FOREWORD

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The COVID-19 Pandemic has forced us to challenge our world views in different forms, leading to the creation of new research domains. Within different disciplines, there was an eruption of new forms of literature, literature focused on how to deal with the worst crisis most of us are living through. While this has been a time of distress for all of us, within this distress, there existed opportunities for us to review our laws, and our societies, and possibly make them more resilient.

The GNLU Journal on Law & Economics wanted to give reflection to newer ideas emerging from the situation of the world today. In furtherance of this, the Journal organised a Symposium asking scholars worldwide to contribute their research on and about the COVID-19 Pandemic. This issue of the GNLU Journal on Law and Economics, comprising of papers from the Symposium, unpacks the pertinent questions and contradictions arising from the pandemic. It hopes to inform action-oriented policy measures to alleviate the uncertainty caused due to the spread of the coronavirus. This issue promises to add to the research through contributions by scholars from around the world, examining the connections between Law and Economics in the 'New Normal' of the pandemic age.

It is true that the 'New Normal' has forced us to regulate differently, and change our policy priorities. Our selected authors have examined these changes from the perspective of two different actors, with varied goals. On one hand, we have businesses and businesspersons who navigate through the Pandemic while making their businesses function profitably in unprofitable conditions for most. On the other hand, we have the government and public policy institutions, plagued by a crisis they have no training in, and scrambling to meet the very diverse needs of their citizenry. The challenges faced by both of these actors are deliberated upon by our authors who seek to answer crucial concerns faced by both of them.

I. The Business Dilemmas

The COVID-19 Pandemic has upturned the business world, presenting new challenges for businesspersons. Dealing with a long-term situation of uncertainty, the business world has seen a slowdown brought on by more cautious spending by consumers, workers being pushed out

of work, and a lack of finances to make up for losses. Our authors have sought to address some business concerns which have arose in the COVID-19 Pandemic.

Contracts are considered as the foundation of modern commerce. Lucas Fulanete G. Bento and Matheus Scussel in their paper titled "**Is COVID-19 an excuse for non-performance and non-enforceability of Business Contracts? Answers from Economic Analysis with a Brazilian Perspective"** highlight improper utilization of COVID-19 to avoid performance of contracts and how law can influence the behaviour of parties to avoid breach of contracts by any one of them. The authors use the Coase theorem to explain how because of inefficient court and dispute settlement mechanism the parties can allocate burdens among themselves if the transaction costs are lower.

The pandemic has rendered many contracts and obligations unfulfilled, leading to a rise in disputes. In her essay titled "**International Commercial Arbitration in the Aftermath of the Pandemic: A Law and Economics Account"** Carolina Arlota through an economic analysis of law discusses the impact of the pandemic on the field of international commercial arbitration and how it has changed the incentives for parties in dispute. She also sheds light on the impact of pandemic on pre-existing contracts without international arbitration clauses and the incentives of including such clauses. According to the author pandemic has highlighted the importance of having international commercial arbitration as a popular mechanism for resolving international legal disputes in contrast to the usual court systems across the globe.

Keeping in mind the current deplorable state of Indian economy, Aaryan Mohan in his essay titled **Insolvency and Bankruptcy Code: Financial Death, and Possible Resuscitation of Pandemic Affected Workmen** discusses the role of government to soften the Insolvency and Bankruptcy Code to take into account the condition of the micro, small and medium enterprises and extend support. He discusses the impact of the amendment made to the code during pandemic like the suspension of Section 7,9 and 10 of the code by introducing Section 10-A, on the workmen of a business undergoing insolvency resolution during the pandemic and the shortcomings of pre-existing provisions. The paper also discusses the importance of having an appeal mechanism in place for claims from special class like workmen and the need for new method of insolvency resolution in the labour-intensive sector of real estate taking into account interest of special classes of creditors.

Protecting employees and workmen has assumed heightened importance in the pandemic. Building on the aspects of the previous article, in a different context, Pranay Jalan in **"The Incidence of Safety Regulation on COVID-19 Compensation Claims"**, attempts to offer a fresh perspective to the aspect of employee compensation claims in the times of the coronavirus and ensuing restrictions. The Essay examines the Employees' Compensation Act, 1923 and the implicit causal connection between injury and workplace. A vital study is undertaken by questioning whether an employee can bring forth a claim for compensation arising out of the coronavirus disease. The author puts forward a strong economic reasoning – resting on the foundation of Prof. Steven Shavell's liability model – to suggest a unique 'joint-liability' model combining safety regulations and a liability rule. The author concludes by commenting that an efficient permanent remedy regarding employee compensation is the need of the hour.

II. The State Dilemmas

The COVID-19 Pandemic also created a new policy challenge for governments to address and work with. The health crisis, and the accompanying economic crisis forced governments to evaluate the cracks in their policy-making. In this section of papers, our authors present the routes taken by different governments in managing these crises together, and question their approaches.

In the aftermath of the pandemic, countries have been scouting for availability of finance to alleviate the economic downturn. **"Financing the Corona Crisis in Europe"** by the renowned Prof. (Dr.) Hans-Bernd Schäfer investigates the economic response by European nations in wake of the coronavirus pandemic. In his inimitable style, Prof. Schäfer dissects the recent line of credit provided by the European Stability Mechanism (ESM), empirically proving that in only a handful of nations such a line of credit would be cheaper that national government bonds. Even in countries having such a purported advantage of inexpensive credit, the financial benefits accrued would be negligible. The far-reaching consequences of using the European Stability Mechanism loan facility on the general composition of the European Monetary System are scrutinised, considering the increased spending undertaken by EU member states. A comparison between 'Eurobonds', ESM financing and proposed 'Corona bonds' is undertaken to determine which would stand the test of constitutionality, commenting on their realistic and financial implications. A noteworthy aspect which this Essay recognises is the

existence of moral hazard in any such financial shielding against crises. Hence, Prof. Schäfer concludes by arguing for a fine balance between aggressive risk diversification, and the principle of liability.

Siddhant Dubey in his paper titled "**Pandemic And the Anecdote of India's Welfare State"** discusses as a repercussion of the pandemic the shortcomings India will encounter on account of not having a robust welfare structure in place. The author mentions instances like death of hundreds of migrant workers, and coronavirus patients and doctors due to the unsustainable and inefficient health care system that reflected the lamentable condition of India's social security system and how it has failed its citizens. He also discusses the impact of pandemic in changing the course of a welfare state and the role of media in shaping the welfare structure of a country.

In a welfare state such as India, the judiciary acts as a critical component of our democracy. In this paper titled **Reshaping and Re-Structuring The Judiciary- Law And Economic Analysis,** Krishna Agarwal discusses the need to restructure the judiciary, by analysing the state of Indian judiciary in pre- and post-COVID times. The author uses various microeconomics tools and public choice theory to comprehend the impact and working of the judiciary based on facts, figures and graphs. She highlights the impact of COVID on the judiciary and the government's response in form of government rules and notifications, taking a cue from them she advances probable solutions to restructure and reshape the judiciary efficiently post **COVID-19.**

In **"Legal Issues of the Coronavirus Pandemic: A Law-and-Economics Perspective"**, noted scholar Prof. (Dr.) Thomas S. Ulen critically analyses the entire episode of the coronavirus pandemic, from the angle of law and economics. The Essay embarks with a poignant statistical account of the gravity of the current situation brought about by the pandemic and subsequent restrictions. The immense economic costs of the pandemic are highlighted through macroeconomic indicators such as the decline in GDP and high unemployment levels. Further, the Essay deeply reviews policy responses to the pandemic, and the aspect of usage of the emergency powers of the government, along with related reactions by the commercial sector. Criticising the US Federal Government's handling of the pandemic, Prof. Ulen underlines the importance of a calibrated approach, where benefits of regulation

outweigh the costs. Courts of law have been closed since the advent of the pandemic and deciding on their reopening involves striking a fine balance between assuring availability of legal remedies, and public safety. The US Presidential election presented a unique scenario with mail-in votes, where the Essay underlines how the pandemic, and absentee ballots, have adversely affected primary voting. In his concluding remarks, Prof. Ulen stresses on the importance of basing policy responses on the foundation of cost-benefit analysis to find common ground.

Following Prof. Ulen's deep and introspective article on the American perspective of the pandemic, **"The 'Law and Economics' of Governments' Response to Pandemics"**, by Indervir Singh and V. Santhakumar, presents a timely analysis of the efficacy of the Indian government's response to the coronavirus pandemic through the lens of law and economics. The authors discuss the increased need of government intervention in difficult times, explaining that certain rules and restrictions become essential to avoid the situation of market failure. It is also important to note that governments of distinct nations may differ in their responses. To highlight this point, a comparison is drawn between the nature of restrictions imposed in Sweden, and those imposed in India. The cost and benefit of the stringent lockdown enforced in India is also brought out, with more beneficial alternatives proposed by the authors. The Essay concludes by recognising the need to fine-tune the responses of the government according to contextual, social, economic, and political factors.

In the final article placing emphasis on ensuring welfare, **"An Institutional Economics Analysis of Wearing a Mask: Internalising the Externality"**, authors Varada Shyama Bhat N and Mahek Khandelwal delve into the pertinent question of the negative social costs arising by not following safety protocols to curb the spread of the pandemic. Likening the pandemic to a market failure with negative externalities, they argue that information asymmetry worsens in such scenarios, with individuals intentionally flouting safety norms for want of better scientific awareness. An intricate assessment regarding the difference between private costs, private benefits and social costs is presented through the concept of bounded rationality. Breaking away from suggesting the imposition of Pigouvian taxes – the usual approach of tackling such negative externalities – the authors instead emphasise on strengthening the existing institutional framework, especially local self-governments, to increase awareness and achieve socially desirable outcomes.

It is definitely true that there has been nothing as drastic as the COVID-19 Pandemic in our recent past, in terms of losses caused and lives claimed. Through this disaster as well, however, human imagination has been at its peak, in looking for new innovative solutions to ensure limited damage, and to protect as many as one can. This human imagination and perseverance in dealing with every crisis is also what made this Journal possible this year. Although our authors are from different parts of the world, all of them were bound together by one desire, to provide solutions to make the currently injured world around them better. It is that very desire which provides us with hope, amidst a global pandemic- hope that if we can imagine a better world through our writing, maybe we have the power to create it too.

IS COVID-19 AN EXCUSE FOR NON-PERFORMANCE AND NON-ENFORCEABILITY OF BUSINESS CONTRACTS? ANSWERS FROM ECONOMIC ANALYSIS WITH A BRAZILIAN PERSPECTIVE.

Lucas Fulanete G. Bento[1] *and Matheus Scussel*[2]

1. NUTSHELLING THE CONCLUSIONS

(a) In any contract, parties only perform because it is worthy for them, and law surely can influence their behavior making sure it is not worth breaching.

(b) Business contracts with different moment of payment can be addressed as a form of investment, since the party that pays first holds the default risk while financing the activity of the counterparty.

(c) COVID 19 imposes great burden and uncertainty towards the contracts and courts may aggravate such uncertainty.

(d) Statutory or jurisprudence provisions are not prepared for COVID 19.

(e) For its characteristics as Business counterparties, neither of the parties are interested in losing a recurrent investor or a recurrent investment.

(f) The Coase theorem, once again, shows itself as the best perspective of analysis. Since neither the Courts nor the statutory provisions can interfere efficiently, only the parties, if in a built environment of low transaction costs, will allocate the burdens in an efficient way.

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[2] L.L.B. Candidate at the University of Sao Paulo. Founder and executive director of the Center of Arbitration and Mediation of the University of Sao Paulo at Ribeirao Preto – NucAM USP RP.

(g) Economic predictions are negative under the scenario of COVID 19 impacting the business activities. However, such predictions point toward even worse scenarios (especially regarding corporate restructuring or breaches of contract) when taken under courts.

(h) Statutory provision – as soft law - and courts have the mission of building a low transaction cost environment, which can be artificially settled by a nudge to negotiate.

(i) The duty of information and good faith are old worth statutes from Civil Continental Law that can help building a duty of best efforts regarding renegotiation without imposing extra-legal penalties.

2. REVIEWING THE LEGAL ECONOMIC LITERATURE ON PERFORMANCE OF CONTRACTS

From a Law and Economics standpoint contracts make promises enforceable by law - in such a way that performing a contract is keeping a promise[3]. Having that in mind, it is coherent to ask what leads parties to perform. As Adam Smith suggests, it is not from the benevolence of the butcher and of the baker that we expect our dinner, but from their regard to their own interest[4]. Choosing to perform goes beyond a moral expectation from Philosophy or Religion, cooperation is the best way towards efficiency, as it helps the parties to reach their economic purposes within a negotiation. However, it would be unreasonable to expect cooperation if the business dynamics and the laws that involve it do not provide a safe environment for the parties to keep their promises.

Within this subject, Ejan Mackaay and Stéphane Rosseau explain that there are different types of contracts concerning the importance of law enforcement for the promises to be kept. For example, when one buys oranges in the grocery store nearby, the parties will most likely achieve their interests regardless of what the law states, since payment is made immediately by both parties[5]. However, this is not exactly true for contracts that are not instantly performed. Within contracts such as sales of goods with instant payment and future delivery - if there is no law enforcement for the promises to be kept - the seller may: (i) simply choose to appropriate since there is no liability for the delivery (ii) not perform since unexpected events create obstacles for performance (iii) deliver goods that do not specifically fit the expectations of the buyer.

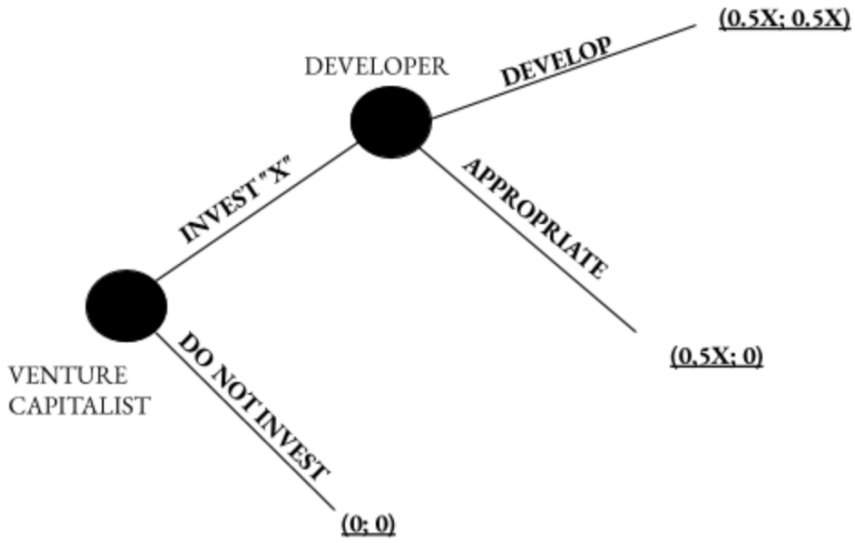
In this sense, Ulen and Cooter have taught us that it is efficient for the economic legal system to enforce promises - making the parties legally responsible for them - to guarantee that either the terms of the contract will be respected or that if a party breaches the contract, the counterparty will be remedied for it. Ulen and Cooter also affirm that this not only provides internal efficiency to the relation between the parties, leading them to achieve the interests that were explicit at the time of the conclusion of the contract, but also external efficiency, since it generates wealth.

To better understand what is suggested by the authors, let us analyze a hypothetical situation: a software developer needs an investor for his start-up company. With the investment, the developer will be able to turn "x" into "2x". The developer tells a venture capitalist that

[3] 6 ULEN COOTER & THOMAS ROBERT, LAW AND ECONOMICS, (Pearson 2012).
[4] ADAM SMITH & CANNAN EDWIN, THE WEALTH OF NATIONS, (Bantam Classic 2003).
[5] EJAN MACKAAY & STÉPHANE ROUSSEAU, ECONOMIC ANALYSIS OF LAW, (Atlas Juridico 2015).

they will share the expected profit of "x" if the venture capitalist decides to invest "x", which the developer does not have. If the promise made by the developer is not enforceable by the law, i.e. by a court, the investor will probably not invest, since the developer will be able to appropriate the investment without actually developing the software. If the promise is enforceable by law, the developer commits a breach of contract if he does not develop the software for which he will have to pay damages. Therefore, the venture capitalist will feel safe enough to invest. In this sense, both parties want the promise to be enforceable, since the developer knows that the venture capitalist will not invest if there is no liability for appropriation.

The parties perform because they understand that it is better for both of them to cooperate.



- *THE NUMBERS IN PARENTHESIS REFER TO HOW PROFITABLE EACH CIRCUMSTANCE IS FOR THE INDIVIDUALS - BEING THE FIRST ONE THE VENTURE CAPITALIST'S PROFIT AND THE SECOND ONE THE DEVELOPER'S PROFIT.*

- *IF THE DEVELOPER APPROPRIATES - BREACHING THE CONTRACT - HE WILL HAVE TO PAY DAMAGES IN THE AMOUNT OF THE EXPECTATIONS HE CREATED.*

- *COOPERATION PROVIDES INTERNAL EFFICIENCY - SINCE BOTH PARTIES ACHIEVE THEIR HIGHEST PROFIT IF THE SOFTWARE IS DEVELOPED - AND EXTERNAL EFFICIENCY - SINCE "X" OF WEALTH IS CREATED IF THE SOFTWARE IS DEVELOPED.*

- *THE MAIN REASON WHY THE PARTIES COOPERATED WAS BECAUSE BOTH OF THEM KNEW THAT THE PROMISE MADE BY THE DEVELOPER WAS ENFORCEABLE BY LAW*

The example helps us to answer the question from the first paragraph: parties perform because it is worthy for them, and law surely influences their behavior. In the investor-developer situation, law acted coercively when assuring that a party in breach would have to pay damages. Nevertheless, law not always has to be operated like that. Eric Posner teaches that sometimes the legal system interferes in cooperation and sometimes enhances it, as the present article will further elaborate within the COVID-19 context[6].

Moreover, the developer-investor situation is connected to the lessons of Eric Posner in the sense that it helps us to understand the application of *damages.* Eric Posner affirms that "*contract remedies should (...) give the party to a contract an incentive to fulfill his promise unless the result would be an inefficient use of resources*"[7]. We will also analyze this concept regarding COVID-19 in the future topics of this article.

Concerning specifically the developer-investor situation, the damages are *expectation damages*. Since expectation damages refer to compensating the injured party putting he/she in a position he/she would be if the contract had not been breached, its application is efficient for the example because it leads the promisor to take the maximum level of commitment to keep the promise, as he has to fully compensate the promisee (counterparty) in case of a breach.

The referred concepts from the law and economics analysis on contracts make it easier to comprehend the importance of having a legal system that enforces agreements, a principle

[6] ERIC A. POSNER, LAW AND SOCIAL NORMS, (Harvard University Press 2000).
[7] RICHARD A. POSNER, ECONOMIC ANALYSIS OF THE LAW, (Aspen 1972).

usually referred as *pacta sunt servanda* - i.e. agreements must be kept - for both Civil Continental Law and Common Law, even though its application varies regarding these two bodies of law.

Nevertheless, the situation that was analyzed through the perspective of the referred authors did not consider the alteration of relevant context for the agreement due to unexpected circumstances. This appears to us to be the case of COVID-19 in many business and commercial contracts, which the present article will examine.

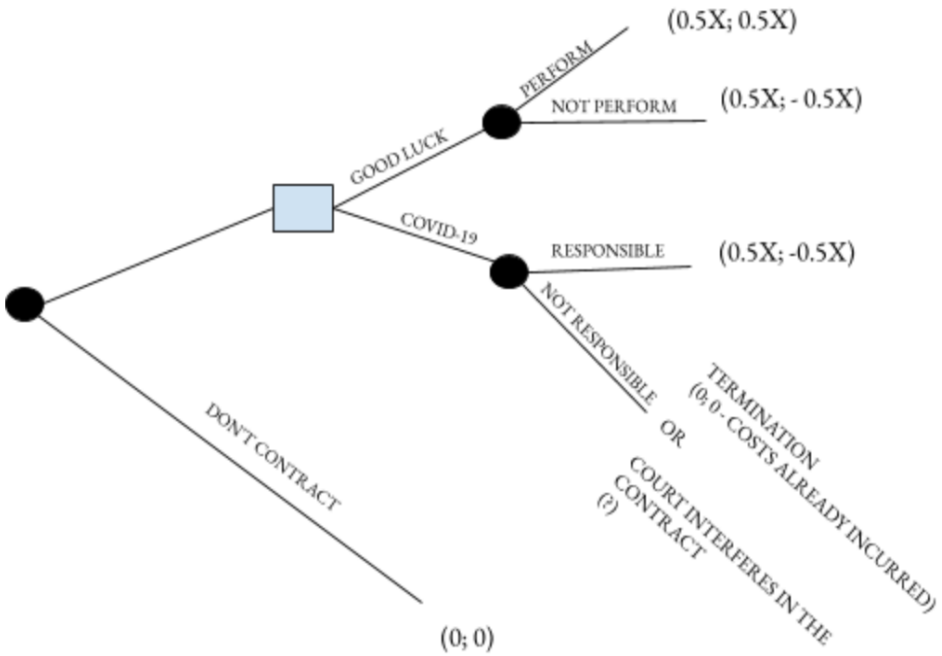
3. SOME CHARACTERISTICS OF BUSINESS CONTRACTS

As mentioned on the first topic, contracts that have gaps between different payments of the agreed obligations are the ones related to which more obstacles to perform may arise, since unexpected events can affect them. And this not only presents one of the main characteristics of business contracts, but also a relevant discussion regarding COVID-19.

Business contracts that concern this element of different moment of payment of the obligations can be addressed as a form of investment, since the party that pays first holds the default risk while financing the activity of the counterparty. These risks can be mitigated by mandatory provisions, but these are not the only sanctions that involve the relation between the parties. Even if there is uncertainty whether a promise is enforceable or not, long-run business contracts, which are common, may have performance guaranteed by the existence of *social sanctions*, such as reciprocity in behavior, and attacks to reputation. For example, when parties engage in a contract of supply of goods, if the demander delays payment, the supplier may perform poorly until the demander starts to pay properly. This kind of practice can be understood as a social sanction and may prevent wrongdoing even if the law does not enforce the promises made by the parties. The practice of rewarding cooperation and punishing appropriation within the environment of a relational contract is called *tit for tat*. And if a party constantly performs poorly it will hardly engage in new business contracts since its reputation will be attacked by the other party.

Combining this perspective with the concepts presented on topic 1, let us analyze a hypothetical scenario that may be facilitated by the events regarding COVID-19: Individual A owns a drugstore and wants to expand it. During the expansion, the drugstore will be closed.

The expansion will be worth "2X" to Individual A. Individual A contracts with Individual B, who promises to expand the drugstore and complete the construction by a specific date. The expansion of the store costs "X" to Individual B, so he charges Individual A "1.5X" for the construction. The contract requires Individual A to pay "X" in advance and "0.5X" when the construction is completed. If no unexpected event impedes Individual B to perform, this relation will follow the same structure of the developer-investor example: both parties will cooperate and make a "0.5X" profit. However Individual B may have bad luck. Let us imagine that Individual B needs the state to issue a construction permit to start a certain stage of the construction and that, due to COVID-19, the state suspends the issuing of all construction permits for works such as the one Individual B is operating for Individual A. What happens in this case?



- *IF THE PARTIES ARE LUCKY AND NO UNEXPECTED EVENT CREATES OBSTACLES FOR THE PERFORMANCE, THE STRUCTURE REMAINS THE SAME AS THE ONE PRESENTED ON THE INVESTOR-DEVELOPER SITUATION*
- *IF THE PARTIES ARE UNLUCKY AND AN UNEXPECTED EVENT SUCH AS COVID-19 CREATES OBSTACLES FOR THE PERFORMANCE, TWO SITUATIONS MAY ARISE (UNDER BRAZILIAN LAW, WHICH MAY BE SIMILAR TO OTHER*

BODIES OF LAW) IF THEY DECIDE TO LITIGATE. (I) A COURT MAY FIND EITHER THAT COVID-19 DOES NOT FALL WITHIN THE SCOPE OF EXEMPTION OF LIABILITY IN SUCH A WAY THAT THE CONSTRUCTOR HOLDS ALL THE RISKS REGARDING HIS PERFORMANCE OR (II) THAT THE CONSTRUCTOR SHOULD NOT PAY DAMAGES SINCE PERFORMANCE WAS IMPEDED BY THE COVID 19.

