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EDITORIAL NOTE

- *Editors*

The first issue for Volume VII presents a set of 6 articles which seek to explore the intersection of law and economics, examining how economic principles can enhance legal frameworks and improve societal outcomes. From the impact of digital technologies on law and society to the challenges of child labor in the handloom industry, these papers offer valuable insights into the complex relationship between law and economics. This issue highlights the potential of economic analysis to inform judicial decision-making, improve regulatory frameworks, and address pressing societal issues.

The paper titled "**Exploring Some Nuanced Approaches in the Economic Analysis of Law**" by Justice AK Sikri, advocates for integrating economic analysis into judicial decision-making to enhance legal reforms in India. He emphasizes the need to consider economic impacts alongside traditional legal principles, human rights, and the doctrine of proportionality. Justice Sikri also highlights the benefits of the interdisciplinary approach between law and economics, and the potential of alternative dispute resolution methods to improve legal efficiency and outcomes. This approach aims to create a more balanced, informed, and effective judicial system.

The paper titled "**Interconnectedness between Economic Theories and Legal Practices**" by R Venkataramani, explores how integrating economic principles with legal frameworks enhances human well-being by aligning legal practices with economic concepts such as utility maximization and societal welfare. It highlights the interconnectedness between law and economics, illustrating how legal systems can drive better outcomes by incorporating economic insights. Additionally, it critiques traditional economic measures like GDP for their inadequacy in capturing quality of life, emphasizing the broader role of law in improving economic and social conditions.

The paper titled "**Information's 'Un'-civilization: The Imperative for a New Approach to Law and Economics?**" by Prof. (Dr.) Upendra Baxi, discusses the impact of digital technologies on law and society, particularly the rise of surveillance capitalism as described by Shoshanna Zuboff. It acknowledges the influence of the law and economics movement but argues that its focus on inequality has diminished. Three models – US (market fundamentalism), PRC (authoritarian legality), and EU (human rights focus) – are presented as potential responses to digital governance. The author expresses concern about the potential

demise of law in the face of powerful digital technologies and corporate control, calling for a renewed focus on the role of law in regulating the digital world and asking if law and economics can help address this challenge.

This paper "**Study on the Application of Forensic Analytics in Early-Stage Occupational Fraud Detection**" by Dr. Himanshu Thakkar, Ms. Gopika Gopan, Ms. Anshu Singh, Dr. Siddharth Dabhade explores the issue of occupational fraud, which is prevalent globally. It discusses the impact of fraud on organizations, including financial losses and reputational damage. The study aims to evaluate preventive measures organizations have implemented to reduce occupational fraud. The paper highlights the importance of forensic analytics in detecting and preventing fraud.

The paper titled "**Analysis of Legal Provisions for Child Labour in Handloom Sector: A Case Study of West Bengal**" by Sumana Lahiri and Nausheen Nizami, examines child labour in India's handloom industry, focusing on West Bengal. It analyses existing labour laws and their applicability to child labour, finding that while laws prohibit child labour, they are often not strictly enforced. The paper highlights the economic reasons behind child labour in handloom households and the impact on children's education and development. The research calls for stricter enforcement of laws and measures to address the root causes of child labour in this sector.

This paper titled "**A Law & Economic Analysis of 'Ordinance Raj' In India: Navigating the Rule v. Standard Debate in the Legal Design as a Mechanism to Reduce Political Cartelization**" by Khyati Maurya and Saransh Sood, examines the use of ordinances in India, focusing on the issue of promulgation. It analyses the constitutional provisions and relevant court cases, highlighting the misuse of ordinance-making power by successive governments. The paper employs a law and economics approach to analyse this issue, proposing solutions to address the problem. The authors suggest framing rules to objectively test the need for ordinances and ensure they are used appropriately. Additionally, they propose a total cost curve to determine the optimal level of stringency in these rules. The goal is to strike a balance between allowing the executive to address emergencies and ensuring that parliamentary deliberations remain central to the legislative process.

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EXPLORING SOME NUANCED APPROACHES IN THE ECONOMIC ANALYSIS OF LAW

Justice AK Sikri[1]

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ABSTRACT

Hon'ble Justice AK Sikri, in his address analyses the necessity of integrating economic analysis into judicial decision-making for balanced and effective legal reforms in India. He advocates for nuanced approaches, such as incorporating human rights and the doctrine of proportionality, to enrich legal jurisprudence. Highlighting the interdisciplinary evolution of law and economics, Justice Sikri underscores the importance of judicial awareness of economic impacts of judicial decisions and the potential of alternative dispute resolution methods to enhance legal efficiency.

Keywords: *Right to Privacy, Data Protection, Sri Krishna Committee, Coase theorem, game theory, costs and incentives*

[1] Former Judge of the Supreme Court of India.

