever, we have adapted as a society to the new way of life. Many governments are now reopening schools. Bringing skills necessary for remote working should be made a part of the curriculum.

Knowledge of computers and skills like teleconferencing, familiarity with online interfaces and so on will become as necessary as language and math for future generations. Gradually, schools can supplement their curriculum with these practices. This will be easier to implement with the younger generations becoming more tech-savvy. Emails are the newsletters and the curriculum used in schools and colleges should be more current.

In addition to training students on these skills, existing employees of organisations must be trained too. Many organisations have training and development teams, which perform upskilling and reskilling as a dedicated activity. This can be extended to include the new essential skills. A defined setup can also identify skills that the existing talent pool lacks. By bridging the skill gap, we can improve the workforce's overall performance.

The cost involved will be minimal compared to the benefits as the trained people will also carry business experience, which is not something that can be trained. Organisations that do not have such a setup must be tasked to create one. Considering that this will impact many people, the government can incentivise such initiatives or create legal mandates.

Bringing the Skills to People

We have a lot of educational institutes for working professionals, and we have many online platforms that provide courses for this demographic. Most of these courses are for highly skilled people, and there are very few opportunities for low-income workers

to skill themselves. This is why the government must step in. The first step to implementing something like this is providing access to technology and skilling people enough to help them access the online job boards. For most people, classroom sessions and training are not possible. Instead, governments must think innovatively and start reaching out to people via familiar mediums.

In the last few decades, television[123] has become a very common aspect of our lives, and it is one of the most powerful mediums. The government must leverage this by creating programmes on digitisation, job boards, and other essential skills for low-skill labour. With proper propaganda, this can grow into something powerful. With enough viewership, this can also create an opportunity for advertising revenue for the government. This should not be a priority, but it is possible later. With mobile phone penetration and access to data,[124] YouTube and WhatsApp have become powerful mediums for information exchange.[125] There is a perfect chance of reaching people[126] with interesting videos at the most basic levels.

Many governments advertise with celebrities to bring more awareness to sensitive issues, which can be used as an opportunity. The advantage of video streaming is that people can see it at their comfort and it provides a means to reach people at a highly personal level. The ideas may sound complicated, but implementing them will be easy. YouTube is so easy that even kids today can start their channels. With careful planning and little investment, governments can leverage such platforms to skill a large segment of the population. Preparing such videos can also be done in collaboration with NGOs.

People are more interested in entertainment when accessing video streaming platforms and television. However, with planning, the content can be made interesting. This will provide significant scope for innovation and creativity, raise the bar for society as a whole and increase the skill level of the country.

The Way Forward

Setting up a registry for skills is being tried all over the world. Many successful companies have a robust skills registry, which gives them a clear view of the capability within the organisation at any given time. Such a setup needs to be implemented by the government for the public. This will not only identify the workforce's potential but will also identify skills that we lack as a society.

Keeping this information updated at a healthy frequency, we can address skill gaps before they become a severe issue. This can help form a highly competitive pipeline for the domestic workforce and be competitive globally in a few iterations. In countries

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[123] COVID-19: Education for Class 10, 12 moves to TV mode in Tamil Nadu (careers360.com)
[124] 60% of the World's Population Is Now Online — DataReportal – Global Digital Insights
[125] *Use of "Social Media"—an Option for Spreading Awareness*
[126] *Effective use of social media platforms for promotion of mental health awareness (nih.gov)*

where labour is a key export, the skills needed in the target markets can be included in the registry to ensure better fitment.

Several countries have public employment services or employment agencies, which assist public employment services by providing a labour exchange. These departments have the infrastructure that can be leveraged to act as a skills registry. Mandating compulsory registration with these services makes it possible to create a robust registry of skills for a significant part of the population.

Making this a digital system will enable a proper mapping of skills. Suppose this is done in tandem with employers providing the skills needed for their existing and new job roles. In that case, we can establish a system that can intelligently connect job seekers and employers. In the long run, this can be used to identify gaps in skill, reskilling opportunities and skills that are not of value. This can become a powerful tool that can empower both governments and the people and mark the beginning of a significant step in helping any country do the right thing for its citizens.

Conclusion

We have had a crisis that has harmed us all. However, the problem it has brought is not new. This was a problem that was not discussed widely until now. Technology is growing faster than people are skilling themselves, and people are getting outdated and risk being unemployable. If governments step in to fix this now, we can build an environment to create more job opportunities. That will be the only way to improve public welfare, reduce inequality and make people more independent. This is a way toward sustained development. The success of this programme depends on proper implementation by the government and compliance by the public.

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11
Epilogue

The discussions at the CUTS 7th Biennial Competition, Regulation and Development Conference on "Building Blocks for an Inclusive and Resilient Economy", threw some critical action points to logical conclusion and their translation into consequences. This chapter seeks to identify the following research and advocacy agendas that could be pursued as a path forward.

It has been highlighted that there is an urgent need to integrate effective multilateralism into the world system to address global commons issues. In response to looming global concerns, there should be increased advocacy for encouraging international collaboration. Further research on the effect of private trade barriers and the private sector's potential to restrict trade flows can also be considered. The overlapping of trade and competition law in the interaction of public procurement policies with trade restrictions and local content requirements could be explored as one of the research subjects.

The market is changing, and market power is becoming more concentrated. It has been suggested that competition authorities must adopt a proactive approach and extensively engage with various stakeholders. Similarly, governments should formulate a regulatory framework that is more inclusive. The competition policy should also complement the fiscal and monetary policies and align with the government's goals. One of the potential next steps is to conduct research on the role of digital markets in redefining the competition policy landscape. This can be viewed in light of the recent European Union law on the Digital Market Act. Study the impact of these regulations on competition, innovation, and investment if such laws are also enacted in other countries. Further, inequity in vaccine access is jeopardising economic recovery in poorer countries.

The international community must prioritise the development of effective disbursement channels and other infrastructure requirements for the equitable distribution of vaccines and other public health resources. Though more research may be needed before recommending reforms in the intellectual property (I.P.) framework, the trilateral partnership of the World Health Organisation, World Trade Organisation and World Intellectual Property Organisation must be very proactive to reconcile one another to achieve equitable access to vaccines and covid-19 healthcare. One of the key research areas that emerged from this discussion was the need for a Global Pandemic Treaty to prevent disruptions to global value chains and supply chains.

Furthermore, e-commerce has proven to be a successful venture in the post-pandemic era, creating many economic and social opportunities. Digitisation needs to be promoted across all sectors. It is also important to note that developed and developing countries face different challenges in the e-commerce space, depending on their stage of development. However, for smoother international trade, research and advocacy are needed to facilitate cross-border data flow and e-commerce. It's also crucial to look into the government's potential role in promoting e-commerce while balancing their interests with offline retailers'.

The changing market dynamics also necessitate a significant upscaling of skills. The pandemic-related job losses, which accelerated economic inequality, are a wake-up call for global action. The need for additional research into the pandemic's impact on the job markets for youth was also a highlight. Another important topic for future research is how competition policy and law can be shaped to apply in a monopsony, given that concentrated economies have a large number of labour supplies and a small number of employers.

It was concluded that the multilateral trade, competition, and consumer protection frameworks, which had been fought for decades, needed to be re-energised. It was realised that international diplomacy requires a multi-stakeholder approach that includes civil society, academia, and businesses. International cooperation in national capacity building is necessary for building an inclusive and resilient world economy.

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