- *IF THE CONSTRUCTOR IS RESPONSIBLE UNDER THE LAW, THE COURT WILL DECIDE THAT HE HAS TO PAY DAMAGES TO THE OTHER PARTY AND THE OTHER PARTY WILL BE ENTITLED TO TERMINATE THE CONTRACT. IF THE COURT FINDS THAT THE CONSTRUCTOR IS NOT RESPONSIBLE FOR THE NON-PERFORMANCE, THEN IT MAY LEAD EITHER TO A TERMINATION OF CONTRACT PLACING THEIR PARTIES ON THEIR "STATUS QUO ANTE" OR TO AN INTERFERENCE BY THE JUDGE ON THE CLAUSES OF THE CONTRACT (WITHIN THE BRAZILIAN LEGAL FIGURES THAT WILL BE PRESENTED IN THE NEXT TOPIC).*

Therefore, we can see that regardless of what is written in the law, the parties will be able to achieve an efficient contract without reaching a court. And here's why: neither of the parties want the contract to be terminated. The store owner most likely plans to operate his business after the COVID-19. Also, the constructor surely wants to perform a contract that is actually concerned to his main activity after all. Reaching a court may lead either to the unsatisfactory termination of contracts or to the interference by a third party on what they had negotiated. Since decisions regarding COVID-19 are still uncertain, the risks within this procedure are too high. Also, as we have seen on the investor-developer situation, the performance of contract generates wealth, so the states are also benefited if the parties perform. In this sense, it is more efficient to enhance cooperation *stimuli* than to create strict rules for contract interference by the state.

4. LEGAL FIGURES THAT CAN BE ADDRESSED ON BUSINESS CONTRACTS WITHIN THE COVID-19 CONTEXT

The spread of the COVID-19 has been impacting the dynamics of many businesses. Since there is no concrete solution to the disease by the present moment, governments all around the world have adopted social distancing as the strategy to avoid major impacts on their health system, which appears to be the most coherent plan to be followed given the situation.

However, this policy involves the suppression of different economic activities, since most stores had to suspend physical operations, borders had to be closed and almost all events that would gather a large amount of people had to be either cancelled or postponed. Due to these new circumstances, the performance of contractual obligations of many kinds can become impossible or at least extremely hard to be executed by now.

One of the main principles in Civil Continental Law countries is the so called *pacta sunt servanda*, which means that the parties to a contract are obligated to comply with their contractual obligations or else they will be held liable for a breach of contract. Nonetheless, if the parties face circumstances that make the performance impossible or that are extremely different from the circumstances that were expected by the conclusion of the contract, *pacta sunt servanda* can be avoided.

In some cases, coherently dealing with performances that are not instantaneous regarding the conclusion of the contract, under the Brazilian Law, if an unexpected event creates extreme difficulties for a party to perform a contractual obligation with an advantage provided to the other party, this contract can be avoided under article 478 of the Civil Code, which refers to the *excessive burden* doctrine.

Also, legal scholars - such as Nelson Nery Jr. - discuss the possibility of addressing article 317 of the Brazilian Civil Code to analyze that if there is an unexpected event that creates high imbalance between the performance of the obligation at the time of the conclusion of the contract and the performance of the obligation after dealing with the unexpected circumstances - generating disequilibrium to the *value* of the obligation for the parties as well - a court could interfere in the terms of the contract without the necessity of analyzing how difficult one of the obligations itself became to the other party[8].

[8] NELSON NERY JR., THE BASIS OF THE LEGAL BUISNESS AND THE REVIEW OF THE CONTRACT, (2004).

The referred understanding of article 317 is related to the Theory on the Objective Basis of a Negotiation, suggested by Karl Larenz[9]. In accordance with the author, this Objective Basis is affected either if the obligations between the parties are not as balanced as they were at the time of the conclusion of the contract due to an unexpected event - which some authors understand to be the nature of article 317 - but also if the purpose of the contract is frustrated. The latter, by a broad analysis of the intentions of the Brazilian Law, can even be understood as incorporated in the Brazilian Civil Code in articles 421 and 422, which also would provide the possibility of termination of contract.

To summarize this brief description of the Brazilian contract law, we can understand that, in theory, the Brazilian law provides the parties with many possibilities to attempt either termination of contract or a judicial interference on the terms of the contract in circumstances that are at least similar to the COVID-19 crisis.

However, what is written in the law may not always be the best alternative to the parties to solve their problem.

4.1. Cooperation and internal efficiency

In the beginning of the 1960s, Ronald Coase brought an intense discussion to Law and Economics with his article *The problem of social cost.* Within the debates around *externalities* - i.e. the benefits and costs held by third parties to a contract that are not taken into account by the party that performs - Coase suggested that reasonable parties were surely able to agree on the most efficient contract regardless of what was stated in the law[10]. If Coase were correct with this assumption, that could mean that tort law was not as efficient as people expected.

To understand Coase's Theorem, let us analyze the following situation inspired by the economist himself: a small factory produces useful goods for the neighboring community. The production of these goods is worth 1.5X. The factory also sends smoke - a sub product of its activity - to the environment. This smoke is harmful for the neighboring properties. The legal framework can create the responsibility for the factory to pay damages of X for all the owners of the neighboring properties. However, this can be extremely expensive for the factory,

[9] KARL LARENZ, BASIS OF LEGAL BUSINESS AND CONTRACT ENFORCEMENT, (2002).
[10] R. Coase, *The Problem of Social Cost*, 3 JOURNAL OF L. & ECON.1, 1–44 (1960).

creating huge obstacles for its operation. The factory could also install a device in the chimney that would contain the harmful emissions, but this is just as expensive as the damages that the factory would have to pay for the owners. On the other hand, if the legal framework is silent regarding the subject and neither the factory nor the owners attempt to communicate and cooperate, it is no-win situation as well, since the owners will suffer losses concerning their property and this may lead them to boycott the factory and attack its reputation. But, considering that communication is easy between the factory and the owners, the parties can cooperate.

	FACTORY'S SITUATION WITHOUT COOPERATION	PROPERTY OWNERS' SITUATION WITHOUT COOPERATION	COOPERATION
FACTORY HAS TO PAY DAMAGES/ INSTALL DEVICE BY ITSELF	DAMAGES OR DEVICE (-X)	DO NOTHING BUT THEN WILL LOSE THE FACTORY NEARBY (-1.5X)	SPLIT THE COSTS OF THE DEVICE (-X/2) AND THE FACTORY STILL OPERATES (1.5X)
FACTORY DOES NOT HAVE TO PAY DAMAGES	DOES NOTHING BUT THEN *SOCIAL SANCTION/BOYCOTT* LEADS THE FACTORY TO INTERRUPT OPERATIONS (-1.5X)	PROPERTIES WILL BE HARMED (-X)	SPLIT THE COSTS OF THE DEVICE (-X/2) AND THE FACTORY STILL OPERATES (1.5X)

It is clear in the table that bargaining within their own and specific situation is the most efficient solution for their relation. But looking at it with a broader perspective, this internal

efficiency also provides external efficiency because it guarantees the operation of a factory that regards an interest of the whole economic system and generates wealth.

Ronald Coase, nevertheless, made it clear that the only reason why cooperation would be possible for that specific situation was because the costs of reaching an agreement were low. These costs are *transaction costs*, obstacles for the parties to properly bargain between them, such as not possessing all the information within the context of the contract or having a hard time to reach the party that you want to negotiate with.

The conclusion suggested by Ronald Coase is that, assuming zero transaction costs, the parties will definitely reach the most efficient agreement for both of them, i.e. *Pareto Efficiency*, which means that a party cannot better off its situation without making the other party's situation worse off. For situations in which parties do not have all the elements of negotiation on their hands, tort law still has huge importance. What is important to comprehend is that law should not only determine sanctions, but also reduce transaction costs for the parties to negotiate, providing them with the most proper environment to achieve efficiency.

Regarding the enforceability of contracts, and now addressing the COVID-19 situation, addressing the courts to enforce a contract facing unexpected events may not only be expensive as usual but can also provide unexpected results (specially concerning Brazilian law, according to which there are many legal figures that can be applied for different circumstances within the context of the agreement).

In such wise, since the parties may not even know what to expect from a court regarding their contract - since the court can even change its clauses or terminate under the Brazilian law - the fairest and most efficient alternative for the parties is for them to renegotiate themselves the clauses pursuant to the new circumstances. Nonetheless, to avoid opportunistic approves to the uncertainty of courts concerning the change of circumstances, the legal system, i.e. the state, has to provide conditions for the individuals to feel safe enough to renegotiate and have the new contract clauses enforced by law.

4.2 Commercial relations and external efficiency

When it comes to most business contracts, as already discussed above, the payment of contractual obligations does not occur immediately. In such wise, one cannot evaluate an idea

until after he knows what it is, and after its disclosure he has little reason to pay for it[11]. This is the problem that arises when attempting to unite ideas and capital, a combination that benefits the economic system internally and externally. The investor must trust the developer not to steal capital and the developer must trust the investor not to steal his idea. It is a similar controversy faced on the developer - investor analyzed on the article if the promises were not enforceable. The solution comes from contracts, promises with material sanctions for breaking it, especially legal sanctions.

Business contracts, within this context, present the characteristics of investments, in such a way that the company that pays first expects to receive benefits, pursuant to the contractual obligations, in the future, in such a way that, while the second payer does not perform, the other party finances it. This structure was already mentioned above, but now we will desiccate the different "stages of investment" that may regard the contracts. We can have relational contracts, private contracts and public contracts, as the level of investment expands. Cooter and Schaefer teach us that there are different sanctions for the different stages. For relational contracts, we have social sanctions as a strong element that arises in case of non-performance. For private contracts, social sanctions are combined with civil sanctions. And for public contracts, those two combine with regulatory sanctions. However, since business contracts are the agreements that regard the development of the parties' core activity, they do not want to terminate the contract or to have strong sanctions applied. They do it in the worst-case scenario. They want the contract to be performed. Reaching the courts is expensive and the procedures may take a long time, as we will see on the results from the ABJ[12] research, especially given the present circumstances. Also, it must be considered that “writing down a law does not make it effective; it is as effective as its supporting sanction"13. The civil sanctions depend on the understanding of the courts (which are not very clear regarding unexpected events as the COVID-19 may be considered)[14]. But what is relevant to consider concerning the different types of business relations described above is that - according to the investor/developer situation analyzed on the first topic - law must guarantee that there is a comfortable environment for the parties reach an agreement to perform, since the economic

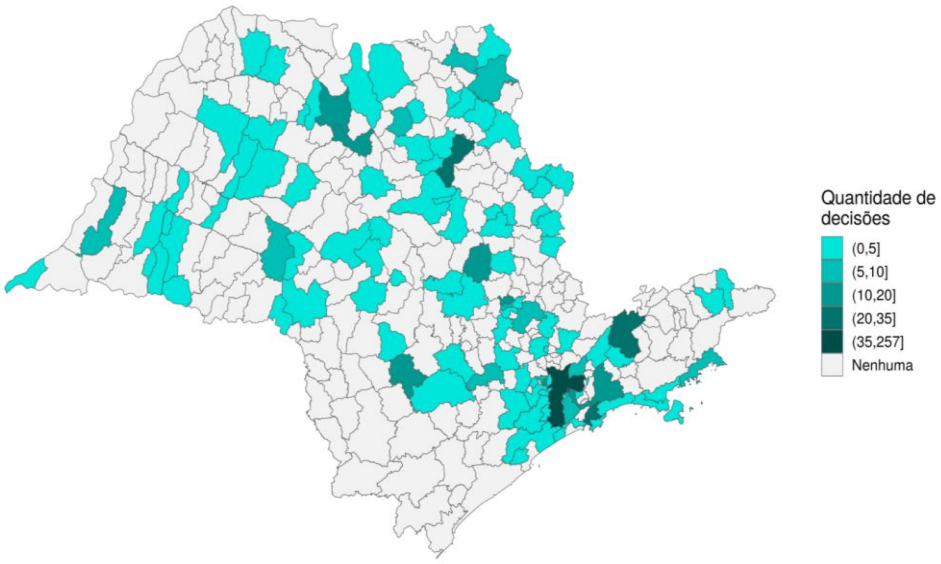
[11] HANS-BERND SCHAEFER & ROBERT D. COOTER, SOLOMON’S KNOT: HOW LAW CAN END THE POVERTY OF NATIONS, (Princeton University Press 2011). (hereinafter “HANS-BERND”)
[12] Brazilian Association of Jurimetrics.
[13] HANS-BERND, supra note 11, at 10.
[14] Cuiabá Plaza v. Minerva Energia, (2020).

gains that both of them will achieve will - simultaneously - be an economic increase for the whole system.

5 EMPIRICAL EVIDENCE FROM THE BRAZILIAN PERSPECTIVE

On the present topic, we will analyze how COVID-19 has changed specifically the Brazilian economic scenario either by its own occurrence or by the consequences of the public measures that were adopted by the country, hoping that this analysis will help to understand the situation of different states.

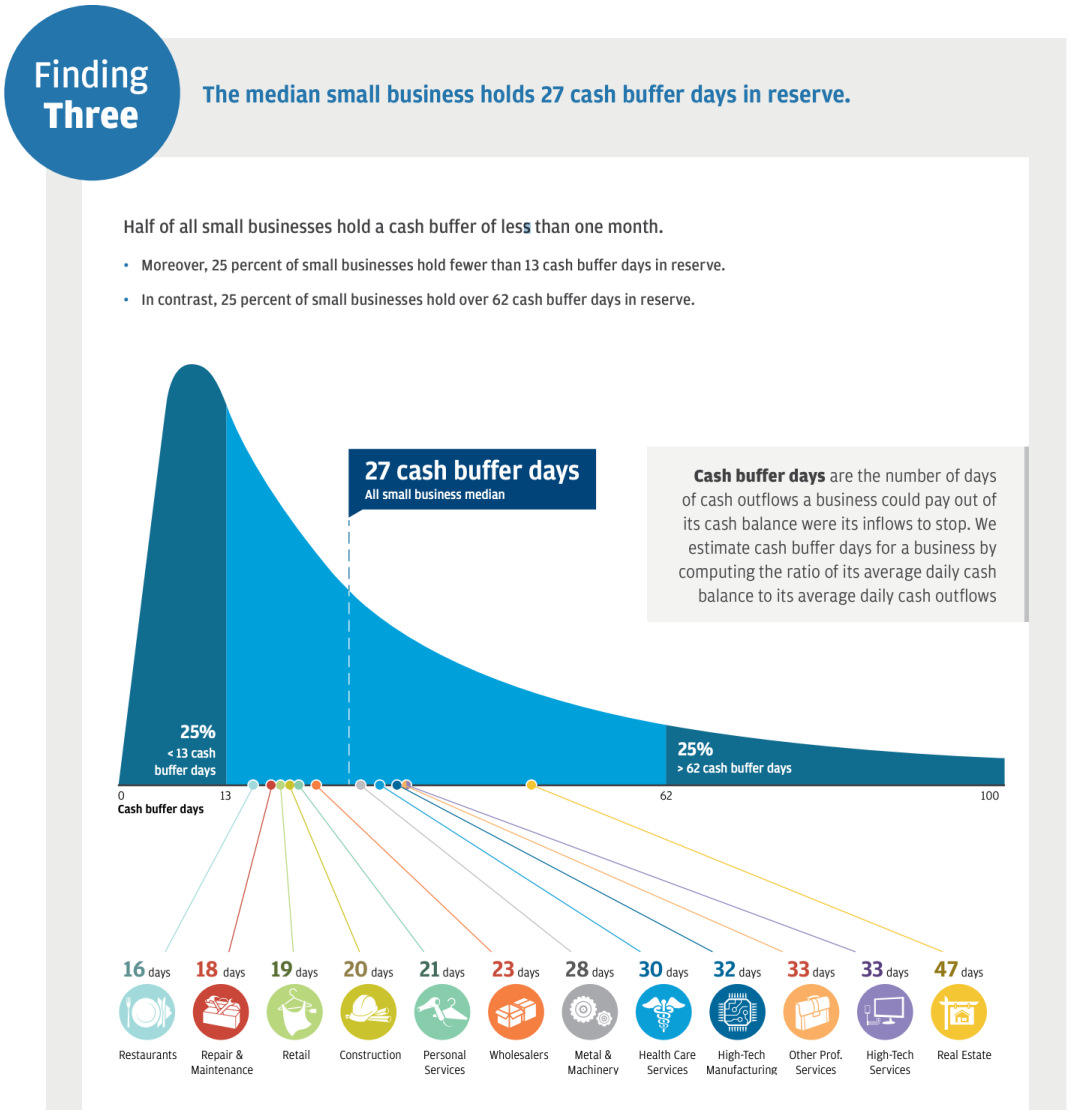
A problem that parties to a contract may face when addressing the courts to analyze their agreement is that a decision may take a long time to be provided to them. Not only COVID-19 brings a new discussion to the table but also it affects many kinds of business, in such a way that a lot of courts will have to deal with a considerable amount of cases concerning an undetermined matter. To highlight that, ABJ, *Associação Brasileira de Jurimetria*, provided data from a research on the impact of COVID-19 on the Justice Court of Sao Paulo, according to which 112 districts from 319 total had already dealt with a COVID-19 by April 4th, 2020. 811 decisions regarding COVID-19 were identified by the same date[15].



[15] Julio Trecenti & Marcelo Guedes Nunes, *Mentions to Covid-19 in the lower court decisions of the TJSP*, (2020)

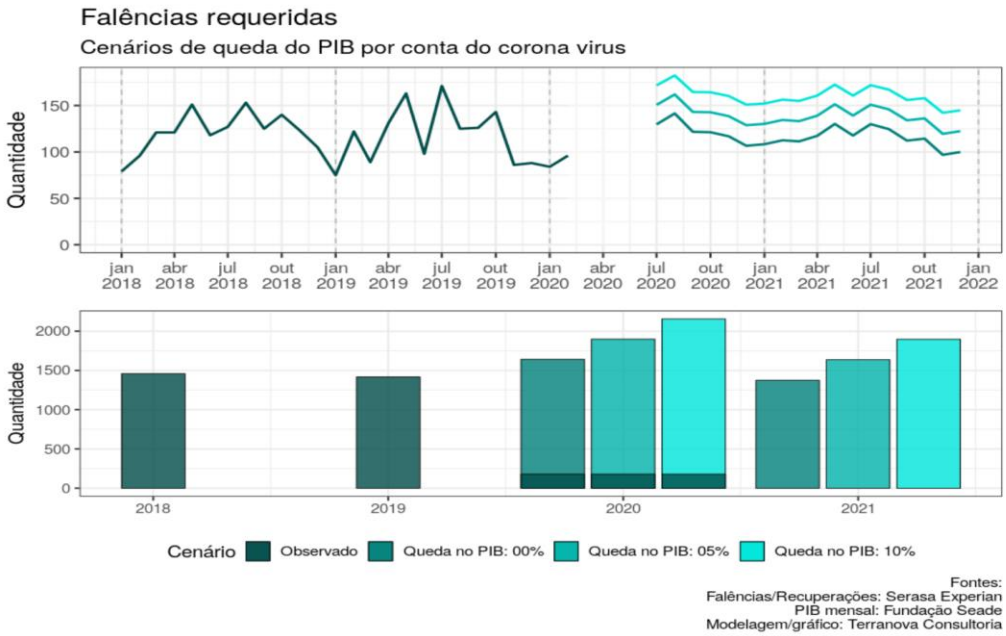
Menções à Covid-19 nas decisões de primeira instância do TJSP; Associação Brasileira de Jurimetria; Julio Trecenti, Bruno Daleffi e Marcelo Guedes Nunes (04.04.2020)

Also, another concern related the COVID 19 regards to bankruptcy. All around the world, stores had to suspend operations due to state programs to contain the spread of the virus. In Brazil, by the end of May 2020, only "essential services" are allowed to regularly function. Depending on how long this kind of policy is adopted, it may lead many business activities to financial distress. In this sense, JP Morgan Chase published, on September 2016, the results of a research according to which around half of the small business cannot survive for more than one month in a situation such as this[16].



[16] JPMORGAN CHASE & CO., https://www.jpmorganchase.com/corporate/institute/document/jpmc-institute-small-business-report.pdf. (last visited July 17th, 2020).

Furthermore, considering the possible impacts of COVID-19 on the Brazilian GDP, Terranova was able to reach estimate numbers of bankruptcy requests for 2020 and 2021, which are higher than on the previous years. This not only represents major impacts on the state's economic system, but also a significant increase in volume of cases for the Brazilian courts to deal with[17].



The expectation for GDP that provided basis for the last chart is convergent with the results published by the CEPAL (The Economic Commission for Latin America and the Caribbean) on *Informe Especial COVID-19 No 2: dimensionar los efectos del Covid-19 para pensar en la reactivación.*

[17] Daleffi, Bruno; Trecenti, Julio; Guedes Nunes, Marcelo. *O que dizem os processos no Tribunal de Justiça de São Paulo sobre a COVID-19*?. 2020

Cuadro 6 | Proyecciones de crecimiento del PIB de América Latina y el Caribe, 2020

	Crecimiento del PIB 2020
América Latina y el Caribe	**-5,3%**
Argentina	-6,5%
Bolivia (Estado Plurinacional de)	-3%
Brasil	-5,2%
Chile	-4%
Colombia	-2,6%
Ecuador	-6,5%
Paraguay	-1,5%
Perú	-4%
Uruguay	-4%
Venezuela (República Bolivariana de)	-18%

Therefore, the sequence of events created within the context of COVID-19 is the following: (i) states, such as Brazil, have to adopt measures of social distancing - which are indeed necessary - to contain the spread of the virus, (ii) many businesses suspend operations, (iii) this leads them to financial distress, (iv) financial distress affect either the judiciary system or the economic system directly, (v) the amount of cases for the courts to deal with also affect the economic system, at least indirectly. In this sense, providing ways to contracts be performed without enforcing then on courts is in our understand the best solution to mitigate the harms of COVID-19, since the generation of wealth benefits the whole dynamics of businesses activities.

6 LEGISLATIVE NUDGE

Throughout the article, we have been arguing that parties must cooperate and renegotiate business contracts before reaching a court to litigate, defending that a so-called safe environment for renegotiation must be provided by law. However, we have not described yet (i) what would be that safe environment and (ii) why it is law's responsibility to facilitate renegotiation. As a conclusion of the article, this is what will be done on this last topic.

Many individuals - whether or not they have studied economics - are usually committed to the idea of the *homo economicus, i.e.* the thought that we think and choose extremely well, always improving the utility of a choice. However, it has been proven by diverse studies on behavioral economics that we, humans, do not behave like that. We make a lot of biased decisions. A good way to explain that is to analyze the sunk cost fallacy. It occurs when one continues a behavior as a result of previously invested resources (time, money or effort)18. For

[18] Arkes, H. R., & Blumer, C.*The psychology of sunk costs. Organizational Behavior and Human Decision Processes.* 1985.

example: it is common for people to attend to events they have paid tickets for regardless of how much they want to do it at the time of the event. And, by doing that, he/she wastes not only the money he/she has paid for the ticket, but also the time doing something he/she did not want to do. Through another perspective of bad choices, an individual may choose to immediately litigate - before attempting to renegotiate a contract - because he/she has a negative perception of the counterparty that did not perform, even though it may have occurred due to unexpected events which makes the event, in fact, neutral. In this sense, the so-called comfortable environment for renegotiation is a circumstance in which the parties can make a choice with the minimum amount of biases as possible.

To answer the second question suggested on this topic, we must analyze what Richard Thaler describes on *Nudge*: our decisions are heavily influenced by small and apparently insignificant details[19]. The author compares the power to display the options for a decision maker with the profession of architecture. Architects know that the way you locate the bathrooms in a building will have subtle influences on how people interact. Accordingly, the way *choice architects* provide information for the decision makers will influence what path they will take. Choice architects have the responsibility for organizing the context in which people make decisions. In such wise, the state is surely a choice architect in many fields, and law is a tool for the architecture. Within our specific discussion, even though the law cannot make it mandatory for the parties to renegotiate, since legal figures such as the Brazilian ones presented on the article and hardship clauses exist and are important, it can create incentives for a stage of renegotiation before the proceedings start, in which the duty - within the consequences of good faith - and the benefits of this new agreement will be explained to the parties. And it will do so because internal efficiency to contracts increases, external gains arise as well.