1. INTRODUCTION

It is my pleasure to deliver this keynote address on a very interesting and somewhat emerging topic. As India looks to enhance economic growth, with the target of 5 trillion economy, legislative and judicial reforms (apart from many other steps that may be required) become paramount. Here, my attempt is to limit the discussion to judicial approach in decision making. The responsibility of the judiciary is humungous as the courts play the role of balancing priorities in deciding legal issues which have economic repercussions. For this, traditional thinking has to be replaced with nuanced approaches in the field of law and economics which lead to the evolution of a jurisprudence that takes care of the legality requirements while keeping in mind the business interests.

The fact that imbuing economic jurisprudence in decision-making is the need of the hour reminds me of what the great Justice Oliver Wendell Holmes had said in his famous paper entitled *The Path of the Law*[2] that, "***For the rational study of the law the black-letter man may be the man of the present, but the man of the future is the man of statistics and the master of economics… We learn that for everything we have to give up something else, and we are taught to set the advantage we gain against the other advantage we lose, and to know what we are doing when we elect.***"

These lines of Justice Holmes eloquently provide the roadmap of the time where various advances in social sciences are shaping some of the most successful approaches that were arising out of the cross-pollination of key models from different fields or were an intersection of philosophies between disciplines. All this postulated an exceptionally fertile place for the emergence of ideas in the fields of Law and Economics, thereby exemplifying not only the significance of its increased meticulousness but also the power of interdisciplinary thinking.

In its earlier phase, law confined the use of economics to antitrust, regulated industries, tax and some special topics like determining monetary damages. In these areas, law needed economics to find an answer to the questions which were the subject matter of the disputes.[3] But in the latter half of the 19th century, this limited interaction changed dramatically when the economic analysis of law expanded into the more traditional areas of the law, such as property, contracts,

[2] Oliver Wendell Holmes, *The Path of the Law*, 10 HARVARD LAW REVIEW 457, 469, 474 (1897).
[3] *See* Jules L. Coleman, *The Economic Analysis of Torts, in* RISKS AND WRONGS (Oxford University Press 2002).

torts, criminal law & procedure and constitutional law.[4] This new trend uses tools from economics to enrich our understanding of the laws and studies the role of law in the marketplace.

So, it would not be an exaggeration to say that economics has changed the nature of legal scholarship, the common understanding of legal rules and institutions and even the practice of law. Economics generally provides a behavioural theory to predict how people respond to laws and this surpasses intuition just as science surpasses common sense.[5] The response of people is always relevant to making, revising, repealing, and interpreting laws. A famous essay in law and economics describes the law as a cathedral—a large, ancient, complex, beautiful, mysterious, and sacred building.[6] Behavioural science resembles the mortar between the cathedral's stones, which support the structure everywhere.

The idea behind having this conference is to eulogize upon how law is not just a mortar between public policy and economics but also a balancing instrument for multiple considerations. Public policy, economics and law interact to create the ideal balance that fosters equality and efficiency. With the aid of numerous theories and frameworks, the ever-expanding fields of law and economics give us the means to comprehend the formulation, operation and outcomes of public policies, enabling a thorough examination that probes the core of a policy.

The field of law and economics employs a complex interplay between quantitative and qualitative analysis techniques to identify policy gaps and provide robust policy suggestions. We have to use the lenses of both law and economics to examine and offer fresh viewpoints on current public policy challenges and choices. Here we should appreciate the need for such an analysis. Let us take an example of the concept of opportunity cost, which *prima facie* embodies the core ideas of economic reasoning. Now, policy decisions are made keeping in mind the fact that how a particular scheme will improve or advance the existing state of affairs.

Every decision made by the policymakers eliminates alternative possibilities as money cannot be spent in two different ways once it has been spent in one. An increase in a product's price indicates a rise in the opportunity cost associated with consuming it. People respond to

[4] The modern field is said to have begun with the publication of two landmark articles—Ronald H. Coase, *The Problem of Social Cost,* 3 JOURNAL OF LAW & ECONOMICS 1 (1960); Guido Calabresi, *Some Thoughts on Risk Distribution and the Law of Torts*, 70 YALE LAW JOURNAL 499 (1961).

[5] Cass R. Sunstein, Christine Jolls & Richard H. Thaler, *A Behavioral Approach to Law and Economics,* 50 STANFORD LAW REVIEW 1471 (1998).

[6] Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARVARD LAW REVIEW 1089 (1972).

economic incentives even though individual preferences influence how they use the limited resources that they have and how strongly they react to price fluctuations. Behaviour can be altered by changes in opportunity costs without affecting an individual's underlying psyche. This is where the economic analysis of law enters.[7]

Laws establish a framework within which individuals and organizations can function. Changes in the law affect behaviour and alter the opportunity costs of different activities.[8] For example, a higher overtime parking fine encourages more individuals to top off their parking meters. There is an increase in caretaking when tort law's standards for negligence are strengthened. Businesses invest more in pollution control as a result of stricter environmental restrictions.