7 NUTSHELLING THE CONCLUSIONS

(a) In any contract, parties only perform because it is worthy for them, and law surely can influence their behavior making sure it is not worth breaching.

[19] Thaler, R. H., & Sunstein, C. R.. *Nudge: improving decisions about health, wealth, and happiness*. Rev. and expanded ed. New York: Penguin Books. 2009

(b) Business contracts with different moment of payment can be addressed as a form of investment, since the party that pays first holds the default risk while financing the activity of the counterparty.

(c) COVID 19 imposes great burden and uncertainty towards the contracts and courts inflict such uncertainty

(d) Statutory or jurisprudence provisions are not prepared for COVID 19.

(e) For its characteristics as Business counterparties, neither of the parties are interested in losing a recurrent investor or a recurrent investment.

(f) The Coase theorem, once again, shows itself as the best perspective of analysis. Since neither the Courts nor the statutory provisions can interfere efficiently, only the parties, if in a built environment of low transaction costs, will allocate the burdens in an efficient way.

(g) Economic predictions are negative under the scenario of COVID 19 impacting the business activities. However, such predictions point toward even worse scenarios (especially regarding corporate restructuring or breaches of contract) when taken under courts.

(h) Statutory provisions, in a soft law manner, and courts have the mission of building a low transaction cost environment, which can be artificially settled by a nudge to negotiate.

(i) The duty of information and good faith are old worth statutes from Civil Continental Law that can help building a duty of best efforts regarding renegotiation without imposing extra-legal penalties.

INTERNATIONAL COMMERCIAL ARBITRATION IN THE AFTERMATH OF THE PANDEMIC: A LAW AND ECONOMICS ACCOUNT

*Carolina Arlota**

1. INTRODUCTION

This essay researches the main consequences of the pandemic caused by the COVID-19 virus in the field of international commercial arbitration through an economic analysis of law.[1] This essay conceptualizes international commercial arbitration as an alternative mechanism for dispute resolution, focusing on how the pandemic may modify the incentives for parties in a different set of circumstances.

In such a context, this essay discusses how the pandemic may impact current contracts which are silent regarding international arbitration agreements. It further contrasts this legal scenario with the one in which parties have already contemplated international commercial arbitration as a final and binding dispute resolution mechanism in their original contract. In addition, this essay discusses which incentives parties may have to include arbitration agreements in their future contracts after the pandemic and related considerations on force majeure (and general clauses on excuse of performance). This essay concludes that, in the aftermath of the COVID-19 pandemic (and it inducing an increased likelihood for contracts to be cancelled/ excused) and related uncertainties in different court systems, it is likely that international commercial arbitration will be even more popular among international business parties as a choice for resolving international legal disputes.

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[1] WORLD HEALTH ORGANIZATION, https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020 (Mar. 11, 2020).

International arbitration is the primary method for resolving disputes between states, corporations, and/or individuals.[2] Although its popularity continues to grow in this globalized world, it has been used for centuries to resolve international disputes.[3] Lew, Mistelis, & Kröll define international arbitration as "a dynamic dispute resolution mechanism varying according to law and international practice," and most jurisdictions do not rely on a single rigid definition.[4] International arbitration's essential features are that it is a private mechanism of dispute resolution designed and controlled by the participating parties to determine their rights and obligations within the scope of their submission. This determination is final and binding among the parties.[5]

Accordingly, arbitration is an alternative to national courts. Its finality and binding nature clearly differentiate it from other alternative dispute resolution (ADR) mechanisms such as mediation and conciliation.[6] The finality and binding character of arbitration is both a contractual commitment of the parties (the manifestation of the private law nature of arbitration) and the effect of the applicable law (highlighting the public law nature of arbitration).[7] An implied obligation of arbitration is the exclusion of court proceedings.[8] In other words, the dispute is not resolved in domestic courts, and, exempting limited cases based on minimum due process considerations, there is no appeals process. These exceptions vary according to national laws and whether the international arbitration proceedings involve an institution. For example, the International Chamber of Commerce (ICC) requires the ICC Court to check the formal requirements of every award, and authorizes a limited review restricted to correction, interpretation, and remission, as determined in Articles 34 and 36 of the 2017 ICC Rules of Arbitration, respectively. Articles 37 and 38 of the United Nations Commission on International Trade Law—UNCITRAL Arbitration Rules (as revised in 2010) allow for review of interpretation and minor corrections of the award.

International arbitration differs according to the nature of the dispute and the parties involved. Although their overall structure might be similar, each type involves specific features.[9]

[2] N. Blackaby, C. Partasides, A. Redfern & M. Hunter, *Redfern and Hunter on international arbitration*., U.K, Oxf., 1 (2015). (hereinafter "BLACKABY")
[3] G. Born, *International arbitration: Case and materials*. N.Y: W.K., 11(2015). (hereinafter "BORN")
[4] J.D.M. Lew, L. Mistelis & S. Kröll, *Comparative international commercial arbitration*, N.L.: K.L.I., 3 (2003).
[5] *Id.* at 3.
[6] *Id.* at 13–14.
[7] *Id.* at 5.
[8] *Id.* at 5.
[9] S. KRÖLL, ELGAR ENCYCLOPEDIA FOR COMPARATIVE LAW 78 (U.K.: Edward Elgar 2006).

International arbitration is classified as *state arbitration* if between states;[10] as *investment arbitration* if the dispute involves the host state and at least one party is a foreign investor;[11] and *international commercial arbitration* if pertaining to transactional disputes of a commercial nature. The last is the focus of this work, because international commercial arbitration comprises a minimum of 90 percent of all international business arbitration.[12]

It is important to note that, due to the nature of the topic involving private parties, public international law references in this essay are used when it is unavoidable. It is noteworthy that the pandemic will affect primarily international commercial arbitration (as detailed further) and also investment arbitration, as governments adopted measures such as regulating prices, restricting travel, preventing foreigners from crossing national borders, compelling private properties to produce certain goods, and restricting travel and commerce.

This essay offers three unique contributions. First, it analyses the impact of the pandemic for international commercial arbitration through a law and economics methodology. Hence, it advances the study of strategic litigation in the international context. Second, it advances the literature on the potential advantages and limitations of international commercial arbitration over litigation in the international setting. Third, the insights presented here might also be applicable to other future emergencies, regardless if another pandemic, global economic crisis,[13] or climate change related emergencies.[14]

In light of the above, this essay offers preliminary considerations regarding the impact of the COVID-19 pandemic on international commercial arbitration. This essay is organized as follows. Part II presents an overview about international commercial arbitration as an alternative dispute resolution mechanism (ADR). Part III discusses how the pandemic may impact current contracts that are silent regarding international arbitration agreements. It further contrasts this legal

[10] *Id.* at. 78.
[11] R. D. BISHOP, J.R. CRAWFORD & W.M. REISMAN, FOREIGN INVESTMENT DISPUTES 10 (Netherlands: Wolters Kluwer International 2014). THE ICSID CONVENTION, C. BALTAG (ED.), ICSID CONVENTION AFTER 50 YEARS: UNSETTLED ISSUES 23 (Netherlands: Wolters Kluwer International 2017).
[12] RALPH H. FOLSOM, PRINCIPLES OF INTERNATIONAL LITIGATION AND ARBITRATION 63 (Minnesota: West Academic 2016). (hereinafter "FOLSOM")
[13] INTERNATIONAL ENERGY AGENCY., https://www.iea.org/topics/covid-19 (April, 2020).
[14] Owen Jones, *Why don't we treat Climate Crisis with the same Urgency as Coronavirus*, THE GUARDIAN (March 5, 2020), https://www.theguardian.com/commentisfree/2020/mar/05/governments-coronavirus-urgent-climate-crisis.

scenario with the one in which parties have already contemplated international arbitration as a final and binding dispute resolution mechanism in their original contract. Part IV discusses which incentives parties may have in order to include arbitration agreements in their future contracts after the pandemic and related considerations on force majeure (and general clauses on excuse of performance). This essay concludes that, in the aftermath of the COVID-19 pandemic and the increasing likelihood for contracts to have performance excused as well as the potential uncertainties in different court systems around the world, it is likely that international arbitration will be even more popular among international business parties as a choice for finally resolving international legal disputes.

2. AN OVERVIEW OF INTERNATIONAL COMMERCIAL ARBITRATION

First, this Section establishes the nature of international arbitration as based on consent of the parties involved and relate manifestation of their autonomy. Second, it presents the main terminology. It defines arbitration agreement and its main requirements. Third, it addresses the international legal framework supporting international commercial arbitration agreements (the will of the parties to submit their future disputes to arbitration) and international awards (to be bound by the final decision reached by the arbitral tribunal) and efforts taken by disparate jurisdictions in harmonizing their legal system in support of international commercial arbitration.[15]

International commercial arbitration is always consensual, with very limited exceptions[16] based on domestic legislation as authorized by the Convention on the Recognition and Enforcement of Foreign Arbitral Awards.[17] Crucially, this convention also requires the recognition and enforcement of arbitration agreements.[18]

[15] C. Arlota, *The Impact of (Mis)Communication on International Commercial Arbitration*, OXFORD RESEARCH ENCYCLOPEDIA OF COMMUNICATION (May, 2020), https://oxfordre.com/communication/view/10.1093/acrefore/9780190228613.001.0001/acrefore-9780190228613-e-915

[16] BORN, *supra* note 3, at 34–35.

[17] Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 10 June 1958) 330 U.N.T.S. 3, entered into force 7 June 1959 (New York Convention) https://www.uncitral.org/pdf/english/texts/arbitration/NY-conv/New-York-Convention-E.pdf. (hereinafter the "New York Convention")

[18] *Id.* Art. I & II.

An arbitration agreement is a written contract, typically a clause in a larger contract (the underlying contract, hereinafter), which requires that the parties must settle legal disputes outside of court; in this context, they must submit to international arbitration.[19] The parties may submit current or future disputes. The former is known as a submission agreement or a *compromis*, but it may be significantly harder to convince parties to submit to arbitration once the contract has been signed and the problems are no longer theoretical. Parties involved in arbitration proceedings are technically denominated claimant (called "plaintiff," if it were a court case) and respondent ("defendant").

A valid arbitration agreement requires both an obligation to arbitrate in good faith and an obligation not to litigate (not to resort to the judiciary to resolve the legal dispute).[20] An arbitration clause must be in writing for the parties to be able to enforce the arbitral award abroad.[21] Most jurisdictions[22] (either through their domestic laws or their own courts), when considering the severability (separation, i.e., autonomy) between the arbitration agreement and the underlying contract, assume the validity of the arbitration agreement, and allocate to the arbitral tribunal the power to determine if the underlying contract exists, and if it does, its validity and related legal requirements.[23]

Most jurisdictions also have enacted domestic statutes differentiating domestic arbitration from international arbitration, aiming at a secure, arbitration-supportive legal system in the international sphere.[24] States recognize the need for predictability and certainty in international commerce in light of the significant challenges posed by international arbitration itself, including choice of law, jurisdictional issues, and enforcement uncertainty.[25] Therefore, the New York Convention and the vast majority of current national arbitration regulations define *international*

[19] BORN, *supra* note 3, at 85.
[20] BORN, *supra* note 3, at 315–334.
[21] A. G. Maurer, *Settling international commercial disputes through arbitration*, N.L: W.K.I., 156 (2018). (hereinafter "MAURER")
[22] BLACKABY, *supra* note 2, at 105–106.
[23] BLACKABY, *supra* note 2, at 104.
[24] BORN, *supra* note 3, at 45.
[25] BORN, *supra* note 3, at 45.

arbitration as that which refers solely to "arbitration agreements that have some sort of *foreign* or *international* connection," in the words of a world expert.[26]

The harmonized practices of international arbitration are based on sophisticated rules of procedure, which are administered by institutional arbitrations and supported by domestic legislation significantly influenced by the United Nations Commission on International Trade Law (UNCITRAL) Model Law.[27] Such rules have been enacted domestically (entirely or partially), regardless if a country follows the common or the civil law legal tradition.

Countries with legal traditions as different as India, which is preponderantly a common law jurisdiction, [28] and Croatia (civil law jurisdiction) use the Model Law as a paradigm for their legislation on international arbitration.[29] The procedural rules aim for optimal effectiveness throughout the arbitral process, minimizing judicial intervention; the involvement of courts is limited to assisting the enforcement of arbitration agreements and awards.[30] Despite such harmonization efforts, distinctions remain with regard the specific social context in which the international arbitration is taking place, the participants involved, and the nature of the dispute.[31]

Nonetheless, the New York Convention has been considered a very successful unifier in setting the minimum requirements for the validity and enforcement of international arbitration agreements and awards.[32] Finally, this study acknowledges that the consequences of the recently signed Convention on the Recognition and Enforcement of Foreign Judgments in Civil or Commercial Matters remain to be seen for international commercial arbitration,[33] because one of international commercial arbitration's main advantages has been the reciprocity of the enforcement of arbitral agreements and awards under the New York Convention.

[26] BORN, *supra* note 3, at 158.
[27] BLACKABY, *supra* note 2, at 1.
[28] A. Bedi, *Alternative dispute resolution in India*, (D. Campbell (Eds.), Comparative Law Yearbook of International Business (185–203) Netherlands: Wolters Kluwer International 2018), 192.
[29] UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE LAW https://uncitral.un.org/en/texts/arbitration/modellaw/commercial_conciliation/status
[30] BLACKABY, *supra* note 2, at 1.
[31] P. E. Allori, *International arbitration in different settings: Same or different practice?* (Bern: Peter Lang 2007), 223–224.
[32] BORN, *supra* note 3, at 24.
[33] The Hague Convention on the Recognition and Enforcement of Foreign Judgments in Civil and Commercial Matters, (July 2, 2019) https://files.constantcontact.com/31ff2a09001/37d43e0f-1cd4-4b0b-9928-89e2fd3f6caf.pdf

3. THE IMPACT OF THE PANDEMIC ON CURRENT CONTRACTS

Part III starts with an outline of the general reasons why parties often chose international arbitration as an alternative dispute mechanism rather than pursue litigation in multiple foreign courts. In light of this basic framework, it discusses the impact of the pandemic on current contracts that are silent regarding international arbitration agreements. It further contrasts this legal scenario with the one in which parties have already contemplated international arbitration as a final and binding dispute resolution mechanism in their original contract. The issues discussed assume a significant level of generalization (as we do not control for the legal tradition or the specific stage of development in different jurisdictions). In addition, this Part assumes that parties have access to sophisticated lawyers and that the arbitration agreement was the product of strategic design (not by lack of legal planning). Part III also considers similar effects of the of the pandemic around the globe in a non-exhaustive approach, such as delays in court systems and potential lack of personnel due to health-related effects of the pandemic. This Part concludes that the COVID-19 pandemic is likely to favor parties to pursue arbitration as opposed to litigation in domestic courts regardless if they have a valid arbitration agreement in their original contract or if such contract was silent.

3.1 General Reasons for International Commercial Arbitration

This Section outlines the main reasons why parties consider the alternative dispute mechanism of arbitration instead of litigating in domestic courts (which, potentially, may occur in multiple jurisdictions in the absence of a choice of forum clause and/ or an arbitration agreement). Hence, the first major reason for parties choosing international arbitration is the centrality of the dispute, namely, they only have to present their case once, which is in the arbitral proceedings (and assuming there is no need for the intervention of domestic courts in support of the arbitral proceedings).[34]

[34] G. B. BORN, INTERNATIONAL ARBITRATION: LAW AND PRACTICE (Netherlands: Wolters Kluwer International (2016), 115–117. (hereinafter "BORN 2016")

Second, long-arm statutes, which authorize defendants to be sued in courts in jurisdictions where they have had no physical presence, but merely engaged in conduct such as negotiations or even texting, provide a significant incentive for parties to negotiate an arbitration agreement.[35]

Third, arbitration is a "deluxe" procedure, conducted in a specialized forum, where the arbitrators have technical and (usually) legal expertise on the subject of the dispute. They also have time to hear the case and consider its implications—as opposed to generalist judges.[36]

Fourth, arbitration is often more cost effective than court proceedings, because a valid arbitration agreement excludes the potential for multiple lawsuits in different jurisdictions—as long as the seat of the arbitration is a state member of the New York Convention. The absence of appellate review (an appeal on the merits of the case) and the fact that arbitration tends to be faster also adds to its cost effectiveness. Arbitral proceedings are conducted in the language(s) selected by the parties in their agreement. This saves time and the expense of hiring official certified translators, which are often required by certain jurisdictions. Moreover, in international arbitration, the defeated party typically bears the legal expenses.[37]

Fifth, international commercial arbitration proceedings are generally not open to the public. Yet, in light of the recent trend in institutional arbitration rules to increase transparency, parties should emphasize the need for a confidentiality requirement in their arbitration agreement.[38] For parties interested in the protection of intellectual rights (including patents and trade secrets) and those who view litigation (or even the commencement of arbitration itself) as potentially damaging to their reputation (either based on cultural views, as it is often the case in Asia,[39] or due to their industry or particular trade, such as in boutique firms), an international arbitration agreement specifically addressing confidentiality is extraordinarily valuable.

Sixth, parties may also choose the procedural rules applicable to their arbitral proceedings as long as their agreement encompasses disputes "capable of settlement by arbitration."[40] On the other hand, the non-arbitrability doctrine covers matters that cannot be solved by international arbitration in a given jurisdiction. The decision on non-arbitrability is left to each country, as public

[35] MAURER, *supra* note 22, at 150.
[36] Bühring-Uhle et al., 2005, pp. 105–128.
[37] MAURER, *supra* note 22, at 158.
[38] MAURER, *supra* note 22, at 159.
[39] G. HOFSTEDE, G.J. HOFSTEDE & M. MINKOV, CULTURES AND ORGANIZATIONS: SOFTWARE OF THE MIND (New York: McGraw-Hill 2010), 236–245.
[40] The New York Convention, arts. II(1) and V(2)(a),.

policy issues are better determined by individual jurisdictions. The rationale for the non-arbitrability doctrine is that it allows each contracting state to the New York Convention to determine the matters of domestic law that require more judicial protection and therefore cannot be arbitrated; these typically reflect concerns based on public interest and policy.[41] Unlike the UNCITRAL Model Law, the Convention opted not to provide an all-encompassing legal framework for the totality of aspects of international arbitration.[42] Due to the flexibility of the Convention, countries are more assured of their sovereignty regarding which matters must be litigated and which can be resolved in an expedited fashion through arbitration.

Accordingly, parties engaged in international business transactions have important reasons to choose international commercial arbitration over litigation, as such arbitration offers centrality of the disputes, privacy, choices of language and applicable procedural rules, specialized judges with unique technical expertise, and the lack of appeals. The latter factors significantly contribute to a more expedited and cost-effective dispute resolution mechanism.

3.2 Why the Conditions of a Pandemic may support International Commercial Arbitration when the Contract is Silent about an Arbitration Agreement

This Section outlines the main factors that parties involved in an international transaction may consider in the aftermath of the pandemic in a scenario where they did not contemplate an international agreement in writing in their original contract. Technically, the question is if both parties will have interest in a submission agreement, i.e., in celebrating an arbitration agreement when the dispute is no longer conditional, but very concrete.

The pandemic is likely to affect delivery terms, bringing delay in performance of the contract, regardless of the object of such contract. Different industries were affected by the pandemic: contracts involving the tourism industry, the international sale of goods, service contracts for the maintenance of goods, and construction contracts, for instance, all will be negatively impacted by the pandemic. This is the case, because travels have been suspended and

[41] BORN 2016, *supra* note 35, at 87–90.
[42] BORN, *supra* note 3, at 35.

all delivery systems, including maritime, were subject to significant delays; disruption in transportation abound.[43]

The situation might be even direr in the energy industry, for example, due to the abundant supply of oil and lower demand.[44] Seller, thus, may have more incentives to breach at such a low sale price. Nonetheless, as the oil industry routinely establishes relational contracts that cover the parties' expectations over a number of years, rather than a one-time transaction, it is likely that they will have an arbitration clause and a force majeure/escalation clause. This is in significant contrast to a contract involving an international sale of goods, for example, where parties are more likely to have neglected to have an arbitration agreement.

In this context, this Section points out that the strategic behavior[45] of the parties in pursuing an international arbitration agreement after the dispute is concrete (technically, a submission agreement) depends on several factors, namely: the object of the contract (and if the parties are within the same industry or not), and whether it is a single contract or an installment contract, and the level of disruption caused by the pandemic (if merely logistical and/or also of significant economic nature).

It is noteworthy that the existence of a legal dispute itself increases transaction costs for the involved parties in deciding whether to pursue arbitration. However, it may also be advantageous to all the parties involved to avoid the court system, where their dispute is likely to drag on longer because of cancelations and delays caused by the pandemic (and the expected increase in legal claims it is likely to provoke). Moreover, as presented in Section A, international arbitration offers the parties an option for choosing their procedural rules, including how arbitrators will consider evidence.[46] Due to the informal and flexible nature of arbitration proceedings, this is likely to be an advantage for all the parties considering a submission agreement and expedite final resolution of their legal disputes.

All in all, it is likely that parties involved in international business transactions will prefer to celebrate a submission agreement centralizing the final resolution of their legal disputes in a

[43] Carly A. Philips et al., *Compound Climate Risks in the COVID-19 Pandemic. Nature Climate Change*, 10, 586–598, (2020), 586.
[44] INTERNATIONAL ENERGY AGENCY COVID-19 TOPICS, https://www.iea.org/topics/covid-19 (April, 2020).
[45] R. D. COOTER, THE STRATEGIC CONSTITUTION (New Jersey: Princeton 2000), 9.
[46] THE WORKING GROUP ON LEGAL TECH ADOPTION IN INTERNATIONAL ARBITRATION, *Protocol for Online Case Management in International Arbitration*, (July, 2020), 4.

single arbitration instead of potential exposure to litigation in different court systems (all likely more chaotic due to the pandemic).

3.3 Why the Pandemic is likely to advance International Commercial Arbitration in Contracts with an Arbitration Agreement

This Section discusses the main factors which parties commonly consider in deciding whether to actually start their arbitration based on a validly concluded arbitration agreement in their original contract and how the pandemic may change such calculus. It further contrasts this legal scenario with the one in which parties have not contemplated international arbitration as a final and binding dispute resolution mechanism in their original contract. It concludes that, all other factors being the same, the pandemic increases the probability of both parties being interested in pursuing arbitration as opposed to litigation in different courts.

The departing point for our analysis is the arbitration agreement celebrated among the parties (either in a bilateral contract or in multiparty contracts). The parties' strategic considerations when celebrating an arbitration agreement (and their process of negotiation) often leads them to determining key provisions of the arbitration agreement, such as choice of law and choice of the arbitral seat (the legal domicile of the arbitration) by selecting the best of each party's least favored options. Regardless of the cultural background of the parties, one party will rarely relinquish their advantage and agree to a seat and/or choice of law provision that works best for the other party, because it would also function worst for the first party. Hence, arbitration agreements tend to be an acceptable solution for all the involved parties, which makes transaction costs low for all parties to obey.[47]

Furthermore, in the international commercial arbitration context (and regardless of the industry involved), parties tend to be unwilling to litigate in courts if a legal dispute arises. This unwillingness is not necessarily due to a particular country's "superior" legal system in which courts obey the rule of law. Rather, foreign parties tend to be uncomfortable pursuing claims in the jurisdiction of the other party, if for no other reason than they assume hometown bias.[48]

[47] R. POSNER, ECONOMIC ANALYSIS OF LAW (New York: Aspen Publishers 2007), 597.
[48] 28 U.S.C. §1332(a)(1).

In such context, a party that decides to pursue an arbitral claim must initiate it timely and in accordance with all requirements specified in the arbitration agreement, including observing conciliation or mediation first if a multi-tier clause exists. If another party initiates judicial action, the party who wants to pursue arbitration should consider invoking the existence of the arbitration agreement itself so they are not deemed to have waived their right to arbitrate. These are all strategic choices that require careful assessment on a case-by-case basis and effective legal counsel in filing notices in accordance with the arbitration agreement and domestic law on the issue. It is noteworthy that strategic thinking does not authorize legal violations of professional rules of conduct.[49]

In light of the above, it is clear that once a contract has a valid arbitration agreement, parties are expected to submit their legal disputes arising out of such contract to international arbitration. The pro-enforcement bias of arbitration agreements and awards in the New York Convention is evident in the non-arbitrability doctrine (as discussed in Section A of this Part) as well as the public policy exception.[50] While often invoked in practice, neither exception has been a major obstacle to the enforcement of arbitration agreements and arbitral awards.[51] National courts may refuse to enforce foreign arbitral awards in the absence of a valid arbitration agreement or arbitral jurisdiction, under the New York Convention.[52]

The New York Convention assumes the validity of arbitration agreements, exempting defenses based on contract formation such as mistake, fraud, unconscionability, unfairness, duress, lack of capacity, and non-arbitrability,[53] which are addressed in the enforcement of international arbitration awards.[54] The majority of jurisdictions tend to presume the validity of arbitration agreements, with the practical effect that such claims are examined by arbitral tribunals—including claims attacking the existence and validity of the arbitration clause itself, rather than the underlying contract, due to the separability of the arbitration agreement.[55]

[49] 2 RONALD A. BRAND, INTERNATIONAL BUSINESS TRANSACTIONS FUNDAMENTALS (Netherlands: Wolters Kluwer International 2019), 277. (hereinafter "BRAND")
[50] New York Convention, arts. V(2)(a) and V(2)(b).
[51] GARY B. BORN, INTERNATIONAL ARBITRATION AND FORUM SELECTION AGREEMENTS: DRAFTING AND ENFORCING (Netherlands: Wolters Kluwer International 2016), 135.
[52] New York Convention, arts. V(1)(a) and V(1)(c).
[53] New York Convention, arts. II(1), II(3).
[54] New York Convention, art. V(2)(a).
[55] BORN 2016, *supra* note 35, at 56.

Considering the legal framework discussed above and the presumption validity of arbitration agreements, the rule is quite clear: arbitration agreements shall be enforced. Because of the certainty provided by the international commercial arbitration system (with the New York Convention and general support of domestic courts), parties are unlikely to depart from their contract, namely, the arbitration agreement and pursue litigation in courts.[56]

Moreover, the pandemic provides additional incentives for the parties to pursue arbitration. This is the case, as discussed in the previous Section, because domestic courts will be busier not only with new claims due to the economic meltdown caused by the pandemic, but also due to the period they have their activities suspended due to quarantines. Here, similar incentives apply vis-à-vis the situation in which parties did not have an arbitration agreement in their original contract.

Those findings are coherent with the economic analysis of law literature which shows that the incentives created by bilateral contracts are superior to those created by unilateral contracts when performances of the parties have interdependent values or when parties are potentially insolvent.[57] An arbitration agreement is a bilateral contract with performances of the parties contemplating interdependent values (this will be the case, as all the parties involved prefer arbitration over litigation and such choice is also dependent on the others' choice) or when the parties are potentially insolvent (which is not difficult to occur in the aftermath of the pandemic).

Accordingly, the pandemic is likely to contribute to arbitration agreements being enforced by providing extra incentives for the parties to comply with the legal certainty (provided by the legal presumption of validity of arbitration agreements under the New York Convention) and the low transaction costs manifested in such agreements.

4. PROBABLE CONSEQUENCES OF THE PANDEMIC FOR FUTURE CONTRACTS

Part IV discusses which incentives parties may have in order to include arbitration agreements in their future contracts after the pandemic. Likewise to what was discussed in Part III, the arguments assume a significant level of generalization (as we do not control for the legal

[56] ROBERT. D COOTER, & THOMAS S. ULEN, *LAW AND ECONOMICS* (2016), 400−404.
[57] Parisi, F. et al. , *Optimal Remedies for Bilateral Contracts,* Minnesota Legal Studies Research Paper No. 7-45, (2007), 14−30.

tradition or specific level of development in different jurisdictions) and the main consequences of the pandemic in a non-exhaustive approach. Part IV also addresses specific considerations of the involved parties when writing future arbitration agreements in the aftermath of the pandemic, such as the specific inclusion of force majeure clauses and its interpretation in light of transnational law concepts. This Part concludes that the COVID-19 pandemic tends to increase the probability of parties celebrating an arbitration agreement in their future contracts, including specific provisions on force majeure.

4.1 Are Future Contracts in the aftermath of the Pandemic more likely to have an Arbitration Agreement?

This Section outlines the impact of the pandemic on future contracts and contends that, all things being equal, after COVID-19 parties should be more willing to celebrate international commercial arbitration agreements for the reasons applicable before, namely, domestic court systems with clogged dockets and the need to expedite resolutions of commercial disputes in a more specialized setting. Moreover, the procedural rules applicable to international commercial arbitration can also be determined by the parties, which is a major advantage for securing not only a faster process, but also one with privacy, more informal and flexible by all accounts, including the hearing and the production of evidence.

At this point, it is worth discussing more details on the taking of evidence and flexibility of international commercial arbitration. International commercial arbitration may be institutional or *ad hoc*. The former involves an arbitral institution whose procedural rules are applicable to the parties' dispute, with administration and supervision of the proceedings implemented by the institution. In *ad hoc* arbitrations, the parties agree to submit their dispute to arbitration without the benefit of a supervising institution. Parties may select a pre-existing set of arbitral procedural rules designated for *ad hoc* arbitrations; if so, they should also designate an appointing authority to choose the arbitrator(s) in the absence of agreement among the parties.[58] The IBA issues guidelines on evidence taking, which are intended to supplement the legal rules chosen by the parties (whether institutional, *ad hoc*, or any other rule that may be applicable to the arbitration

[58] BORN 2016, *supra* note 35, at 26–27.

proceedings).[59] As all international commercial arbitration institutions are private entities,[60] so they have incentives to act fast and change their procedures in order to adapt to the effects of the pandemic.[61]

Hence, this Section contends that parties will opt for balancing flexibility and certainty in the procedural rules applicable to their proceedings, regardless of the type of commercial arbitration (institutional or *ad hoc*). With regard to institutional arbitrations, parties will look to how the major institutions responded to the pandemic and act upon such responses according to what they may assess as the best balance between flexibility and certainty. Importantly, the more flexible (and the more the informal) a particular set of rules may be, the higher the likelihood of potential judicialization in international commercial arbitration proceedings, namely, the interference of domestic courts with the arbitral proceedings. Judicialization, of course, is not cost-effective and may defeat the purpose of international commercial arbitration itself as an alternative dispute resolution mechanism, because it increases delays, bring higher costs, and leads to greater workloads.[62]

As the pandemic brings incentives for parties to move their hearings online as well as overall remote proceedings with more online sharing of data, this Section outlines the main relevant points that parties should consider. It is noteworthy that when the pandemic struck, online hearings and the use of video-conference were already well advanced in international arbitration while courts around the globe were scrambling to equip themselves with Zoom, for instance.[63]

First, experts in the field contend that the power of the arbitral tribunal to authorize remote hearings is contingent on the existence of several factors, including: specific authorization granting to such tribunal powers to manage the proceedings as it deems appropriate; whether the applicable law/rules refer to the parties' "*full* or *reasonable* opportunity to present their case"; if the applicable

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[59] INTERNATIONAL BAR ASSOCIATION, https://www.ibanet.org/Publications/publications_IBA_guides_and_free_materials.aspx (2010).
[60] A. S. SWEET & F. GRISEL, THE EVOLUTION OF INTERNATIONAL ARBITRATION (U.K. Oxford 2017), 45.
[61] INTERNATIONAL CHAMBER OF COMMERCE, https://iccwbo.org/content/uploads/sites/3/2020/03/icc-forcemajeure-hardship-clauses-march2020.pdf (March, 2020).
[62] Sundaresh MENON, *The Transnational Protection of Private Rights: Issues, Challenges, and Possible Solutions*, 5 Asian J. Int. Law 219-245, 25 (2015).
[63] George Bermann, *Dispute Resolution in Pandemic Circumstances*, LAW IN THE TIME OF COVID-19, (2020) 168–170.

law/rules consider hearings a mandatory requirement or if arbitral tribunals have the authority to proceed on the basis of documents only, despite parties requesting hearings. [64] Therefore, parties should specifically address that situation in their future arbitration agreements.

Second, cross-examination online has been traditionally quite contentious. Nonetheless, current renowned literature finds that alleged risks of remote testimony and concerns regarding the body language and the demeanor of witnesses are overstated.[65] Moreover, there appears to be no successful challenges of an arbitral award due to hearings being conducted remotely, so far.[66] This, however, does not mean parties will not attempt to do so. Therefore, aiming to avoid potential challenges, incentives point to parties specifically contemplating remote hearings, including cross-examination of witnesses and experts, in their arbitration agreement.

A related concern that is expected to be magnified after the pandemic is cyber intrusion in international commercial arbitration proceedings. The more remote hearings occur, the higher the risk of such intrusions. A survey of the ethical rules governing lawyers shows that, except for Russia, national legislators remain reluctant to extend the duty to incorporate cyber-security-related obligations.[67] However, the existence of general duties that can be interpreted to include the duty to protect data in general should encompass such obligations. There is a general expectation of confidentiality, regardless of the extent to which the proceedings are deemed private, as parties and lawyers expect that they alone will have access to their communications and case strategy, and arbitrators expect that no one else would attempt to view their previous working drafts or overhear their deliberations.[68] Therefore, parties should specifically address cyber risk and related obligations in their arbitration agreements.

4.2 Specific Considerations when drafting Future Contracts in the Wake of the Pandemic

The common legal challenges posed by international transactions include difficulties in coping with potential fluctuation caused by natural or market forces that affect factors such as

[64] Abdel Wahab, *Abdel Wahab's Pandemic Pathway*, GLOBAL ARBITRATION REVIEW ONLINE (May 6, 2020).
[65] M. Scherer, *Remote Hearings in International Arbitration: An Analytical Framework*, 37 J. Int. Arbitr., 21 (2020).
[66] *Id.* at 29.
[67] S. Alekhin, A. Foucard & G. Lourie, *Cybersecurity, international arbitration and the ethical rules and obligations governing the conduct of lawyers: A comparative analysis*, Transnational Dispute Management: Special Issue on Cybersecurity in International Arbitration, 21 (May 2019).
[68] S. Cohen, & M. Morril, A call to cyberarms: The international arbitrator's duty to avoid digital intrusion by taking reasonable cybersecurity measures, 40 Fordham Int. Law J., 981, 994 (2017).

currency, delivery, insurance, and freight and overall costs.[69] Moreover, international business transactions tend to rely more on e-communication, which may contribute to additional misunderstandings caused by language, interpreters, and what should actually be written down.[70] Hence, negotiating force majeure clauses in international arbitration agreements is an intricate process. They may be even more complex than negotiating the underlying contract they aim to protect, due to detailed specificities, including their scope and relation with the arbitration agreement, their relation with legal duties imposed by legislation applicable to the main contract,[71] as well as a lack of legal (and cultural) knowledge about arbitration, inherent bias among the negotiating actors, for example.[72]

In such a context, the more detailed an arbitration agreement establishing a force majeure event is, the higher the transaction costs in negotiating such agreement. That said, parties often agree on such excuse of performance, despite the fact that there is not a single definition of force majeure.[73] Common elements allude to an event which occurs after the contract formation and which is beyond the reasonable control of the parties; and the event may cause performance to be more onerous or impossible for one or all the parties. Hence, force majeure clauses may determine the suspension of performance, renegotiation of key elements of the contract, and preclusion of the termination of the contract due to a breach caused by the event or even bringing the contract to an end.[74] The International Chamber of Commerce Force Majeure Clause 2003 (as the recent updated 2020) do not mention pandemic, as they only referred to epidemic; this, however, does not preclude invocation of such force majeure clause, as pandemics are epidemics of global proportion.[75]

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[69] BRAND, supra note 50, at 2.
[70] J. R. SILKENAT, J. M. ARESTY, & J. KLOSEK, (EDS.), THE ABA GUIDE TO INTERNATIONAL BUSINESS NEGOTIATIONS: A COMPARISON OF CROSS-CULTURAL ISSUES AND SUCCESSFUL APPROACHES (New York: American Bar Association 2009)
[71] Martins, José Eduardo Figueiredo de Andrade, *Duty to mitigate the loss no Direito Civil brasileiro*. São Paulo: Verbatim, (2015) 224–228.
[72] O. Lando, *Contracts*, 3 K. Lipstein (Ed.), International encyclopedia of comparative law, 13–41 (1986).
[73] C. Twigg-Flesner, *A Comparative Perspective on Commercial Contracts and the Impact of COVID-19 Change of Circumstances, Force Majeure or What*?, Katharina Pistor (Ed.) Law in the Time of COVID-19, 155–165, 156 (2020). (hereinafter "TWIGG-FLESNER")
[74] TWIGG-FLESNER, supra note 74, at 156.
[75] TWIGG-FLESNER, supra note 74, at 157.

The party which tends to be the repetitive player in any transaction is likely to have the advantage in writing the contract draft,[76] including the tentative provisions of the arbitration agreement and force majeure clauses. The repetitive player is the party who professionally engages in the commercial activity sought: the seller, in a sale of goods transaction; the moneylender, in a lender contract, and so on. Because the seller is the repetitive party, they often write the first proposal. Most sectors use model clauses developed by sophisticated legal counsel and suited to their needs.

An interesting discussion regarding repeated players and domestic litigation in the U.S. court system is worth mentioning. The Priest and Klein model for litigated disputes and disputes that were settled before or during litigation in the United States does not seem applicable to the decisions in international commercial arbitration settings.[77] The main justification for this understanding is that the advantages of international arbitration over multiple ligation in different courts are applicable to both parties and that settlement might be encouraged even before commencing arbitration (though mediation or conciliation) or at any time later in the arbitration proceedings.

Moreover, as discussed earlier in Part II, arbitration agreements are perceived as the optimum solution for both parties when they celebrated their contract. Besides these specificities, there is prestigious U.S. literature applicable to courts defending that any litigation rate favoring the plaintiff is possible, to the extent that the 50% winning prediction defended by Priest and Klein has very difficult requirements for validation.[78] Professor Shavell argues that any litigation rate is possible when the parties involved have asymmetric levels of information.[79] This would be the case for the seller in a given transaction, in particular, if we consider it as a repeated player.[80]

Having established the potential advantage of the repetitive player, this Section turns its analysis to the drafting of international arbitration agreements. This activity is considered a specialized craft, a work of art that involves strategic choices such as the choice of law, choice of forum, excuses of performance, and yet this does not mean the opposing party will accept the

[76] C. K. ADAMS & P.K. CRAMER, DRAFTING CONTRACTS IN LEGAL ENGLISH: CROSS-BORDER AGREEMENTS GOVERNED BY U.S. LAW 14 (New York: Wolters Kluwer 2013).
[77] G. Priest & B. Klein, *The Selection of Disputes for Litigation*, 8 Oxf. J. Leg. Stud. , 1–55 (1984). (hereinafter "PRIEST & KLEIN")
[78] S. Shavell, *Any Frequency of Plaintiff Victory at Trial is Possible*, 25 Oxf. J. Leg. Stud, 493, 495–498 (1996).
[79] *Id.* at 495–498.
[80] PRIEST & KLEIN, *supra* note 78, at 28–29.

proposed clause.[81] If parties are not in the same industry, the asymmetry of information will likely be higher, because it would be harder to obtain information about the reputation of the repetitive player. Hence, pertinent concerns about specific sectors are illustrative and relevant for future claims arising out of legitimate expectations of the parties and to the interpretation of the arbitration agreement. The arbitration agreement itself is a contract; as such, it builds on contractual cannons of interpretation: ambiguity is constructed *contra proferentem* (i.e., against the drafter of the provision); specific terms prevail over general terms, giving effect to all parts of the parties' agreement; and trade usage.[82]

In such a context, parties should include information about their expectations and contractual equilibrium, which may provide guidance for future arbitral panels in assessing claims of excuse of performance and related defenses of the contract itself. Among the principles of the *lex mercatoria* derived from reported arbitral awards, *pacta sunt servanda* ("contracts shall be obeyed") and *rebus sic stantibus* (the mandatory nature of contractual clauses exists as long as the initial set of circumstances among the parties remains the same, without unforeseeable events altering the initial equilibrium of the contract) are noteworthy because they are related to potential excuses of performance, including force majeure events. Nonetheless, these principles on their own are generally insufficient when applied to actual disputes, due to the absence of rules indicating where the application of *pacta sunt servanda* terminates and that of *rebus sic stantibus* begins.[83]

Accordingly, parties have incentives to actually negotiate provisions on excuse of performance and related liability, and to specifically contemplate pandemics and climate change disruptions from now on in their contracts, as these events appear to become more common.

[81] FOLSOM, *supra* note 13, at 5; S. M. Chesler & K.J. Sneddon, *The transactional lawyer as storyteller*, 15 L.C. & R. 119, 120–121 (2018).
[82] BORN 2016, *supra* note 35, at92.
[83] A. Samuel, & M. F. Currat, *Jurisdictional problems in international commercial arbitration: A study of Belgian, Dutch, English, French, Swedish, U.S. and West German Law*, Zürich: Schulthess Polygraphischer Verlag, 245 (1989).

5. CONCLUSION

This essay started with an outline of international commercial arbitration. It proceeded to analyze the potential impact of the pandemic in current contracts which are silent regarding international arbitration agreements. It further contrasted this legal scenario with the one in which parties have already contemplated international commercial arbitration as a final and binding dispute resolution mechanism in their original contract. In addition, this essay addressed which incentives parties may have to include in arbitration agreements in their future contracts after the pandemic and related considerations on force majeure (and general clauses on excuse of performance).

Part II presented an overview of international commercial arbitration, introducing basic concepts and applicable terminology in light of arbitral proceedings and the New York Convention dynamics with domestic courts, in particular.

Part III started with an outline of the general reasons why parties often chose international arbitration as an alternative dispute mechanism rather than pursue litigation in multiple foreign courts. In light of this basic framework, it discussed the impact of the pandemic on current contracts that are silent regarding international arbitration agreements. It further contrasts this legal scenario with the one in which parties have already contemplated international arbitration as a final and binding dispute resolution mechanism in their original contract. Part III found that the COVID-19 pandemic is likely to favor parties to pursue arbitration as opposed to litigation in domestic courts regardless if they have a valid arbitration agreement in their original contract or if such contract was silent.

In Part IV, the incentives that parties may have in order to include arbitration agreements in their future contracts after the pandemic. This Part also addressed specific considerations of the involved parties when writing future arbitration agreements in the aftermath of the pandemic, such as the specific inclusion of force majeure clauses and its interpretation in light of transnational law concepts. This Part concluded that the COVID-19 pandemic tends to increase the probability of parties celebrating an arbitration agreement in their future contracts, including specific provisions on force majeure that go beyond pandemic but also include disruptions caused by climate change.

In light of all the arguments discussed previously, this essay concludes that in the aftermath of the COVID-19 pandemic (and its induced increasing likelihood for contracts to be cancelled/

excused) and related uncertainties in different court systems, it is likely that international commercial arbitration will be even more popular among international business parties as a choice for resolving international legal disputes.

Annex I: International Treaties

Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 10 June 1958) 330 U.N.T.S. 3, *entered into force* 7 June 1959 (New York Convention). Retrieved from https://www.uncitral.org/pdf/english/texts/arbitration/NY-conv/New-York-Convention-E.pdf

European Convention on International Commercial Arbitration of 1961 – UN Treaty Series, Vol. 484, p. 364, N. 7041

The Hague Convention on the Recognition and Enforcement of Foreign Judgments in Civil or Commercial Matters (concluded July 2, 2019).
Retrieved from https://files.constantcontact.com/31ff2a09001/37d43e0f-1cd4-4b0b-9928-89e2fd3f6caf.pdf

Inter-American Convention on International Commercial Arbitration of 13 January 1975. Retrieved from https://treaties.un.org/doc/Publication/UNTS/Volume%201438/volume-1438-I-24384-English.pdf

UNCITRAL Model Law on International Commercial Arbitration of 21 June 1985 (as revised by the 2010 Amendments).
Retrieved from https://www.uncitral.org/pdf/english/texts/arbitration/arb-rules-revised/arb-rules-revised-2010-e.pdf

Annex II: Databases on International Commercial Arbitration

For a free database on international awards: International Arbitration Case Law (IACL), which produces summaries of recently released arbitral awards, including investment arbitration: www.transnational-dispute-management.com/casere ports.asp

For a free database on the New York Convention, including its history, different versions, authoritative final versions in different languages, and court decisions: http://www.newyorkconvention.org/

For free access to cases on the New York Convention and additional UNCITRAL documents, the Case Law on UNCITRAL Texts (CLOUT) website is hosted by the United Nations: https://uncitral.un.org/

For a public database providing information on published and unpublished awards and all features of arbitrator decision making, see Arbitrator Intelligence: https://arbitratorintelligence.com

FINANCING THE CORONA CRISIS IN EUROPE

Hans-Bernd Schäfer[1]

1. THE LOANS PROVIDED BY THE EUROPEAN STABILITY MECHANISM TO COMBAT THE CORONA CRISIS ARE TOO SHORT, ONLY SIMULATE EUROPEAN SOLIDARITY AND CARRY A HIGH MONETARY POLICY RISK

On the 9th of April, after two days of negotiations on a European financing programme to deal with the Corona crisis the finance ministers of the euro area agreed, amongst other things, on a line of credit provided by the European Stability Mechanism (ESM). All further-reaching proposals from France, Italy and Spain, but also from many respected economists in Germany, are thus off the table for the time being. Nevertheless, the German government has succeeded in presenting this as a breakthrough in European solidarity. The headlines of the world press spoke of a line of credit of 240 billion euro. According to Politico on April 10 "The ESM will make €240bn available in spending for indebted countries." The Süddeutsche Zeitung already titled "240 billion from rescue aid" on March 25. On the homepage of the German government it says "The Eurogroup has agreed on a 500 billion euro protection program." This indirectly puts the ESM loans at EUR 200 billion.[2] These are widespread but misleading claims, as we will show here.

2. ONLY 5 STATES WOULD HAVE AN INTEREST RATE ADVANTAGE AND ONLY 3 STATES WOULD HAVE A SIGNIFICANT INTEREST RATE ADVANTAGE FROM ESM LOANS

The finance ministers of the euro zone proposed that each member state can borrow an amount of 2 percent of its gross national product as a loan under the ECCL (Enhanced Conditioned Credit Line), set out by Art. 15 of the ESM Treaty, as a "Pandemic Crisis Support".[3] The strict conditionality laid down in Art. 3 and Art. 12 of the ESM Treaty is waived. The only condition is that the loan has to be used for health care costs arising from the Covid 19 crisis.

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[2] Federal Finance Minister Olaf Scholz, *A Day of European solidarity and strength*, THE FEDERAL GOVERNMENT (Apr. 11, 2020), https://www.bundesregierung.de/breg-de/aktuelles/statement-scholz-1742786.

[3] *Report on the policy response to the Corona-19 pandemic*, CONSILIUM EUROPA EU (Apr. 9, 2020, 11:05 PM), https://www.consilium.europa.eu/en/press/press-releases/2020/04/09/report-on-the-comprehensive-economic-policy-response-to-the-covid-19-pandemic/.

How attractive are the Corona loans for the member states of the euro zone? The ESM refinances itself with loans, including bonds,[4] which are guaranteed by euro zone member states in proportion to their share of equity. The German quota is 26.9 percent.[5] Depending on the creditworthiness of the individual member states, the ESM's refinancing loans are subject to interest rates that are equal to the average of all interest rates that the member states have to pay on their debts in the national bond markets, weighted by their equity ratios. This interest rate is currently 0.53 percent. In addition, there is an interest margin which allows "full coverage" of all costs of the ESM, Art. 20 (1) ESM Treaty. In April 2020, lending interest rate at 0.76 percent according to ESM figures.

It is quite plausible that the interest margin for corona loans will be reduced somewhat because the mild conditionality of these loans provides for comparatively low administrative costs. At present, however, the lending rate is 0,76 percent.

Using this interest rate as a comparison, it turns out that 14 of the 19 euro zone countries pay a lower interest rate for national government bonds with a duration of 10 years than for ESM loans. In only 5 euro zone countries is an ESM loan cheaper than national government bonds. The finance ministers of the eurozone countries, of course, knew this when they made their decisions on 9th of April. However, they insinuated to the European public that there is a much higher credit volume. They blew up a balloon, that for a few days produced the desired headlines, that the ESM would provide 240 billion euros to fight the Corona crisis.[6]

Table 1: Interest rates on 10-year government bonds in the member states of the euro zone in percent

Member State of the euro zone	Interest rate for 10-year government bonds in percent, as	Member State of the euro zone	Interest rate for 10-year government bonds in percent, as

[4] The eurobonds, often scorned in the public debate, therefore already exist and are explicitly set out in Art. 21(1) ESM Treaty: "The ESM shall be empowered to borrow on the capital markets from banks, financial institutions or other persons or institutions for the performance of its purpose."

[5] *Amended Annexes I and II to the Treaty*, ESM (Jan. 15, 2020), https://www.esm.europa.eu/sites/default/files/2020-01-20_amended_annexes_i_and_ii_effective_from_15012020.pdf

[6] It is also to be noted that it is currently entirely unclear, what duration the loans provided by the ESM shall have. According to an internal guideline of the ESM, the ECCL, which is supposed to be used according to the finance ministers, has a duration of only one year and can be prolonged twice for a further duration of six months. It only serves as a measure for ensuring liquidity and does not meet the criteria of the long term need for corona-loans. While this can be altered by a resolution of the finance ministers, official documents have so far remained silent in this regard and so have the people, who might know more, when asked about this issue.

	of April 13 2020		of April 13 2020
Belgium	0.087	Luxembourg	-0.36
Germany	-0.349	Malta	0.553
Estonia	n.a.	Netherlands	-0.086
Finland	-0.24	Austria	0.087
France	0.1	Portugal	0.856
Greece	1,776	Slovakia	0,43
Ireland	0,206	Slovenia	0,731
Italy	1,587	Spain	0,777
Latvia	-0.04	Cyprus	1.929
Lithuania	0.31	Average of all euro area countries	0.539
Source: Bloomberg, Eurostat and ESM, the values for Luxembourg, Finland, Latvia and Lithuania date from February 2020.			

Let us now take a look at those eurozone countries for which an ESM loan is cheaper than national debt. These are Greece, Italy, Portugal, Spain and Cyprus.

Table 2: Potential loan volumes and savings of the 5 countries for which an ESM loan is beneficial

	Euro zone, gross domestic product 2019 at market prices in billion euros	Maximum ESM loan to combat the corona pandemic of 2 percent of GDP in billion euros	Interest savings when taking out an ESM loan compared with the issue of 10-year national government bonds in percentage points Interest savings per year	

			in million euros	
All euro area countries	11,905	238.1		
Greece	187	3,74	1,016	38,0
Italy	1.788	35,76	0,827	295,7
Portugal	212	4,24	0,096	4,1
Spain	1,245	24.9	0.017	4.9
Cyprus	22	0,44	1,169	5,1
Total of the 5 countries	3,454	69.08		
Sources: Eurostat, ESM, Bloomberg				

The highest possible loan amount of those countries for which an ESM loan results in an interest rate advantage over national government bonds is less than 70 billion and thus amounts to 29 percent of the amount that politicians and newspapers blurt out. If there were a political consumer protection law, every citizen could obtain a temporary injunction to have the misleading information on the homepage of the Ministry of Finance deleted. For two countries the financial advantage is so small that it almost vanishes into thin air. In order to estimate this advantage, column 3 of table 2 contains the current difference between the interest rate for 10-year national government bonds and the interest rate for ESM loans. Multiplying this difference by the highest possible ESMC loan for each country results in the highest possible interest saving per year and country. Only Italy, Greece and Cyprus can count on significant advantages, taking into consideration the size of the country. For Portugal and Spain the savings are not worth mentioning and are so low that the question arises whether the additional transaction costs of an ESM loan, such as negotiation and reporting costs, do not render borrowing from the ESM unattractive from the outset.

For the remaining 3 countries, the benefits are modest but significant. These advantages, however, cannot belie one important fact. The ESM credit line is - even in combination with further lines of credit from the European Commission amounting to 100 billion euros and the European Investment Bank amounting to 200 billion euros - so small that these countries would have to increase their national debt considerably if another solution were not found.

According to this calculation, the interest savings for those countries that have any advantage at all from taking out an ESM loan amount to 311,8 million euro per year. This amount does not constitute an ongoing burden in the budgets of ESM-member countries, but is a consequence of the state guarantee. The German share in this guarantee is 26.9 percent. If all 5 countries with relatively high interest rates take out an ESM loan, the total loan amount will be 69.1 billion euros and the German share of liability will be 18.1 billion Euros in the worst case scenario, if all loans were to be completely defaulted on.

3. ESM LOANS, CONDITIONALITY AND "OUTRIGHT MONETARY TRANSACTIONS" (OMT) OF THE EUROPEAN CENTRAL BANK

The German government claims that the ESM is a well-established crisis mechanism that can be deployed quickly. This, rather light-footedly, disregards the fact that the ESM's corona loans do not comply with its statutes. Neither do they correspond to the ESM's general objectives of providing stability aid to members with serious financing problems under strict conditionality, nor was the ECCL set up for the purpose of disease control. What the ESM is doing now is comparable to an automobile company deciding to breed sheep for a transitional period instead of producing cars. Now, the ESM is not a listed company for which such a thing would be completely unthinkable, but a legal entity with its registered office and head office in Luxembourg. It came into existence by means of an international treaty outside the institutional framework of European law. Ultimately, the ECJ, as court of last instance according to Art. 37 III ESM Treaty, would have to decide by means of an interpretation under international law whether this construction is permissible without amendments to the articles of association. There are also exceptions in German law which, for example, allow a GmbH to deviate from the articles of association if the decision is urgent and does not entail any permanent change.[7] The legal problems pertaining to these decisions, born of necessity and time constraints, are only hinted at here.

However, it seems crucial that taking out an ESM loan to combat the Corona crisis could have far-reaching consequences for the overall structure of the European Monetary System. This applies above all to the abrogation of strict conditionality and the question of how this affects the permissibility of the OMT (Outright Monetary Transactions) of the European Central Bank. The conditions for a corona loan for the improvement of the health care system

must be different and much milder than for an ESM loan, which serves to restore financial stability. As a consequence, this raises the question what impact taking out an ESM loan as part of "Pandemic Crisis Support" will have on the central bank's ability to buy government bonds of individual countries if they fall into a financial crisis.

When, at the height of the financial crisis in 2012, Italy came under pressure from the financial markets and the interest rates for government bonds rose to unsustainable levels, the President of the European Central Bank Draghi gave his famous speech "Whatever it takes". He announced a programme to buy government bonds of distressed member states, provided that the state had previously borrowed from the ESM, subject to strict conditionality. This announcement alone caused interest rates on Italian government bonds to fall rapidly. This so-called Draghi Plan was the subject of decisions of the German Federal Constitutional Court and the European Court of Justice. It was accepted as admissible under European law and under the German constitution. The arguments behind these decisions, however, rely heavily on the fact that the OMT transactions of the central bank to support individual member states are accompanied by the strict conditions attached to taking out an ESM loan. The European Central Bank had in a press release in September 2012expressed in a clear manner the conditions , attached to OMT purchases.[8] According to this statement, the "strict and effective conditionality" of an ESM loan is a necessary precondition for any OMT purchases, which, moreover, according to this statement, will be terminated as soon as the borrowing state fails to meet the conditions. The ECJ found that this programme is covered by the mandate of the central bank and in its reasoning made particular reference to strict conditionality.[9]

How are OMT purchases by the central bank of government bonds of a country taking out an ESM loan to cover corona-related health care costs to be assessed? The terms and conditions of the ESM loan are completely different to those of the Draghi Plan. Is it sufficient for the central bank's OMT purchases if a country heading towards sovereign default proves that it has spent the ESM loan on healthcare? If that was to be the case, there would be only little

[7] Harbarth, *Münchener Kommentar zum GmbHG*, 3, § 53 p 44 (2018); Zöllner/Noack, *Baumbach/Hueck GmbHG*, 22, § 53 p 40 (2019).
[8] *Directorate General Communications, Technical Features of Outright Monetary Transactions*, ECB (Sep. 6, 2012), https://www.ecb.europa.eu/press/pr/date/2012/html/pr120906_1.en.html.
[9] Peter Gauweiler and Others v. Deutscher Bundestag, ECJ C-62/14. In the judgment it says “Accordingly, the fact that the purchase of government bonds on the secondary market subject to a condition of compliance with a macroeconomic adjustment programme could be regarded as falling within economic policy when the purchase

remaining of the ban of state financing by the central bank as laid out in Art. 123 (1) TFEU. It is not possible today to predict how the European Central Bank will react should debt crises of individual states occur in connection with the high demand for public loans caused by Corona. It is to be feared, however, that targeted purchases of the debt instruments of these states will then be made within the framework of the OMT programme, although these states have not agreed to strict macroeconomic stabilisation in accordance with Art. 3, Art. 12(1) ESM Treaty. By deciding to use the ESM as a finance instrument for corona-related loans, the finance ministers may have taken a further step towards a central bank that acts as a financial policymaker, ironing out the shortfalls of member states in acting appropriately in terms of financial policy.

4. CORONA BONDS WITH VARYING RISK POTENTIAL AND MORAL HAZARD

Many leading German economists and politicians have suggested Eurobonds in recent weeks.[10] They emphasized that the situation is different from the one 10 years ago, at the outbreak of the financial crisis, when Eurobonds were also proposed. There are 2 reasons for this. Firstly, the Corona crisis is a catastrophic shock and an exceptional case for everyone in the European Union, which obliges us to show solidarity. This word appears 7 times in the Treaty on the Functioning of the European Union. Article 222 (1) TFEU states: "The Union and its Member States shall act jointly in a spirit of solidarity if a Member State is the object of a terrorist attack or the victim of a natural or man-made disaster. The Union shall mobilise all the instruments at its disposal...". This current situation is exemplary for this requirement. Secondly, the proposals on corona bonds currently under discussion are not joint government bonds as proposed during the financial crisis, for which the member states would be joint and severally liable, and which were rightly criticised and rejected.

Bonds with joint and several liability, which entail a high and confusing risk for the guarantor state, are questionable with regard to constitutional law. They pose a risk for democracy and parliamentarianism as international or European obligations may give rise to financial risks that undermine the significance of general elections and parliamentary decisions. The German Federal Constitutional Court has stressed this connection in its decision on the

is undertaken by the ESM (see, to that effect, judgment in Thomas Pringle v. Government of Ireland and Others, C-370/12, EU:C:2012:756, paragraph 60)…" (para. 63).

[10] Jens Südekum, Gabriel Felbermayr, Michael Hüther, Moritz Schularick, Christoph Trebesch, Peter Bofinger & Sebastan Dullien, *Europa muss jetzt finanziell zusammenstehen*, FRANKFURTER ALLGEMEINE ZEITUNG, (2020).

conformity of the German participation in the European Stability Mechanism with German constitutional law. It concluded that the highest possible risk of 190 billion euros that the Federal Republic of Germany is bearing with its quota in the ESM does not pose a threat to the democratic state given its economic strength.[11] It also stated that the assumption of such risks by the Bundestag, the Federal German parliament, are unconstitutional only if they not only restrict the financial leeway but can almost completely drain it.

The Eurobond models discussed and politically proposed today lead either to limited pro rata liability or to no liability at all for the debts of other states. Mixed forms in which the liability ratio of a state is smaller or larger than its payout ratio are also being discussed.

Least problematic with regard to constitutional law would be a Corona Bond, which covers the credit demand of all eurozone states arising from the epidemic. Each member state would then only be liable for the amount of the total credit it takes out itself. In that case, no repayment obligations on the part of one state can arise for another state. The result would be an average interest rate of between 1.6 percent for Italian government bonds and -0.35 percent for German government bonds because the financial markets would price in the risk of state insolvency for individual debtors according to their share. This average interest rate currently stands at 0.53 percent. If such corona bonds amounting to 1 trillion euros were issued, and Germany received a payout of 20 percent, it would pay 0.9 percent higher interest - compared to German government bonds. This would lead to an annual additional burden and, in the case of a corona bond with a term of 10 years, to an indirect transfer payment of 18 billion to the financially weaker countries, which would pay a lower interest rate than for national government bonds. After 10 years, the bond could be repaid and revolved into national government bonds. This would not constitute any guarantee risk, but would result in a moderate and temporary transfer of EUR 18 billion within 10 years.[12] Such a proposal is currently being put forward by Italy, according to an interview with Italian Prime Minister Conte[13]. The proposal of a corona bond of this kind is sometimes met by the argument that a

[11] *See* German Federal Constitutional Court Cases 2 BvR 1390/12, 2 BvR 1421/12, 2 BvR 1438/12, 2 BvR 1439/12, 2 BvR 1440/12, 2 BvE 6/12, published in the official report BVerfGE, vol. 132, pp. 195-287, pp. 251 ff. and Cases 2 BvR 1390/12, 2 BvR 1421/12, 2 BvR 1438/12, 2 BvR 1439/12, 2 BvR 1440/12, 2 BvR 1824/12, 2 BvE 6/12, published BVerfGE, vol. 135, pp. 317-433, pp. 408 ff.

[12] In comparison the German Federal budget includes an annual amount of 20 billion euro for covering the basic costs of living and protection for refugees who are not from Europe and with whom we do not share a legally binding common destiny. In 2017 this figure amounted to 21 billion euro, in 2018 23 billion euro.

[13] SÜDDEUTSCHE ZEITUNG (Apr. 20 2020), https://www.sueddeutsche.de/.

corona bond only serves as an entry into a European transfer union and cannot be reversed.[14] But special situations require special measures, and nobody can force Germany to permanently subsidise the national budgets of other Member States of the European Union with Eurobonds. This variant of Eurobonds not only has the advantage of being constitutionally innocuous. It also leaves the liability risk exclusively with the debtor and thus reduces moral hazard.

By contrast, financing via the ESM results in a guarantee of 26.9 percent, the German capital share. This would also apply to models such as the one proposed by Felbermayr, Hüther and others, which suggests only providing corona bonds for those states which have difficulties in carryint out the corona-induced expansion of national debt on their own.[15] However, the proposal of these scholars would have the advantage that, because all the states in the euro zone assume the liability risk in accordance with their quota, a high corona-induced increase in the debts of financially weaker countries will not trigger a speculative attack by the financial markets on these countries.

The mantra-like argument of the need for unity of liability and decision-making in this context fails to recognise the fact that some of the most important and successful institutions of capitalism allow risk spreading, insurance, risk shifting and shielding against external shocks. Their introduction has always brought changes to the relationship between liability and decision and was accompanied by moral hazard. Without the invention of the partnership, which enabled merchants to pool risks,[16] without the invention of the legal entity, which effectively protects companies against risks to their existence posed by creditors of the shareholders, without the limited liability company, which allows parts of the private assets of shareholders and partners to be withdrawn from creditors' access through the principle of separation, there would be neither capital markets nor large companies. The fact that these developments carry moral hazard problems only demonstrates the need to strike a balance between the principle of risk diversification and the principle of liability. Only this enables individuals, companies and entire societies to take risks that would otherwise be avoided as unacceptable.

[14] Lüder Gerken & Bert Van Roosebeke, *Solidarität ja, aber nachhaltig*, SÜDDEUTSCHE ZEITUNG, (2020).
[15] FRANKFURTER ALLGEMEINE ZEITUNG, https://www.faz.net/aktuell/.
[16] H.-W. Sinn, *Gedanken zur volkswirtschaftlichen Bedeutung des Versicherungswesens*, *77* ZEITSCHRIFT FÜR DAS GESAMTE VERSICHERUNGSWESEN, 1.

LEGAL ISSUES OF THE CORONAVIRUS PANDEMIC: A LAW-AND-ECONOMICS PERSPECTIVE

Thomas S. Ulen[1]

1. INTRODUCTION

The coronavirus pandemic has become a defining event of our times. We have all been affected by the disease in one way or another. Some of our friends, relatives, colleagues, and noted people we admire have had the disease and, in far too many instances, we have known people who have died from the disease. Our schools have been interrupted. Our plans to travel have had to be shelved. We are still avoiding crowds, remembering to wear a mask when outside, and to wash hands frequently, and mastering the art of the Zoom class or meeting.

In this section of the article I lay a foundation for what comes next. To that end, I begin with a brief history of this particular pandemic and a comparison with other recent or historical pandemics. Then I will turn to a brief account of the economic impact that the pandemic has had, followed by a discussion of the public health and economic policy responses to the pandemic.

My focus throughout will be on the United States, but that is only because I am much more familiar with matters in that country. I hope that readers will recognize in their own countries events and issues that are analogous to those I highlight and will be able to derive some lessons for policy and law there.

Writing about an ongoing event like the coronavirus pandemic presents problems that will be obvious: Matters change quickly so that what we thought we knew on April 15 is contradicted by something credible that is publicized on July 20. Because our knowledge is deepening and events are unfolding so quickly, there is always a chance that what I have to say today will be out of date tomorrow. I have tried to anticipate this possibility by speaking as generally and as conditionally as I can, and noting what contingencies might arise and how they might affect my analyses.

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1.1 Background on the Pandemic

The beginning of our current health and economic woes dates to the outbreak in Wuhan, China, in December, 2019, of the disease, covid-19, that comes from being infected by the novel corona-virus, SARS-CoV-2.[2] The virus and its disease spread so quickly from its origin that the World Health Organization declared the situation to be a pandemic on March 11, 2020.

According to this dating, the world is currently in the sixth or seventh month of the pandemic. Worldwide, there have been – as of early August, 2020 – 19 million cases of covid-19 reported, and over 700,000 deaths.[3] That is a case fatality rate (or CFR, a term of art in epidemiology) of 0.0368 or 3.7 percent, which is almost four times the CFR for seasonal influenza.[4] Those are breathtakingly large numbers.

The country with the most reported cases as of early August, 2020, is the United States, with almost 5 million cases and over 160,000 deaths. The case fatality rate for the United States is approximately 4 percent. That is, the United States, with 4 percent of the world's population, has had 26 percent of all the world's reported covid-19 cases and 23 percent of world deaths from the disease.

For the sake of comparison, recognize that in the Ebola virus outbreak of 2014-2016 there were about 28,000 cases and 11,300 deaths in West Africa and 36 cases and 15 deaths that occurred elsewhere in the world. Note that the CFRs from the 2003 SARS outbreak and the 2014-2016 Ebola virus were much higher than that for covid-19 but that both SARS and Ebola affected a much smaller number of people worldwide and in the U.S.

The only comparable recent pandemic to today's was the Spanish influenza outbreak of 1918-1919. Estimates are that about 500 million people, one-third of the world's population then, contracted the disease (which was caused by the H1N1 virus) and that worldwide deaths were 50 million, with approximately 675,000 deaths in the United States.[5]

[2] CENTRE FOR DISEASE CONTROL AND PREVENTION, https://www.cdc.gov/sars/about/fs-sars.html (last visited Aug, 2020).

[3] CORONAVIRUS STATISTICS, https://covid19stats.live/ (last visited Aug, 2020).

[4] STATISTA, www.statista.com. (last visited Aug, 2020).

[5] CENTRE FOR DISEASE CONTROL AND PREVENTION, https://www.cdc.gov/flu/pandemic-resources/1918-pandemic-h1n1.html (last visited Aug, 2020).

All of this testifies to the immense seriousness of the current coronavirus pandemic. This health crisis is orders of magnitude worse than any other recent health scare and unlike anything that the world has seen in the past 100 years.

Although we have learned a great deal about covid-19 and the novel coronavirus over the past half-year, there is still much that we do not know. And our uncertainty has contributed to our chaotic public health responses to the virus. We have learned, among many other things, that the disease has a greater effect on those with underlying health problems, such as obesity, diabetes, heart, and respiratory problems. Young people seem not to become as sick from the virus as older people do. Asymptomatic people may account for between one-third and one-half of all transmissions of the virus. This last point highlights the importance of being able to test for the presence of the novel coronavirus and to get those results quickly. The more testing we do and the quicker we get the results and can move to isolate those who have the disease and trace their contacts to warn them of their exposure to the disease, the faster we will be able to stop the spread of the virus.

But what do not know is important, too, in devising sensible public health policies. For example, we suspect, but are not sure, that transmission of the virus from human to human principally occurs through airborne droplets. Thence, the strong public health admonition to wear face masks and maintain social distancing. But one important thing that we do not know is whether having had covid-19 and survived generates antibodies that protect the individual from a recurrence of the disease, and if a recurrence is possible, whether that recurrence will be worse, the same, or not as serious as previous episodes. There is now some anecdotal evidence that those antibodies do *not* protect against catching the disease a second or third (and so on) time. As a result, antibody testing, which was touted at one point early in the pandemic as an important means of determining who had and might have survived covid-19, becomes less important than tests to determine who currently has the disease. Finally, we do not know why, in the U.S., covid-19 strikes minority populations so much harder than other groups and seems to be much more fatal to Native American, black, and Latinx populations than to others.

1.2. The Economic Costs of the Pandemic

There have also have been very large economic costs of the pandemic. The disease has caused significant rises in unemployment and drops in Gross Domestic Product around the world. In the United States, there were approximately 40 million adults who filed for unemployment benefits in the period between March and July. That is not quite one-third of the labor force and has led to the highest levels of unemployment – on the order of 15 percent – since the Great Depression of 1929 to 1933.

In late July, the U.S. Commerce Department estimated that in the second quarter of 2020 (the period of April, May, and June), the U.S. GDP fell 9.5 percent, which equates to a 32.9 percent annual rate of decline. This was the largest three-month collapse since modern recordkeeping began and "wiped away nearly five years of growth."[6]

Estimates are that the GDP of the UK will fall 11.5 percent this year. Germany reported, in late July, a drop in GDP for the second quarter of 2020 that was even greater than that in the U.S.[7] China has had a relatively modest decline of 2.6 percent in its GDP (on an annualized basis) and has recently reported a 3.2 percent increase in GDP in the second quarter of this year over the second quarter of 2019.

What happens for the rest of 2020 depends on what happens to the number of covid-19 infections and deaths. If infections decline, then economies will gradually return to health over the course of the remainder of 2020. But that presumption has already been violated in the case of the United States. After some heartening declines in the number of new cases, especially in states, like New York, Connecticut, and New Jersey, that were "hot spots" in March, April, and May, the number of new cases, particularly in the South and West of the United States, has begun to rise again. Recently, in mid-July, the number of reported new cases across the U.S. rose to over 75,000 per day – significantly higher than had been the case in the earlier days of the pandemic.

It is too soon to tell what impact this resurgence of cases might have on the economic costs of the pandemic. Many jurisdictions are responding to the uptick by reinstating the lockdown or "stay at home" policies that were in place from mid-March on. That is, they are closing bars and restaurants and limiting public gatherings as they had done from, roughly, mid-March through early May

[6] Ben Casselman, *Virus Wipes Out 5 Years of Economic Growth*, *N.Y.T.*, 1 (2020).

[7] *Id.*

or in some instances late June, when they relaxed restrictions. The evidence suggests that the states that had either weak initial public health responses to covid-19 or relaxed their restrictions earliest are the states that are experiencing the greatest increases in cases and deaths. Notably, Texas and Florida had no or few public health restrictions on their populaces and have been among the states with the greatest increases in cases and deaths this June and July. A notable exception to this general rule is California, the most populous state, which imposed restrictions on movement and retail operations very early in our experience with the pandemic, but is, nonetheless, one of the three or four states having the greatest increase in the number of cases and deaths.

Conversely to this evidence, those states that maintained their restrictions most forcefully and the longest in time are experiencing either a slowing in the number of cases and deaths, such as Illinois, or a decline in the number of cases and deaths, such as New York.

We also know that no other developed economy than the U.S. has had this resurgence of cases. Most of Europe, for example, had, relatively speaking, run-ups in the number of cases and deaths comparable to those in the U.S. in March and April and early May. But from those peaks, most European countries have all begun a continuing and relatively rapid decline in both numbers of those infected with covid-19 and deaths. It is still unclear why the U.S. experience has been so contrary to that of Europe, although we shall see some possible distinctions in the public health policy response in the U.S. in the following section.

Our leading public health experts are deeply concerned that the Fall and Winter months of 2020 are going to bring another surge in the number of covid-19 cases. The situation will be complicated by the return later in the year of the seasonal influenza, which may interact with the coronavirus in very detrimental ways for public health.[8]

1.3. The Policy Responses to the Pandemic

In discussing policy responses to the pandemic, we can distinguish between two different classes of responses: one to the health issues raised by the pandemic, the other to the economic issues.

[8] CNN WORLD, https://edition.cnn.com/world/live-news/coronavirus-pandemic-07-14-20-intl/h_0a1e9579c6acb8adc5a8cd454f221d59 (last visited Jul. 14, 2020).

An important point to bear in mind is that the health and economic policies are related. To see this, recognize that consumers are not going to return to in-person dining and shopping if they do not feel safe doing so. Nor are employees going to return to work if they perceive the workplace as a place where they are more likely to catch covid-19 than if they stayed at home. So, the safer people feel from infection, the sooner they will return to work and routine commercial activities.

Another complication in policy response, at least in the U.S. case, is to ask what level of government was instituting and enforcing a policy response to the pandemic. The American system of governance has three levels of government – federal, state, and local.[9] We might, therefore, consider how each level has responded to the coronavirus pandemic.

1.3.1 Public Health Policy

The public health response from the federal government has been weak, contradictory, and politically motivated. When the first reports of the disease arrived in late January, 2020, the President was preoccupied with his impeachment trial in the U.S. Senate (which began on January 16). He had apparently been briefed in late December and early January by intelligence officers and one of his economic advisors, Peter Navarro, about the possibility of a pandemic. But in the absence of more compelling evidence and given the momentous importance of the impeachment trial, the President did not to pay close attention to these early reports.

President Trump routinely downplayed the severity of covid-19 and suggested that the Democrats were building hysteria about the disease in their campaign to damage his presidency. As he memorably said, "There are only 15 people with the disease, and soon there will be none." And "It's like a miracle; someday it will just disappear."[10]

This unfortunate attitude pervaded the federal government and prevented that entity from acting to address the disease for almost two full months, till mid-March. And even then the federal response was half-hearted. For example, the president invoked the Defense Production Act of 1950, legislation introduced at the beginning of the Korean War that allows the president to direct

[9] THE WASHINGTON POST, https://www.washingtonpost.com/ (last visited Aug. 4, 2020).

[10] Christian Paz, *All the President's Lies about the Coronavirus*, THE ATLANTIC MONTHLY (Jul. 13, 2020), https://www.theatlantic.com/politics/archive/2020/07/trumps-lies-about-coronavirus/608647/?utm_source=share&utm_campaign=share.

private manufacturers to produce items needed in an emergency.[11] In this instance, the president said that he would use the Act to instruct certain manufacturers to produce personal protective equipment (PPE), items that were and still are running short in hospitals and that doctors and nurses need to treat covid-19 patients safely, and to limit the export of PPE. The President suggested that the shortage was due to doctors and nurses taking the equipment from hospitals for their own use. There is not a shred of evidence to support this suggestion.

On March 13 the president declared a "national emergency" due to covid-19. One week before the emergency declaration, the President authorized $8.3 billion in spending on the pandemic, $5.3 billion for ongoing efforts to contain the virus and $3 billion for research on a vaccine against covid-19. On the same day as the President declared the pandemic to be a national emergency, he also suspended all interest payments on student loans until the end of the pandemic. What that emergency entailed was not entirely clear, for two reasons. First, the federal government did not really follow its declaration with concrete steps and, worse, was inconsistent. The emergency order suggested that the federal government intended to promulgate guidelines drawn up by the Centers for Disease Control and Prevention, but then the president disavowed those guidelines and, worse, began to use Twitter to encourage citizens in the states that enacted public health measures to oppose those measures. In at least four instances involving states with Democratic governors, President Trump tweeted the message "LIBERATE ___!" adding the state name in the blank – thereby encouraging his followers to protest lockdowns or stay-at-home orders. In one of those states, Michigan, men armed with assault weapons briefly occupied the state legislature to protest the governor's public health orders.

The second reason for the ineffectiveness of the president's emergency order was that his administration's dithering about what to do – including its repeated contentions that the pandemic was not serious but was, rather, a mild influenza – left such a vacuum in the nation's policy space that many of the nation's fifty governors, some of them working in conjunction with other governors in their region, took over the task of crafting public health policies to address the pandemic. In many states, most of them in the northern and eastern halves of the country, the principal policies

[11] COUNCIL ON FOREIGN RELATIONS, https://www.cfr.org/in-brief/what-defense-production-act (last visited Aug, 2020).

were to issue "stay at home" orders, ban gatherings of more than 10 people, close commercial and retail businesses, and the like. Public health officials are the ones who suggested these responses, and many governors tied their policies to those suggestions.

But some governors, most of them in southern states, such as Florida, Texas, and Arizona, did not follow those suggestions. They allowed commercial entities to remain open, would not endorse or even allow mayors to endorse the public wearing of masks, and followed the President in suggesting that the reaction to covid-19 was overblown. And, as we have seen, those states experienced a significant spike in covid-19 cases and deaths, beginning in June and July.

1.3.2. Economic Policy Responses

An unintended consequence of the public health measures instituted in states from early- and mid-March was astonishingly large economic costs. Most businesses simply closed. The so-called hospitality industry – restaurants, hotels, airlines, cruise ships, vacation rentals, and more – was devastated. Unemployment, as I indicated above, rose to its highest levels since the Great Depression, and recent estimates are that the GDP of the U.S. fell by 9.5 percent in the second quarter, the largest quarterly drop since records have been kept. Economists at the University of Chicago estimated that 37 percent of the labor force could continue to work by connecting from home or some other remote location but that 63 percent of the labor force in the U.S. could not work remotely.

To their great credit, Congress and the Federal Reserve acted quickly and generously to the economic crisis. For example, the Federal Reserve announced on March 12 that it would loan $1 trillion to banks to help them maintain their clients' liquidity. Three days later, the Fed reduced interest rates to zero and announced a $700 billion "quantitative easing" program."Quantitative easing" involves the Fed's purchase of assets as a means of getting liquidity into the hands of asset holders.

For its part Congress passed four bills between mid-March and early May to ease the economic consequences of the coronavirus pandemic. Taken together, those four bills appropriated almost $3 trillion for various forms of relief. "Quantitative easing" involves the Fed's purchase of assets as a means of getting liquidity into the hands of assetholders. Included in those programs were $1,200 to be distributed to all adults who earned less than $75,000 per year, a Paycheck Protection Program that loans money to businesses and forgives the repayment of the loan if a large fraction

of the loan goes to pay employees, and the addition of $600 per week to whatever state benefits unemployed workers receive.

Congress is currently considering a fifth relief bill. They are doing so acrimoniously and under a binding time constraint. The moratorium on evictions and foreclosures that was part of the earlier relief acts expires on August 1. So, too, does the $600 per week federal supplement to state unemployment compensation. Unemployment benefits are, by and large, a state, not a federal, responsibility and vary considerably depending on one's domicile state. There has been some speculation on whether those receiving the state weekly benefits plus the $600 federal benefit are comfortable enough *not* to seek re-employment. Those who believe that the $600 federal supplement is too generous apparently believe that its continuation will prolong unemployment. With those expirations, the economic situation is likely to become even worse.

1.4. The Plan of the Article

The next section of this article will give a brief introduction to law and economics, the tools of which I intend to use in Section III to examine some legal issues raised by the coronavirus and covid-19. There are, of course, other disciplines – epidemiology,[12] microbiology, demographics, public health, medicine, psychology, and more – that have central things to contribute to our understanding of this disastrous situation. But economics, perhaps surprisingly, does have important contributions to make to assist our understanding of the legal issues raised by this pandemic.

2. A BRIEF INTRODUCTION TO LAW AND ECONOMICS

Law and economics – or the economic analysis of law – is a scholarly innovation that Professor Bruce Ackerman of the Yale Law School has called "the most important development in legal scholarship of the twentieth century." This new method uses tools from microeconomics to throw light on legal issues.

[12] DAVID QUAMMEN, SPILLOVER: ANIMAL INFECTIONS AND THE NEXT HUMAN PANDEMIC (W. W. Norton & Company 2013)

For example, consider the negligence liability standard. Under the traditional understanding of negligence, if there has been an accident; a victim has been injured; and an injurer has been identified, a court ought to find the injurer liable for money damages to compensate the victim if that injurer failed to take "reasonable care." If the injurer *did* take reasonable care or if the victim failed to take her own reasonable care, then the injurer ought not to be liable.

The economic view of negligence is consistent with this traditional view but distinct and, I and many others believe, richer. First, the economic understanding provides a different view of what care should count as "reasonable." According to law and economics, the social costs of accidents will be minimized if actors invest in "cost-justified precaution." That is precaution that will prevent an accident or mitigate losses and whose cost is less than the expected accident losses. One calculates "expected accident losses" as equal to the probability of an accident's taking place, given the amount of precaution taken, times the losses that the victim is likely to suffer. This is not an easy calculation to make, and advanced treatments of the subject seek to explore how people do or might make this calculation. Note, by the way, that we can analyze many different ways in which to help individuals and organizations to make these calculations – in the context of automobile accidents by, for example, clearly posting speed limits and other traffic laws, by requiring automobile manufacturers to build safety features into their cars, by mandating the wearing of seat belts and other passenger restraints, by moving to a regime of autonomous vehicles (which, by some estimates, will significantly reduce automobile accidents, 94 percent of which are due to human error), and more. In application, suppose that there has been an accident involving two motorists, one of whom is clearly the injurer; the other, the victim, who has suffered losses (such as damage to his car, medical expenses for his own injuries, and lost income from being unable to work). The injurer will be held liable to the victim for his damages if precaution that would have prevented the accident (such as not speeding or obeying the traffic rules) cost less than the probability that the accident would have occurred times the victim's losses, and the injurer did not take that precaution. If he did take the precaution but an accident happened anyway, he will (or should be) excused from negligence liability for the victim's losses.

Second, where traditional analysis focuses on what should happen if there is litigation, as in the examples above, law and economics lays even greater stress on how law can influence pre-accident behavior so that accidents are far less likely to happen or to be less injurious if they do occur. That is, law and economics imagines that if potential injurers know (perhaps through their

attorneys) the actions that will excuse them from negligence liability in the event of an accident, then they will take adequate precaution – that is, precaution whose cost was less than the expected benefit to a potential victim. Prior to an automobile accident, any given driver does not know if she will be the injurer or the victim. But that fact should not matter to negligence's ability to induce adequate precaution by both parties. If she is thinking about precaution as law and economics imagines that people do or ought to do, she will take all cost-justified precaution so that however things turn out, she will be protected. If she is the injurer but has taken all cost-justified precaution, she will not be liable for any victim's losses. If she is the victim and has been injured by a person who took reasonable care and is, therefore, not liable, she will have, nonetheless, minimized her own injuries by taking reasonable care.

Law and economics has thrown light by applying the tools of microeconomics – such as game theory, the analysis of risk allocation, and the theory of decisionmaking under uncertainty – on issues is all areas of civil law, criminal law, corporate law, administrative law, family law, and more.

There are two important recent developments in law and economics. The first is what is called "behavioral law and economics."[13] Behavioral science (or behavioral economics) imports the findings of cognitive and social psychology into legal and economic decisionmaking. Psychologists, most notably Daniel Kahneman[14] and Amos Tversky,[15] have done numerous experiments to see whether actual behavior confirms or refutes rational choice theory, the prevailing theory of decisionmaking in microeconomics. Rational choice theory posits that decisionmakers are rational in the sense that their preferences are transitive (if *A* is preferred to *B* and *B* is preferred to *C*, then *A* is preferred to *C*) and their actions are well-suited to achieving their goals. An implication of RCT is that rational people do not make mistakes unless they are misled or misinformed. For example, standard microeconomics proposes that individuals have attitudes toward risk that influence people's decisions when faced with uncertainty: People are either risk-averse, risk-neutral, or risk-

[13] EYAL ZAMIR & DORON TEICHMAN, BEHAVIORAL LAW AND ECONOMICS (2018).

[14] DANIEL KAHNEMAN, THINKING, FAST AND SLOW (2020).

[15] MICHAEL LEWIS, THE UNDOING PROJECT: A FRIENDSHIP THAT CHANGED OUR MINDS (2016).

seeking. Those categories speak for themselves. For our purposes here, it is important to note that standard microeconomics imagines that if a person is risk-averse, they are risk-averse with respect to any decision about an uncertain course of action. It does not matter, for example, whether the uncertainty arises from a gain (as in buying a lottery ticket) or a loss (as in a house fire).

However, in a famous series of experiments and papers, Kahneman and Tversky showed that most people are risk-averse with respect to gains but risk-seeking with respect to losses.[16] They showed that as a result of this finding, people's choices can be affected – indeed, changed – by how a choice is framed. For instance, if people are presented with a choice between public health options, both of which frame the choice by focusing on lives saved, they behave in a risk-averse manner. However, if people are presented with precisely the same choice between public health options that frame the choice by focusing on lives *lost*, then people behave in a risk-seeking manner.

The second important development in law and economics is the rise of empirical legal studies.[17] Using experiments, data from public archives, case data, and more, law-and-economics scholars have subjected the hypotheses about legal issues to confrontation with data to see whether the real world agrees with or refutes those hypotheses. To take one famous example, John Donohue and Steve Levitt showed in 2001 that half of the remarkable decline in crime that began in the U.S. in 1991 can be attributed causally to the legalization of abortion by the U.S. Supreme Court in January, 1973.[18]

The contributions of behavioral and empirical law and economics will continue to enrich our understanding of legal issues, as I hope to show in the following section.

3. LEGAL ISSUES RAISED BY COVID-19

The novel coronavirus and the pandemic that it has spawned have raised new legal issues or exacerbated old and on-going legal issues. For example, many employers, retail merchants, restaurants, airlines, hotels, and customers and employees of those businesses are deeply worried

[16] Amos Tversky & Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE, 453 (1981); Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA, 263 (1979).

[17] 2 ROBERT M. LAWLESS, JENNIFER K. ROBBENNOLT & THOMAS S. ULEN, EMPIRICAL METHODS IN LAW (2018).

[18] John J. Donohue III & Steven D. Levitt, *The Impact of Legalized Abortion on Crime*, 116 Q. J. ECON., 379 (2001).

about how the law will deal with liability issues if businesses reopen to their employees and customers. What if a cohort of customers at a restaurant, all of whom dined there on the same evening, come down with covid-19? Under what theory may they sue the restaurant for its responsibility for their getting ill? What problems of proof will they encounter? Understandably, customers and employees want to be safe, and businesses want to be assured that if they take adequate precaution, they will not be held liable for their employees' or customers' illnesses. Do existing principles of tort liability provide both sides of this issue with adequate incentives to take care? Will they feel reasonably protected against liability and infection? Or does the federal government need to intervene to make the tort liability system post-covid-19 better?

In this section, I shall use the tools of law and economics to help understand how to think about these legal problems. Almost all of my examples will come from the United States, but my hope is that because every country is experiencing this same pandemic, these examples will resonate with every country's experience.[19]

3.1. Emergency Powers

Covid-19 is a disease that comes from being infected by the SARS-CoV-2 virus. It is, we have come to learn, highly transmissible from human to human, especially in the minute droplets that humans emit when they breathe, cough, sneeze, talk, sing, yell, and the like. For example, one of the first "superspreader" events took place at a church choir practice in Seattle in March. By contrast, it has recently been discovered that it is extremely difficult for the coronavirus to be transmitted from surfaces to humans. Of course, these findings about transmissibility could change.

Another important finding is that asymptomatic carriers of the coronavirus – that is, people who have the virus but have yet to manifest any symptoms of covid-19 – account for between one-third and one-half of all transmissions.

Finally, the best estimate of how long it takes between the time one becomes infected by the coronavirus and begins to manifest covid-19 symptoms is two weeks. For some, the disease may manifest itself soon after having been infected, and for others, later.

Taken all together, these facts suggest problems that defy the abilities of rational individuals to deal with by themselves or by agreement with other rational individuals. First, there is the ability of individuals to determine if they have been infected. If tests were readily and cheaply available and if their results could be given within a very short time, such as 15 minutes or even 24 hours, then rational people might be able to get tests and results of tests frequently and fast enough to take actions that would diminish the spread of covid-19. They could, for example, immediately isolate themselves so as not further to infect others. In addition, if a test on Monday had shown a given individual to be covid-19-free but a test on Wednesday showed her to be infected with the disease, then public health officials could do "contact tracing." That would involve contacting those with whom the now-infected individual had spent time between the (negative) Monday test and the (positive) test on Wednesday and warning them, then contacting those whom those direct contacts had been with and warning them, and so on. These informational matters are beyond the reasonable ability of even the most rational person to deal – information being one of the most difficult items for people to deal with adequately. Moreover, it can be time-consuming and is far better left to trained individuals to do. I should note that the complexity of contact tracing can be greatly diminished by more frequent testing and more rapid results. If, for example, it takes two weeks for results of a test to come back, the contact tracer has to try to get a list of everyone the infected person has been near in the past two weeks, who those people have been near, and so on. By contrast, if people are getting tested twice a week (which is the standard that public health officials recommend), the number of people who might have been near an infected person in the few days between tests is far smaller, and, therefore, the contact tracer's job is far simpler. It is also true and worth noting that technology – as with mobile phone apps as have been used to great effect in South Korea – can make the job of contact tracing much, much simpler and, probably, more accurate. But privacy concerns about these apps are keenly felt in the United States. Thus, practically speaking, society must undertake the jobs of testing and contact tracing and design policies for disseminating the information thereby gathered, subject to privacy considerations. The United States federal government has completely mismanaged the testing for covid-19. The first tests they produced were flawed and had to be recalled. The tests now in use are of questionable veracity. To take but one example: Governor Mike DeWine (R-Ohio) had a test for covid-19 early on August 6 before he was to meet President Trump, who was visiting Ohio. The test was positive, indicating that Gov. DeWine had covid-19. So, he did not meet with the President. Later in the

day, Gov. DeWine took a second test for covid-19 that indicated he did *not* have covid-19. Either he had a miraculous and spontaneous cure over the course of the day, or, more likely, the test is flawed. The number of tests that are now available is wholly inadequate for the public health task at hand.

Second, the transmission of the coronavirus to others is what economists call an "externality" or an "external harm." That is, it is a harm that the infected person can impose on others without their consent, even without their or the infector's knowledge. Economists recommend *internalization* as the means of dealing with externalities. That would mean bringing to the attention of the externality-generator that he is doing harm unintentionally and restricting the infector's behavior so as to minimize his ability to impose the disease on others. For example, public health authorities would probably recommend "social distancing," that the infector be isolated, that he and those he is around wear face masks to prevent infecting or being infected by virus-laden air droplets, and that his contacts be traced. Public health specialists refer to this conjunction of practices as "test, trace, and isolate."

Third, because up to 50 percent of infections can come from asymptomatic infectors, isolation and face-mask-wearing may not be enough, however important they are. The normal interactions of human beings – commuting to work, shopping, attending sporting events and concerts, going to a restaurant for a meal or a bar for a relaxing evening, watching a movie at the cineplex, and so on – often involve large numbers of people being within close proximity. That being the case, there is a public-health argument for restricting the number of people who can be out in public or even going so far as to issue "lockdown" or "stay at home" orders.

Authorities, such as public health administrators, might issue hortatory advice to people within their jurisdiction to follow these practices. Alternatively, governmental authorities might issue orders to those in their jurisdiction to obey these public health guideline with, perhaps, fines or other sanctions for failure to comply. In the United States, those governmental authorities might be federal, state, or local. If the federal authorities issued mandatory guidelines (and other facilitating orders) to deal with the information and externality problems presented, there would be one national policy to govern all 330 million people in the country. There are both advantages and disadvantages of that unitary policy. A large advantage would be that everyone would be doing the

same thing to combat the spread of the disease. Among other things, that single policy would minimize the spread of the disease between localities or states that might have different policies. A large disadvantage would be that there might be enforcement issues that outrun the ability of federal authorities to control. Relatedly, as I am about to point out in the text, a single policy for the entire country will almost certainly not account for significant differences – as in population density – across states and localities.

Alternatively, as has been the practice of the Trump administration, regulation may be pushed down to the states. States then would be free to develop their own regulations and guidelines and their enforcement practices. Some states entered into interstate compacts (agreements among states, subject to Congressional approval[20]) with nearby states to adopt similar practices with the result that there was regional uniformity in regulations. Among all of the fifty states, there was a great deal of variation in the range and seriousness of the guidelines and regulations that they adopted to deal with the problems of covid-19. For example, Iowa and Illinois are neighboring states, but Iowa did not have stringent regulations while Illinois did.[21] The states in the Middle Atlantic and New England areas and Illinois in the Midwest, adopted stringent lockdown practices. Other states, such as Florida, Georgia, Texas, and Arizona, refused to institute stringent behavioral controls or stay-at-home orders. The consequences of these variations were predictable and predicted: The states with more stringent controls have, by and large, fared better than those that had more lax controls. But, in truth, the contrast is not as sharp as that. Some states that imposed lockdown orders early, like California, have seen a recent spike in cases. Indeed, California has become the state with the greatest number of covid-19 cases.

The central legal issue in all these matters has been the exercise of emergency powers that all state governments have granted their governors and that Congress has granted to the executive branch. There cannot be any question that the benefits of giving government emergency powers in special circumstances exceed the costs and that the emergency of the covid-19 pandemic and the informational and externality issues justify invoking those powers.

[20] Lisa Hansmann, *Interstate Compacts: A Primer*, EDMUND J. SAFRA ETHICS CENTER HARVARD UNIVERSITY, (Apr. 30, 2020) https://ethics.harvard.edu/files/center-for-ethics/files/interstatecompactsprimer.pdf.

[21] PANDEMIC ECONOMICS, https://bfi.uchicago.edu/podcast/pandemic-economics/ (last visited Aug, 2020).

That doesn't mean that there are no legal questions raised by the use of emergency powers to deal with the covid-19 pandemic. For instance, some have contended that contact tracing violates privacy interests and that mandatory face-mask wearing infringes on civil liberties. Others have argued that forbidding groups of people greater than a certain, small number to gather violates the First Amendment right of assembly and freedom of religion. Still another set of complaints has arisen about the government's compelling the closure of some businesses, such as bars, restaurants, hotels, sporting venues, and cinemas. Some have claimed that the extraordinary economic costs inflicted on those businesses amount to a compensable taking.[22]

I do not find those criticisms compelling, but I recognize that they are important questions that those exercising those emergency powers should be prepared to answer. In all those cases, I think that the answer is that the benefits of the regulations exceed their costs. Nonetheless, I leave for another day the question of whether those who are financially injured by the exercise of these emergency powers have a valid claim for compensation.

Additional questions are these: Should there be fines for failing to wear a mask? Or for failing to obey an order to isolate oneself? Or for a doctor's failing to notify the authorities that a patient has covid-19? Or a business' failing to police social distancing? Would it be lawful to fine people for failing get a covid-19 vaccine?

3.2. Covid-19 and the Commerce Clause

The search for a vaccine to protect individuals from covid-19 has begun in earnest. There are said to be over 100 pharmaceutical companies, worldwide, engaged in a race to develop a vaccine. In the United States the Trump Administration selected five companies in early June to receive substantial financial aid with their vaccine development. Among other help, the administration has promised to assist with manufacturing promising vaccines if the Food and Drug Administration has granted emergency use licensing to a particular vaccine or that vaccine has received full and

[22] Mary Williams Walsh, *What Is Insurable in a Pandemic*, B1 *N.Y.T.* (Aug. 7, 2020).

final FDA approval.[23] In normal circumstances a new drug or vaccine must pass through three phases of clinical trials,[24] and prudent pharmaceutical companies, knowing that approval is not certain till the results of widespread testing (phase III) are complete, do not undertake manufacturing till the drug receives final FDA approval. Because manufacturing takes time, it can be months or longer till an approved drug is widely available for patient use. Indeed, the prior record for developing and bringing to patients a safe and effective vaccine is four years.[25] This is a truly innovative policy for which the administration deserves great credit.

But even with these efforts to discover a vaccine for covid-19 and to make it available early, there is another hurdle that must be surmounted: In surveys only 50 percent of the respondents plan to get vaccinated against covid-19 once a vaccine is available.[26] This is distressing. Economists believe that vaccination against a communicable disease is an "external benefit" – that is, an action that confers an unbargained-for benefit on other persons. The greater the percentage of a population that has been vaccinated, the less likely that any unvaccinated person is to contract the disease from another person.

Governments can take advantage of an external-benefit-generating activity by either mandating or subsidizing that activity. For example, governments typically mandate that young people be educated through a particular age on the theory that a literate and numerate population is a social benefit, not just an individual advantage. Governments typically subsidize getting the annual influenza vaccine. In many communities the shot is free.

With respect to increasing the number of people who will get the covid-19 vaccine when it is available, a Congressional mandate to get the vaccine like the one I suggested at the end of the last section, is, apparently, not constitutional. Congress has until recently used the Commerce Clause

[23] U.S. HEALTH AND HUMAN SERVICES, *U.S. Government Engages Pfizer to Produce Millions of Doses of COVID-19 Vaccine*, (Jul. 20, 2020), https://www.hhs.gov/about/news/2020/07/22/us-government-engages-pfizer-produce-millions-doses-covid-19-vaccine.html.

[24] WCG CENTRE WATCH, *Human Clinical Trial Phases*, (Jul. 2020), https://www.centerwatch.com/clinical-trials/overview#:~:text=Once%20approved%2C%20human%20testing%20of,continuing%20to%20the%20next%20phase.

[25] Noah Welland & David E. Sanger, *Trump Administration Selects Five Coronavirus Vaccine Candidates as Finalists*, *T.N.Y.T.*, (Jul. 27, 2020) https://www.nytimes.com/2020/06/03/us/politics/coronavirus-vaccine-trump-moderna.html.

[26] Warren Cornwall, *Just 50% of Americans plan to get a covid-19 vaccine. Here's how to win over the rest*, Science, (Jun. 30, 2020) https://www.sciencemag.org/news/2020/06/just-50-americans-plan-get-covid-19-vaccine-here-s-how-win-over-rest#:~:text=Recent%20polls%20have%20found%20as,vaccine%2C%20with%20another%20quarter%20wavering.

of the *Constitution* as the basis for national regulation of an activity or industry.[27] But the Supreme Court has decided in a series of cases that the Commerce Clause cannot be used as the basis for the regulation of noncommercial activities.[28]

If this view is correct, then to increase the benefits of taking the covid-19 vaccine, the federal and state governments will probably have to rely on changing attitudes and subsidization.

Urging people to get the vaccine early may face some significant hurdles. It is possible that the survey finding that only about 50 percent of adult Americans intend to get the vaccine once the FDA has approved it may be due to the public's skepticism about the approval process. Like so much of the federal and some states' public health policies to stop the spread of the coronavirus, vaccine testing – like the wearing of masks, social distancing, and the like – has been politicized; in fact, some or many of the survey respondents may fear that the Trump Administration, which is in serious danger of not being reelected on November 3, 2020, may short-circuit the clinical testing process in order to get a political bounce from having produced a vaccine.

3.3. Reopening the Courts

When governors began to issue stay-at-home orders in early March, courts and lawyers realized that they should suspend the business of the courts. And so 45 states and territories suspended jury trials. By mid-Summer, 2020, most states had not yet resumed jury trials. In Champaign County, Illinois, the county circuit clerk began to send out jury summons in June with instructions to appear in mid-July. Some of those summoned sought to be excused on the ground that serving as a juror would expose them to infection with covid-19, and the circuit clerk accepted that as a reason for postponing jury service for those who raised that fear.

Some courts have experimented with "virtual proceedings," in which the parties involved – judges, lawyers, plaintiffs, defendants, and others – use a computer communication program to do some routine proceedings. But new trials or trials that were interrupted by the pandemic are not taking place.

[27] United States Constitution, Art. I, § 8, Cl. 3.
[28] United States v. Alfonso Lopez, 514 U.S. 549 (1995).

Most famously, the United States Supreme Court heard oral argument in several cases through telephonic and computer connections. Those virtual connections were made available to the public so that for the first time the public could listen to the Court's proceedings without being physically present at the Supreme Court Building in Washington, DC.

The federal judiciary, in contrast to the states, "has been processing cases at a rate pretty close to normal."[29] Judge Jed Rakoff, United States District Judge of the United States District Court for the Southern District of New York, reports that the federal judiciary typically has a much smaller caseload than do state judges and that the federal courts have been very good at planning for emergencies like the coronavirus pandemic. Much of his courts' business early in the covid-19 crisis consisted of application for those in jail or prison to be released to home confinement. Those applications usually turn on whether the applicant is a flight risk or a danger to the community, but in the pandemic, they turn on the ground of fear of contracting covid-19 in jail or prison.

A more routine issue is how a prisoner and his counsel can safely and securely consult. Many jails and prisons are not adequately equipped to allow video consultations, and yet they are not comfortable with in-person meetings between counsel and client.

Arraignments, trials, and other legal proceedings are, generally, public. Thus, the plaintiff, the defendant, counsel, and the public all have a right to be present. To conduct such proceedings requires having courtrooms or other venues that are large enough to allow social distancing. Some courts have allowed a defendant in a criminal proceeding to appear by video from the room in the courthouse where he is confined before appearing in court (the "cellblock").

The wearing of masks in court proceedings may raise fairness issues. Lawyers may not be able to notice tell-tale signs of prejudice, such a smirk or scowl, if a prospective juror is wearing a mask. Some lawyers have asked judges to allow masks to be removed from potential jurors during *voir dire* and from witnesses during testimony, and those requests have been granted.

Because of fears that many jurors may have of being in close proximity to other jurors, the Arizona Supreme Court, anticipating that many calls to jury duty would be ignored, has reduced the number of potential jurors that can be struck [without cause] by each side to two, from the usual six."[30]

[29] Jed S. Rakoff, *Covid and the Courts*, N.Y.REV, 10-12 (2020).

[30] Shaila Dewan, *Drama in Courtrooms: The Return of the Jury*, A7 T.N.Y.T., (Jun. 11, 2020).

There is a broadly held feeling that these and similar measures are mere stopgap measures, that the standard in-person proceedings are vastly preferable. But no one will feel comfortable with returning to the *status quo ante* until we are well beyond this pandemic.

3.4. Liability

In the current Congressional negotiations regarding a new relief bill, the Republican negotiators are said to have liability relief as their top priority. They cite concerns that the behavior of employees, customers, and others may be adversely affected by fears of contracting the coronavirus and of liability for harms arising from having contracted covid-19 due to the negligence of a shopowner, an educator, an employer, a healthcare professional, and so on. For example, an employer may be worried that one or more of his employees may bring an action against him alleging that he contracted covid-19 in the workplace. Or a theater owner may fear that his customers may sue him for negligently failing to clean his establishment with the result that some customers were infected with covid-19.

I recognize that these are two-sided transactions – that employees may be reluctant to return to work unless they are confident that the workplace is safe and that customers will not patronize a restaurant or hotel unless they are assured that the proprietor has followed public health guidelines on masks for employees and customers, maintaining social distancing, ventilation, and so on.

The Republican position is surely premised on both of these concerns – on protecting employers from liability if they have been nonnegligent and on encouraging employees and customers to feel safe in going to work and going to commercial establishments to shop.

There must be other, unspoken premises at work in this position, and I suspect that they are these: that trial lawyers will perceive suing employers, commercial entities, healthcare providers, educators, and others for negligent care in the pandemic as a potentially lucrative business opportunity[31] and that there is little substance to these allegations, that they are merely a means of shaking down defendants for money.

[31] Andrew Duehren, *Senate GOP Aims to Funnel Covid Liability Cases to Federal Courts*, W.S.J, (Jul. 16, 2020).

The Democratic position – because almost everything in the U.S. is politicized today – is probably this: that the tort liability system works reasonably well to provide incentives for everyone to take care; that only those who violate obvious norms of precaution are held liable for injuries; and that the safety regulation system, which provides *ex ante* safety standards for those who might cause harm, fills in the gaps in the tort liability system.[32]

Rather than waste time fighting about whether the tort liability system works well or ill, whether trial lawyers perform a vital function or are mere predators on the business community, let us try to find a middle way forward. William Galston of the New Center and *The Wall Street Journal* has recently suggested such a way: Congress should offer a "safe harbor" act that says if employers and commercial establishments comply with Centers for Disease Control and Prevention guidelines for safe workplaces, schools, and commercial businesses, the act would "guarantee employers [and businessowners] who can demonstrate that they have met these standards a 'safe harbor' against litigation [related to covid-19]."[33]

There are details that need to be specified. For instance, because this compromise would apply only to the current pandemic, there needs to be a sunset provision. The act might say something general, such as that the act should lapse within six months of the end of the pandemic or by the end of 2022, whichever comes first, or something specific, such as that the act expires when a safe and effective vaccine against covid-19 is widely available. This latter provision would have the effect of inducing people to get the vaccine. Having failed to do so could be deemed contributory negligence.

Another detail that needs addressing is for employers to make certain that their employees get tested frequently and isolate themselves if they have been found to test positive for covid-19. There ought, also, to be incentives for someone, perhaps the federal government, to compensate employees for their lost wages while they isolate or are recovering from covid-19. Some employees who are not feeling well or who have been exposed to the coronavirus or have tested positive for the disease might not stay away from work if to do so means losing income. We have a friend whose son worked with someone who had tested positive for covid-19 but stayed on the job because she needed the income. Our friend's son was frightened but did not want to go to his employer to tell

[32] Ephrat Livni, *US businesses want immunity from coronavirus lawsuits*, QUARTZ, (Apr. 24, 2020).

[33] Galston, *Democrats Should Back 'Safe Harbor' Law*, A17 W.S.J., (May 13, 2020).

him about his co-worker's infection. A law that provided for the continuing compensation for an isolated worker would obviate this problem.

3.5. Voting

On November 3, 2020, the American people will vote for federal (president, vice-president, and 35 Senate seats) and state offices. The experiences that many states have had in holding their primary elections between January and July, in the midst of the coronavirus pandemic, have raised concerns about the viability of in-person voting. In those states that allowed mail-in votes, the state authorities and the post office were overwhelmed by the volume of mail. Many voters who had requested mail-in ballots never received them and, as a result, never voted. Take the Commonwealth of Kentucky. Four states officially call themselves a "Commonwealth," rather than a State – Kentucky, Massachusetts, Pennsylvania, and Virginia. There is no difference between a "commonwealth" and a "state." In a normal election only 1.5 percent of voters request a mail-in or absentee ballot. Here is a brief primer on the differences between mail-in and absentee ballots. Many use the words "mail-in ballots" and "absentee ballots" interchangeably, but there are subtle differences between them. The absentee ballot, which is available in all 50 states, the District of Columbia, and all U.S. territories, is for those voters who will be out of the state or incapacitated and unable to vote in person on the scheduled date of the election. That practice began during the Civil War (1861-1865) to allow soldiers who were stationed away from their home states to participate in their home state elections. Federal law today requires that absentee ballots be sent to armed forces personnel and citizens who are overseas. In 16 states a voter who requests an absentee ballot must give a "reasonable excuse" for being unable to vote in person. Another 28 states and the District of Columbia have what is called a "no excuse" absentee ballot, which means that one simply has to ask for an absentee ballot but does not have to provide a reason for wanting to vote absentee. Thus, the "no excuse" absentee ballot is equivalent to a mail-in ballot. All of the likely swing states in the 2020 presidential election – Florida, Pennsylvania, North Carolina, Michigan, Wisconsin, and Arizona – allow the "no excuse" absentee ballot. Some states impose additional restrictions on absentee voters, such as a requirement that their ballot be notarized or witnessed or

that the voter provide his own stamp for returning the absentee ballot. But those ballots can also be placed in secure boxes or handed to a clerk at the appropriate state office; so, the stamp requirement should not significantly deter voting.

In contrast to the absentee ballot, there are five states – Washington, Oregon, Utah, Colorado, and Hawaii – that vote almost entirely by means of a "mail-in" ballot. In those states voters do not have to request a ballot by mail; the authorities send an application to every registered voter in the state. And typically, the state provides a prepaid return envelope. But in the June primary elections, Kentucky state officials in essence ran two parallel elections – a mail-in election involving 760,00 mailed ballots and 270,000 people who voted in-person at a limited number polling places. With the help of both the Republican and Democratic parties, state officials made the process work relatively flawlessly. There were a few delays at some polling stations, but there were not long lines of voters waiting, as they socially distanced, to get in. And the state had provided special venues for receiving the flood of mailed ballots and an increased number of workers to count those mailed ballots. All went well.

Other jurisdictions held elections that did not go as smoothly. In April Wisconsin held its primary election. At the time the mayor of Milwaukee, Wisconsin's largest city, and the governor had issued stay-at-home orders to try to stop the spread of the coronavirus. The governor tried to use his emergency powers to postpone the election till June, but the Wisconsin Supreme Court, on a party-line 4-2 vote, voided the governor's order, arguing that postponing an election was not within the governor's emergency powers. They were probably correct. At the federal level, we have recently been reminded that the president does not have the power to cancel or re-schedule a federal election. The timing of federal election matters comes from an 1845 statute and other controlling legislation and constitutional doctrine. In Wisconsin, one of the most hotly contested items on the ballot was for a seat on the Wisconsin Supreme Court. There was some speculation that the Wisconsin Supreme Court's ruling against the governor's attempt to postpone the election till June was, at least in part, motivated by the Republican Party's belief that its candidates are generally favored if voting is more costly or difficult. In the end, despite the very long lines at polling places, the Democratic candidate for the open seat on the Wisconsin Supreme Court won.

Therefore, the in-person voting and submission of absentee ballots went on as scheduled. In a normal, non-pandemic year, there are 180 polling places in the City of Milwaukee. But in this

pandemic year, the city only opened *five* polling places, largely because poll workers (approximately 60 percent of whom were older than 61 in 2018 and therefore would have been more vulnerable to contracting covid-19) were reluctant to show up.[34]

So, absentee ballots were the only recourse for those who did not want to brave the long lines at the greatly diminished number of polling places. A federal district court issued an extension that moved the deadline for the state to receive absentee ballots by six days, which would have allowed people to send in ballots that were postmarked after the primary election took place (an almost unheard of extension).

On the night before the election, the U.S. Supreme Court issued a stay against the district court extension. That meant that some people who wanted to vote and would have taken the opportunity to send in absentee ballots under the district court's ruling had either to make sure to post their ballots on election day or to vote in person. Apparently, so many people felt so strongly about voting (and concerned that their absentee ballots might not be counted) that they braved the long delays – some as long as 8 hours – to vote in-person.

I cite these examples of how the pandemic has adversely affected primary voting because it is everyone's belief that those difficulties signal that similar problems are likely to affect the state and federal elections in November. But those November election problems are likely to be orders of magnitude worse than those in the primary elections of the Spring and early Summer. In the average primary election only 22 percent of eligible voters cast ballots. In a national election the figure is closer to 60 percent of those eligible. Put somewhat differently, the cumulative voting totals in 47 state, district, and territorial primaries between February and June were 55 million people. The expected voting totals in all 50 states, the District of Columbia, and the territories is likely to be 150 million on one day, November 3.

The good news is that we have had the experience of dealing with pandemic concerns in the primaries and should have learned enough to deal with the issues for the general election in the Fall.[35]

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[34] Michael Wines, *From 47 primaries, 4 warning signs about the 2020 vote*, T.N.Y.T., (Jun. 30, 2020).

[35] *Id*.

Given that poll workers are likely to be reluctant to staff polling places if the pandemic is, as seems likely, still with us in November, and that many voters, too, would prefer not to have to venture out into public to vote, then the states (which are constitutionally in charge of much of the process of voting) will want to make voting by mail easy and secure.

There are several real problems and two specious problems that are likely to arise this Fall. If many more people than is normal decide to vote by absentee or mail-in ballot, there will be problems for the post office in managing this extraordinary volume and in the state election officials' ability to count the mailed ballots in a timely fashion. The percentage of mail-in ballots in presidential election years has increased continuously from 7.6 percent in 1996 to 12.9 percent in 2004 to 18.5 percent in 2012 and to 20.9 percent in 2016. Most states do not allow officials to begin processing mail-in ballots till the in-person polls have closed. Depending on the volume of these mail-in ballots and the number of people trained to check their validity and count them, it may be days or weeks before all the ballots are tallied. The State of New York took slightly more than one month to process the huge number of mail-in ballots submitted in their June primary election. So, there may be delays in the announcement of winners and losers in all of the Nov. 3 elections. Those delays can become a source of anxiety and distrust with potentially ugly consequences for the nation.

There are two specious problem with mail-in votes – both frequently brought up by President Trump. One is that they are much more subject to fraud than is in-person voting. The other is that they favor Democratic candidates over Republican candidates. There is empirical evidence on both contentions. With regard to fraud, that has been extremely rare in absentee voting and in the five states that currently rely almost exclusively on mail-in ballots. Second, there is no evidence that suggests that mail-in voting favors one party over another.[36]

There are several things that the states can do to accommodate a larger than normal volume of mail-in ballots and to ensure that the risk of fraud is minimized. States can require earlier requests for absentee ballots. Many states, like Ohio, require that such a request be made by the Saturday before a Tuesday election. But even a modest change like moving the deadline for requests to five

[36] Reid J. Epstein & Stephanie Saul, *Does Vote-by Mail Favor Democrats? No. It's a False Argument by Trump*, T.N.Y.T., (Apr. 10, 2020).

days before the election may be enough. States might set that earlier deadline both to give themselves more time, pre-election, to organize the ballots but also to allow flawed ballots (those, for instance, in which signatures on file do not match those on the submitted ballot) to be cured.

All of these matters will cost the states substantial sums of money. Congress appropriated and distributed $400m to the states to help with voting preparation in one of its early relief bills, but many experts believe that five times that much – $2b – is required to equip the states to handle the anticipated surge in mail-in ballots.

3.6. Behavioral Considerations

I have implicitly been assuming that decisionmakers in these matters – legislators, judges, lawyers, executives, businessmen, consumers, healthcare providers, and more – are reasonably rational in making their choices about law and safety. But as I mentioned toward the end of Section II, law and economics is moving away from the rational choice theory of human decisionmaking in favor of the conclusions emerging from experiments in cognitive and social psychology. Those conclusions typically find that human beings are flawed or imperfect decisionmakers. We make predictable mistakes, not just random, haphazard errors. And we do not learn very well how to avoid those mistakes. We make them over and over.[37]

Behavioral considerations must be brought to bear on the study of many aspects of the coronavirus pandemic. First and foremost, we can invoke behavioral science to explain one of the most fundamental facts about the virus: People do not seem to assess the risks of the virus accurately. It is not that they miscalculate by a small amount; they miscalculate by orders of magnitude. People are not good at estimating risks. For example, they tend to latch onto what is readily available to them rather than investigating the true, objectively verifiable risks. This is known as the "availability heuristic." A "heuristic" is a quick method of discovering something for oneself. As an example, if you were to ask a group of people in the United States which kind of death, homicide

[37] SCOTT PLOUS, THE PSYCHOLOGY OF JUDGMENT AND DECISION MAKING (1993).;Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CAL. L. REV. 1051 (2000).; Doron Teichman & Kristen Underhill, *Behavior Science and the Legal Response to Covid-19*, Columbia Law School Working Paper, (Jul. 2020).

or suicide, is more common, most will answer, "Homicide." Why? Because homicides are published in media and are, therefore, readily available. Suicides are typically not publicized, unless the decedent was a famous or notorious person. But, in point of fact, annual suicides are approximately three times the number of annual homicides. In 2018, for example, there were slightly more than 14,000 homicides in the U.S. and slightly more than 48,000 suicides.

Additionally, human beings suffer from "optimism bias": They believe that they are more likely than average to have favorable outcomes, a good life, a successful enterprise, a good grade, a long and happy marriage. (It is, in many ways, a charming fault about humans.) Almost 50 percent of marriages in the U.S. end in divorce. The figure for first marriages is about 41 percent; for second marriages, 60 percent; and for third marriages, 73 percent. As the great Samuel Johnson said, "Remarriage is the triumph of hope over experience." So as a first approximation, when asked what is the probability that any one couple's marriage will end in divorce, the objectively accurate answer (unless one has special knowledge about that couple) would be 50 percent. But if you ask those about to be married or recently married the question about their marriage surviving, they will give you a very low number, usually zero.

Finally, we all suffer from "confirmation bias." We place more weight on evidence that supports our position than we place on evidence that questions our position. Thus, if we dislike President Trump, we give more weight to those who are critical of him and his policies than we do to someone who applauds him and his policies.

How might these biases or heuristics apply to assessing the risk of covid-19? They all suggest that unless one has strong evidence readily available to them that this unseen and unseeable virus causes significant harm, they may discount the risk of becoming ill and discount the social benefit of taking steps to contain the viral outbreak. If public officials are saying that the disease is nothing more than a mild flu, that it will disappear quickly, that 99.9 percent of cases are harmless, and the like and if one believes those assertions rather than the tabulated evidence of the number of cases and deaths, then one will give more weight to the proposition that covid-19 is not worth worrying about; it really is not worth shutting the economy down.

In contrast, if you are a healthcare worker who has seen patients and coworkers die of covid-19, the evidence that this is a very serious disease is readily available. And you will probably be easy to convince that serious public health steps are necessary. You will also pay more attention

to the objective, tabulated information on the number of cases and deaths than to "happy talk" by politicians eager to have you believe that the risks are minimal and that all will be well soon.

3.7. Other Matters

There are, of course, other legal issues upon which I have not touched. In administrative law, for instance, there are issues about the extent, if any, to which authorities should or can relax testing standards so as to hasten the availability of new vaccines and treatments. In the area of civil liberties, there are fraught issues of the extent to which the governments can restrict freedom of assembly and movement, gun sales (which were shut down in some states), and abortions and other voluntary medical procedures (so as to free scarce medical resources for pandemic-related uses). Additionally, the legislatures, administrative agencies, and courts must wrestle with whether phone tracing of individuals, as part of a policy of contact tracing, violates individual rights to privacy. There are also civil liberties issues arising from the fact that prisoners in jails and prisons are suffering inordinately high exposure to the coronavirus and are demanding alternatives such as home confinement as more humane. Finally, there are issues of the use of federal executive power. Here the issue is not of "overreach," of going beyond what would seem to be allowed, but of "underreach," of not exercising power to do what would be prudent to do. Specifically, some scholars have raised the issue of whether the Trump Administration may have made the coronavirus pandemic significantly worse than it might have been by their inaction.[38]

4. CONCLUSION

The novel coronavirus, SARS-CoV-2, has generated the greatest health and economic crises of the last 100 years. It has affected nearly 20 million people worldwide and killed more than 700,000 people. In the United States, covid-19, the disease that this coronavirus causes, has afflicted nearly 5 million people and killed more than 160,000. In addition to the tragedy of so many

[38] David E. Pozen & Kim Lane Scheppele, *Executive Underreach, in Pandemics and Otherwise*, 113 *Am. J. Int'l L.* (forthcoming Oct. 2020); Cameron Peters, *A Detailed Timeline of All the Ways Trump Failed to Respond to the Coronavirus*, VOX (June 8, 2020), https://www.vox.com/2020/6/8/21242003/trump-failed-coronavirus-response.

lives lost and the lasting effects of the illness on so many, the disease has devastated every developed and many developing economies. Unemployment rates have soared around the world, and GDPs have fallen by the greatest levels since governments began keeping systematic records.

Along with the health and economic problems, the novel coronavirus has generated a series of novel legal issues in many different areas of law. Those issues strain the bounds of received legal theory and require fresh thinking.

I have tried to use the tools of law and economics to address some of the more salient issues arising from the coronavirus pandemic. The public health measures that may be necessary to stop the spread of covid-19 are great, and without question they impose significant costs on individual citizens and on commercial enterprises. The personal and emotional consequences of more than 700,000 lives lost and of many other lives interrupted by and, perhaps, affected for a long time by this disease are immense. And so are the economic costs of unemployment, business and individual bankruptcies, investments gone to waste, plans shelved, education disrupted and changed for the worse, the difficulty of getting to visit and hug loved ones, and more.

I have tried to argue that in every instance law and economics argues for applying cost-benefit calculations to find the best policy responses to the challenges that covid-19 has presented us. Those calculations may not be so blindingly clarifying that they point to one and only one answer to the legal problems we face, but they do make the choices clearer – as illustrated by the matter of a liability "safe harbor" provision. Reasonable (and fallible) people may initially disagree about whether and how much to shield businesses from liability for pandemic losses. But with the help of cost-benefit analysis they are likely to find common ground.

THE `LAW AND ECONOMICS' OF GOVERNMENTS' RESPONSE TO PANDEMICS

Indervir Singh[1] and V. Santhakumar[2]

1. INTRODUCTION

Governments all over the world may use or institute laws and other measures (like the Epidemic Diseases Act, 1897 in India) during pandemics like the COVID-19. These may provide special powers to governments to restrict social and economic activities and the freedom of individuals with the purpose of containing the spread of epidemics. It may be interesting to use the framework of the `law and economics' to analyse the need for such restrictions and the conditions with which these may lead to efficient outcomes. This article is an attempt in that direction. It also uses that framework to assess the response of the Government of India towards the COVID-19.

2. MARKET FAILURES THAT NECESSITATE GOVERNMENT RESTRICTIONS DURING EPIDEMICS

A starting point of the `law and economics' is to analyse the sources of market failure that necessitate the legal or institutional interventions on the part of government on a specific issue. Pandemics may lead to the following market failures.

2.1. Negative Externality

The obvious source of market failure as part of epidemics is the negative externality. The infected individuals may cause infection in others without compensating the losses to the latter. There is a need for an entity representing all individuals to act to address this problem. The negative externality (infection in this case) is emerging from a large number of sources and can affect an equally large number of individuals, who in turn can become the sources of the externality. Hence the transaction costs (required for a possible negotiation between parties who create and are affected by the externality) are huge, which makes a legal/ institutional intervention necessary[3]. It is also not a context where financial disincentives (like taxes) can be used to control the externality (and this is also due to the information

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[3] R. Coase, *The Problem of Social Cost*, 3 JOURNAL OF L. & ECON.1, 1–44 (1960).

problems discussed in a following sub-section), and there is a need for a direct control of activities that may cause or increase the externality.

2.2. Weakest Link Public Goods

Certain actions that are taken to control the negative externality during pandemics (as in other situations) have the feature of public goods. The reduced rate of infections in a locality can be beneficial to many (one person's gain does not reduce the gain of others) and it is also difficult to exclude someone from deriving that benefit. As expected, private actors may not be willing to provide such public goods adequately and hence there is a need for the intervention of an entity representing the society as a whole (and hence the need for government intervention).

The reduction in rate of infection is also a weakest-link public good [4] which makes it different from many normal public goods. A weakest-link public good is a commodity whose effective provisioning depends on the worst performer. For example, the successful control of COVID-19 does not depend on the state which is the most successful in controlling its spread but on the state, which is the least successful. There is always a chance of second wave of infections if it is not successfully contained everywhere. Also, the extent of spread of COVID-19 depends on people who are least careful or least aware. The weakest-link good necessitates government intervention so that the worst performer is good enough to control the spread of the disease.

2.3. Scale economies in certain kinds of preventive actions

The avoidance of infections or the minimisation of the spread of infections may require individual and public (government) actions. Certain actions at the level of individuals could be cheaper. Wearing masks or washing hands is of this kind. However, there are many other actions where there is a scale economy. For example, there may be a need to check the infection of people entering a territory, and this can be carried out cheaply by a single entity (rather than a multitude of individual actors), and it is socially better if the government carries out such an activity.

[4] JACK HIRSHLEIFER, FROM WEAKEST-LINK TO BEST-SHOT: THE VOLUNTARY PROVISION OF PUBLIC GOODS, 41 (CONSERVATION ECOLOGY 2002).

2.4. Information problems

Epidemics also create multiple information problem. There could be a lack of information on the part of many individuals on what causes the infection or its implications. Private firms may not be willing to provide that information, given the substantial cost of generating such information but the very low cost of copying it. A pricing strategy which equates the price to marginal cost (which is almost zero in such cases) may not lead to the recovery of the cost of producing such information. The cost of acquiring information is not same for everyone. It is costly for the illiterate and less educated to get the right information and the chance of making a mistake is also high for them. A lot of lives may be lost before people have correct information and realise their mistakes. Hence there is a legitimate reason for the government to generate and provide that information.

Though each person may have the incentive to know whether he/she is infected and to take appropriate care (if one is not infected[5]), the private gains from this information could be lesser than the social gain (since one infected person can pass on the infection to many others), and the private incentive to use testing services may not lead to social efficiency. (Though there may not be any economy of scale in testing and that is a service which can be provided by multiple firms and a near competitive situation can be achieved in this market). There may be a need for social (or governmental intervention) due to this positive externality associated with the testing.

There are also issues of information asymmetry. Each person may not know whether the people who interact with him/her are infected or not. Even if a person knows that he/she is infected, there may not be an adequate incentive for him/her to reveal that information. Even if the information of the infection (or susceptibility) of that person is known to a third party (public system), there could be a difficulty in communicating that to the public at large. The miscommunication may cause panic and costs the society dearly. (We have seen marking/stamping on bodies during the COVID-19, and the associated problems.)

2.5. Merit good and the issues of affordability

[5] On the other hand, he/she may not take appropriate care to avoid infecting others.

Societies may have genuine reasons for not accepting the consumer sovereignty on issues such as whether the testing of infection is to be carried out or not; whether to take appropriate care or not, etc., not only for reasons discussed earlier. Some people may not be aware or convinced of the need for such steps, and these could be costly to themselves (and others). Then there is an issue of affordability. There could be a significant section of the society which may not have the required resources to take the appropriate private care (even if they are aware of the need to do so). From the point of view of economics, they should be in a position to use borrowed resources for this purpose but the imperfections in the capital market may work against it. There could be governmental interventions driven by these considerations.

2.6. Insights from behavioural economics

What we have discussed so far are possible reasons justifying societal intervention within the rationality framework of the conventional microeconomics. However, the experiments in behavioural economics have brought out important insights on the actual behaviour of people. Some of these may strengthen the need for social intervention during epidemics. People tend to have a certain inertia[6] which may discourage them from taking steps which are known to be good for themselves. They are likely to underestimate the losses in future[7]. Both these tendencies may work against taking appropriate care on the part of many individuals.

People also tend to take instinctual decisions (rather than those after deliberations) and have a herd behaviour (by simply following what their peers do)[8]. They may have mental models of reality, and these need not be always grounded in reality. Even when new information is available, these may be internalised through a process of filtering[9] and hence would only confirm their pre-judgments. (Hence there may not be a correction of one's pre-judgements even when new counter information is available.) These tendencies can work in both ways with respect to crises like COVID-19. In the initial stages when an epidemic is new and unknown, people may take substantial time to accept it or take appropriate care. It is difficult

[6] S. BENARTZI & R. H. THALER, SAVE MORE TOMORROW: USING BEHAVIORAL ECONOMICS TO INCREASE EMPLOYEE SAVING 164-187 (JOURNAL OF POLITICAL ECONOMY 2004).

[7] S. BENARTZI & R. H. THALER, MYOPIC LOSS AVERSION AND THE EQUITY PREMIUM PUZZLE 73-92 (QUARTERLY JOURNAL OF ECONOMICS 1995).

[8] WORLD DEVELOPMENT REPORT, MIND, SOCIETY, AND BEHAVIOR (The World Bank Group 2015).

[9] J. BARON, THINKING AND DECIDING (Cambridge University Press 2000).

for people to change their habits which may facilitate infections. The social norms may make it difficult to adopt new habits such as maintain social distancing and avoid large gatherings. This situation may warrant `stronger' persuasions and actions to motivate the people to change their behaviour. There may be a need to unsettle the prevailing mental models of reality, and the create newer ones which are closer to the reality.

The behavioural traits mentioned here also mean that once a set of newer habits (which are useful to control infections) are developed, then these may be continued somewhat unthinkingly. People may follow these as part of the herd behaviour too. Hence the needed change is to move from an equilibrium corresponding to one model of reality to another one.

People are motivated not only by their self-interest or are driven not only by monetary gains but also intrinsically (to be right, as part of their moral or ethical considerations)[10]. Behavioural economics has demonstrated that there could be certain incompatibilities between the intrinsic motivation and monetary gains or other extrinsic incentives[11]. This insight is useful in deciding strategies to motivate certain actors (like medical professionals) during the pandemics.

3. ON THE NATURE OF GOVERNMENT INTERVENTION

The different sources of market failure or different motivations and behavioural patterns of individuals (which are somewhat different from the rational behaviour presumed in conventional neoclassical economics) may necessitate societal or governmental intervention during epidemics. Each of the sources of market failure may warrant a specific intervention. For example, the negative externality may require restricting the activities that may increase the chances of infection, information problem may necessitate testing and the provision of such information to others and so on. However, there could be interconnections or `economies of scope' too. An intervention to address one failure may reduce the burden (effort) to act on another ground. For example, if information is known and can be made available on who is infected (and if they can be protected or quarantined), then that may

[10] W. Guth et al., *An Experimental Analysis of Ultimatum Bargaining*, 3 J. OF ECON. BEHR. AND ORG. 367–388 (1982).

[11] U. Gneezy et al., *When and Why Incentives (Don't) Work to Modify Behavior*, 25 J. OF ECO PERS, 191–210 (2011).

reduce the need to control other people. Hence there could be a selection of a combination of strategies which may reduce the social cost of an intervention.

The social cost of government intervention has two components in this case. First consists of those required to enforce restrictions (including that needed to punish people who are not following these restrictions). The second component arises due to the surplus forgone (or that cannot be generated) due to the restrictions on social and economic activities. Ideally, the government should attempt to minimise the total social cost in deciding the nature of intervention. Let us use this framework to analyse the lockdown as an intervention strategy during a pandemic like the COVID-19 in the following section.

4. LOCKDOWN AS A CONTAINMENT STRATEGY DURING THE PANDEMIC

A `lockdown' in a strict sense is the ban of almost all activities outside home by individuals other than those who are acting on behalf of the government (like medical professionals, police and so on). What are the benefits of such a strategy? Through this, the negative externality, (that is, the spread of the disease by an infected person) can be limited to his/her close family members. This should reduce the number of persons who can be infected by a patient (before that person is moved to an institutional quarantine or medical care centre). Hence a safe public environment (as a public good) does not have to be provided or the `locking down' others is the public good that is available to each individual and he/she is paying a price of locking in him/her for this public good. The enforcement of the lockdown by the government benefits from scale economies. Each diseased person may get hospital treatment, and there need not be any economy of scale in the provision of this service.

How does the lockdown solve the information problems that we have discussed earlier? In a strict lockdown, it not so important for one person to know whether she is infected or not. This information is needed only if there are symptoms which make medical treatment necessary. (Or the information on infection is necessary mostly for deciding the treatment and deciding the protocol for the safety measures to be taken by medical professionals). During the lock down, each and every family is in home quarantine. There are incentives for individuals to be free from infection (due to the cost of illness) but they may not have the incentive to acquire or provide that information to public authorities in the situation of a lockdown. The lockdown also reduces the cost (making it almost zero) of information

asymmetry in this regard. People stop interacting with others (barring one's own family members) and there is no potential threat due to the information asymmetry. This is like solving the problem of information asymmetry by banning market exchange altogether!

The lockdown may be useful when people have other habits/motivations as evident from the experiments in behavioural economics. Some people may not change their routine (like going to markets or public spaces) even if they are aware of the danger but the lockdown may force them to change it. This is much more so if their peers are also of this kind. Some people's mental model of reality may encourage them to underestimate the dangers of the pandemic, but a forced lockdown may keep them away from others, and hence reducing the spread of infections.

Another important benefit of the lockdown (if it is effective) could be the reduced number of patients in hospitals. This may ensure the availability of services to all such patients. The negative externalities on the healthcare system like the possible infection of medical professionals or the reduced availability of medical services to other patients (who are not affected by the pandemic) would also come down. Otherwise, the social cost of healthcare would go up drastically if many patients reach hospitals simultaneously.

What about the impact of the lockdown from the perspective of merit good? In one sense, it is trying to protect everyone by keeping them at their homes. However, the likelihood of infection for a particular member of the family is higher in poorer households because of the limited space within homes. They are likely to bear a higher cost due to the lockdown. The non-poor sections can work from home, or take paid leave, or may have savings to meet the expenditure during the lockdown whereas the poor may be unemployed (and their work is less likely to be amenable to be carried out from home), may have only limited savings or may have a higher marginal utility of money (and hence the cost of lost income could be higher).

What are the cost of the lockdown? There are two kinds of costs as noted earlier. First include that to enforce the lockdown. Most of the police machinery may have to be used for this purpose (and there could be a diversion of their effort from other issues). However, if the state has already put in a sizable machinery for policing, then the marginal cost of using it for

enforcing the lockdown may not be that high especially by considering that other crimes may also come down during the lockdown.

It is the second cost of the lockdown that is huge. Theoretically, the lock down would lead to a standstill of a major part of economic activities (barring those related to healthcare, or those related to precautions like the production of masks, soaps, and so on in the case of COVID 19), and those that can be carried out by work-from-home and through remote activity/supervision. This would lead to substantial economic losses. Moreover, there could be a reduction of the income of governments which can impact the provision of public services in general (if there is no effort to enhance the borrowing. The social cost of borrowing may not be that high during such periods of crises). Ideally the decision to impose the lockdown should be based on the consideration of these costs and the social benefits (described in the previous paragraphs). However, this trade-off need not be a static one, and there could be innovations and technologies enabling more efficient solutions. Some of these issues are discussed in the following section.

5. POSSIBILITIES OF RELAXED RESTRICTIONS

If the testing and identification of infected people are easier, then a different form of restrictions would become feasible. This is the mandatory quarantining of these infected people, and the hospitalisation of those among this set who are chronically ill. This should allow the government the relax the restrictions over others. This can solve almost all issues of market failure that we have discussed in the first section. The negative externality is addressed since those who are likely to cause infection are restrained (or their activities are restricted). Testing and identification should be seen as the public good here since their benefits are non-rival and non-excludable, and this service is to be provided by the government, since the private provision of this service and its use by individuals who want to know whether they are infected or not, may not be adequate. Though people have some incentive to know whether they are infected or not, all of them may not be willing to pay for the testing, or even if they test and have the information may not have the incentive to reveal it.

The testing and identification by the government (and quarantining of all infected people) also solve the information issues. It can give information on whether someone is infected or

not, and the chances of interaction with such a person can be minimised. It is a better strategy with merit good considerations. If testing is done based on the susceptibility, these can cover all people (irrespective of their socioeconomic status or ability to pay and if institutional quarantining is provided to those who cannot practice social distancing within their homes), and if all others are allowed to go on with the normal social and economic activities, then the problem of the poor bearing an unequal share of the cost of lockdown can be mitigated to a great extent.

The behavioural patterns or motivations (noted in behavioural economics) will also be taken to account through this set of relaxed restrictions. Anybody suspected is tested irrespective of the inertia (or heard behaviour) or readiness and is asked to go through quarantining. Hence this isolation can happen irrespective of whether one think whether such a measure is needed or not (based on one's own mental model of reality).

Let us consider the costs of this relaxed set of restrictions. There is a cost for testing all who are likely to have infection. (This may require testing all those who may have interacted with a person who is already infected). Then there is a cost of quarantining people with infections and to see that these people are self-isolated. Monitoring to see that the infected/suspected people are in isolation may become costlier (when all others continue with their normal activities). This may require a decentralised approach. It may be necessary to have ground level functionaries (like ASHA workers in India) working with communities or local government representatives to enforce it. There could be places where decentralised institutions are already in place and such monitoring may become easier there, but the building up of this institutional infrastructure just for dealing with the pandemic could be costly.

The second cost is the opportunity cost of foregone economic activities. However, this would be considerably less than that of the blanket lockdown, since a relatively wider set of economic activities can be allowed. Hence there could be a trade-off between the first and second costs. The higher cost of instituting a relaxed set of restrictions may encourage the governments to move towards a blanket lockdown but that would lead to higher social losses (in terms of foregone economic activities). One can visualise an optimum here, whereby the marginal cost to enforce relaxed restrictions becomes equal to the marginal social loss due to

the banned activities. This trade off and the optimum may depend on specific socioeconomic and governance contexts.

An extreme form of government intervention during epidemics is `no' intervention. We have argued in the second section that some form of intervention may be needed to address different kinds of market failure in this regard. The other extreme intervention is the complete lockdown. This may be addressing the market failure but at a huge social and economic cost. However, there could be different feasible strategies between these two extremes. However, the feasibility may depend on specific social contexts. We can understand this by considering the restrictions imposed by two countries namely Sweden and India during the COVID-19 as in the following section.

6. COVID-19: SWEDEN VERSUS INDIA

Sweden has imposed only milder restrictions during the COVID-19. Ashok Swain [12] summarises these as follows: "It has stopped classroom teachings in the universities and high schools; postponed the soccer season; and, banned the gathering of more than 50 people. Aside from this, life goes on in the country, as usual. Offices, schools, shops, bars, and restaurants are open like before, as are the spas and hairdressers. Very few people are wearing masks while walking outside." The strategies followed by Sweden are different from even those in other Scandinavian countries. On the other hand, India has followed a blanket lockdown for a number of weeks.

If people are informed and if they are careful in protecting themselves, and if their physical environment enables social distancing, then government-imposed restrictions may not be that required to control the negative externality. If people are careful in limiting their interactions with others, then government intervention in the exchanges (interactions) due to the information asymmetry may not be that important. The government can save enforcement costs that is necessary for such interventions. Those who are infected can also be self-isolated at home and only those with chronic conditions need to be hospitalized.

[12] COVID-19 STRATEGY – THE SWEDISH MODEL AND LESSONS FOR INDIA UNIVERSITY PRACTICE CONNECT, AZIM PREMJI UNIVERSITY, https://practiceconnect.azimpremjiuniversity.edu.in/covid-19-strategy-the-swedish-model-and-lessons-for-india/ (last visited May 12, 2020).

There can also be a trade-off for individuals with respect to the safety and personal freedom. It is not unusual for people to carry out apparently unsafe activities (like adventure sports) based on their personal discretion. There could be a societal aggregation of this trade off and hence there could societies which may not like a higher level of governmental intervention in the space of personal freedoms even if that is aimed at ensuring the safety of its citizens.

Given the knowledge that the end-result of COVID-19 is the chronic infection of about 5-10 percent of people, and given the personal freedoms people may enjoy, a strategy that protects who are highly vulnerable people (say by banning visitors to old age homes) or by ensuring that enough hospital workers are available (say by keeping their children in schools[13]) may become acceptable to certain countries. This may be seen as a desirable strategy since the long-run objective is to achieve the herd immunity for a substantial section of the population. Such a strategy would not lead to major economic losses and this may enhance its attractiveness.

However, such a strategy may not be acceptable to India. Or the expected loss due to this strategy could be much higher. This could be so since many people may not take adequate personal care and that may lead to a higher level of infections in the country. Many people may not be able to isolate themselves due to different constraints. Given the limited healthcare infrastructure available within the country, it may not be able to treat all chronically infected patients if infections spread fast. The possible increase in the death rate may be viewed socially and politically very costly, and that may make the blanket lockdown attractive.

There could have been another strategy in India. This is to test a large number of people who are suspected to have contacts with infected people. (Such a large-scale testing was practiced in a number of developed countries). Such a testing could have been used to practice less severe restrictions as noted in the previous section. However, the cost of large-scale testing can be high considering the size of India's population. This too may enhance the attractiveness of the blanket lockdown for the government since it has to bear the political costs of a higher level of infection and deaths, whereas the losses due to the blanket lockdown is shared by the society at large.

[13] A strategy used by Sweden

7. APPENDIX: A SIMPLE MODEL DESCRIBING THE SOCIAL COST

We have discussed three strategies, lockdown, changing habits, and testing, to combat COVID-19. Now, the question is, should a country use one or a mix of strategies. Also, should there be any limit to using a strategy? A simple model can be used to analyze the choice among the three strategies.

Let SC be the social cost of COVID-19 that a country wishes to minimize. The social cost is the function of three strategies, (i) inculcated new habits that leads to more careful actions by citizens[14] (h), (ii) the share of economic activity not allowed by the government (x), and (iii) the large-scale testing to detect infected people (t) i.e. $SC = C(h, x, t)$. The three strategies are substitute of each other.

The social cost is combination of two costs, $f(h, x, t)$ and $g(h, x, t)$, where $f(h, x, t)$ is the cost of deaths due to infection and $g(h, x, t)$ is the cost of preventing infection by using one of the three strategies. These costs may differ among countries.

Let us assume that $f_x = \frac{\partial f(h,x,t)}{\partial x} < 0$, $f_h = \frac{\partial f(h,x,t)}{\partial h} < 0$, , $f_t = \frac{\partial f(h,x,t)}{\partial t} < 0$ $g_x = \frac{\partial g(h,x,t)}{\partial x} > 0$, $g_h = \frac{\partial g(h,x,t)}{\partial h} > 0$ and $g_t = \frac{\partial g(h,x,t)}{\partial t} > 0$. The first three inequalities mean that there will be less deaths with more stringent ban on economic activity, higher investment in changing habits or creating awareness and testing at larger scale. The fourth, fifth and sixth inequalities signify an increase in the economic losses as the ban on economic activity becomes more stringent, a higher investment requirement for inculcating better habits and a positive relation between the level of testing and the cost of testing.

Since f_x, f_h, and f_t denotes the lowering of cost of deaths due to COVID-19, they represent the marginal benefits of banning economic activity (MB_x), the marginal benefits of creating awareness (MB_h) and the marginal benefits of testing (MB_t). However, negative values of f_x, f_h, and f_t mean that $MB_x = -f_x$, $MB_h = -f_h$, and $MB_t = -f_t$. Similarly, g_x, g_h, and g_t are the marginal cost of banning economic activity (MC_x), the marginal cost of creating awareness (MC_h) and the marginal cost of testing (MC_x).

[14] The investment required to inculcated new habits may include large information campaigns and enforcing certain
rules like making everyone wear mask. These actions do not need banning an economic activity but still requires large investment.

The aim of a country is to minimize the social cost $C(h, x, t)$, i.e.

$$min\ SC = f(h, x, t) + g(h, x, t)$$

Let us assume that SC is minimum at h^*, x^*, and t^*. The first-order condition of a minima will be

$$\frac{\partial C(h^*, x^*, t^*)}{\partial x} = f_x + g_x = 0$$

$$-f_x = g_x$$

$$MB_x = MC_x \qquad (1)$$

$$\frac{\partial C(h^*, x^*, t^*)}{\partial h} = f_h + g_h = 0$$

$$-f_h = g_h$$

$$MB_h = MC_h \qquad (2)$$

$$\frac{\partial C(h^*, x^*, t^*)}{\partial t} = f_t + g_t = 0$$

$$-f_t = g_t$$

$$MB_t = MC_t \qquad (3)$$

Combining (1), (2) and (3), we will get

$$\frac{MB_x}{MC_x} = \frac{MB_h}{MC_h} = \frac{MB_t}{MC_t} \qquad (4)$$

We shall assume that the marginal benefits, though positive, are decreasing (it requires $f_{xx} > 0$ $f_{hh} > 0$ and $f_{tt} > 0$) and the marginal cost is increasing (i.e. $g_{xx} > 0$, $g_{hh} > 0$, and $g_{tt} > 0$). These assumptions ensure that our second-order condition of a minima is satisfied.

Equations (1), (2), (3) and (4) mean that to minimize the social cost, each strategy should be used until its marginal benefits are higher than or equal to its marginal cost. A country may choose one or more strategies depending on their marginal benefits and marginal costs. In the

context of COVID-19, the situation may require a country to choose a mix of three strategies, though their optimal relative quantities may vary from country to country or state to state.

Equation (4) shows that the relative importance of a strategy depends on their relative marginal costs and marginal benefits. For example, a smaller MC_h must be balanced with a smaller MB_h. Since the marginal benefits are declining, a lower MB_h means choosing a high value of h to minimize the social cost. Since people having better education are in a better position to recognize authentic information and quick to understand the required precautions, the marginal cost of inculcating new habits is lower for them. Thus, the countries with better education like Sweden may depend more on creating new habits and awareness than banning economic activities. On the other hand, a high MB_h will compel the country to invest less in changing habits of its people and to prefer banning economic activities like it has happened in India. (Since there are large differences among Indian states, the optimization may require different strategies for different states).

It does not mean that a lockdown is less costly for a developing country like India. The cost of lockdown in terms of the loss of livelihood and income may be much higher in a developing country as compared to a developed one. The lack of an effective social security system makes the citizens of a developing country move vulnerable to the lockdown. In comparison to these two options, the option of testing at large scale may be cheaper for the developing countries. The relatively lower salaries of health workers in developing countries mean that the cost of testing may not be too high for them. The relatively lower marginal cost and higher marginal benefits (as pointed out earlier) of this option may warrant the large-scale expansion of testing capacity (i.e. choosing a higher value of t) to minimize the social cost.

8. EPILOGUE

The need for restrictions and intervention by governments during a pandemic is somewhat obvious due to different kinds of market failure (which make private actions and voluntary exchange) inadequate. However, there can be multiple strategies which may lead to different costs of enforcement and losses due to forgone economic activities. What is selected may depend on contextual, economic, social and political factors. There may be possibilities of

using innovative strategies that can minimize the total social cost. However certain context may allow the use of such cost-minimizing strategies where as others may not.