On the other hand, how people react to current rules can vary depending on how the world changes. By decreasing the incentive to seek out lawful work, a rise in unemployment may lead to an increase in crime. Variations in the economy can affect the parties' bargaining power, which can have a systematic effect on the terms of the contract.[9] As a result, the way law functions in the world depends on both the law itself and the circumstances surrounding it. A law in South Africa could be very different from one in India in terms of its effects. This conference is a comprehensive exploration of these multifaceted issues in the world of law and economics where we will deliberate upon the intersection of legal principles and financial responsibilities.

In this spirit, my objective in the present address is to shed some light upon the nuanced approaches which can consolidate the symbiosis of law and economics in an era of multilateralism. To facilitate analysis, I have bifurcated this address into three parts.

1.1 I will initiate my discussion in **Part I** by emphasizing upon the epistemology of *'Law and Economics'*. Here we will see how the economic analysis of law can broadly be of two types viz., descriptive and normative, depending upon the question it tries to address. Then, in **Part II**, we will explore the role of the judiciary in increasing the importance of marrying *'Law and Economics'* by discussing some transformative judgements. Here, I will discuss

[7] William M. Landes & Richard A. Posner, *The Influence of Economics on Law: A Quantitative Study*, 36 JOURNAL OF LAW & ECONOMICS 385 (1993).
[8] For a detailed discussion of cost-benefit analysis *see*, AA Schmid, *Benefit-Cost Analysis: A Political Economy Approach,* WESTVIEW PRESS, BOULDER CO (1989).
[9] Susan Rose-Ackerman, *Economics, Public Policy and Law*, 26 VICTORIA UNIVERSITY WELLINGTON LAW REVIEW 1 (1996).

how the court should strive to balance 'law and economics' and in doing so must go by scientific evidence and not general notions.

1.2 In **Part III** of the address, I will eulogize upon some nuanced approaches which can be adopted by the judiciary in its decision-making to deal with specific issues in law and economics. I will also illustrate how we can employ the doctrine of proportionality which acts as a methodical tool in balancing the various juxtapositions of commercial laws. I will then highlight how using methods of ADR and especially Mediation increases the economic efficacy of dispute resolution practice leading to amplified rewards for both the disputants and the economy. I intend to conclude with a message that we should work on using the analytical strengths of economics in conjunction with the empirical data that law furnishes, which would enrich both fields.

2. PART I:

2.1 The Epistemology of Law and Economics

Although the seeds of contemporary Law and Economics go back at least a century[10], it is only in the past five decades that it has emerged as a substantial and important body of thought within both economics and law. During this time, Law and Economics have developed within, and in part because of, a somewhat uncertain and unsettled atmosphere within jurisprudence. What once existed as prevailing legal doctrine derived from conventional political and legal theory still exists, but law no longer develops in a self-contained, autonomous manner.

Rather, most scholars now recognize the law as "a multidimensional phenomenon—historical, philosophic, psychological, social, political, economic and religious" in its inspiration and implications.[11] Furthermore, almost all contemporary legal scholars, judges, and lawyers hold an instrumental view of the law—instrumental in the sense that legal rules are adopted so as to promote some goal, be it equality, justice, fairness, or efficiency. Regardless of whether one believes law is used to promote these goals, it *does* have a wide-ranging impact, and the

[10] In fact, one can go back much further than this, to Adam Smith, whose work *Lectures on Jurisprudence* (1978 reprint) and *The Wealth of Nations* (1937 reprint), is in some respects, well within the tradition of Law and Economics.
[11] Herbert L. Packer and Thomas Erlich, *New Directions in Legal Education,* 71 MICH. L. REV. 866 (1973).

assessment of these impacts necessitates the use of tools and ideas from disciplines outside of legal theory proper.

Today, the law is being analysed from an incredibly diverse set of perspectives, including Law and Economics, critical legal studies, rights-based theory, feminist jurisprudence, and critical race theory, all of which claim to have something worthwhile to say as to the origin, legitimacy, and development of the law. The outward turn of law thus far has generated no consensus-type movement toward a new and stable foundation for the law.[12] We now stand at a point where legal study embodies a plethora of competing and often mutually exclusive points of view. To use Alan Hunt's metaphor, "**[T]he glacier that is law has fractured into numerous pieces, and its replacement (if there is to be one) remains to be determined.**"[13] Perhaps the present situation is best summed up in the comment that legal scholarship has been "left with a plethora of explanatory frameworks, [and] a dearth of criteria for choice among them".

Adverting to the theme of this conference, I may say that the unsettled nature of legal theory and the relationship of law to economics did not arise in a vacuum. Rather, it is partially the outcome of **1)** the development of Law and Economics—in particular, the various evolving perspectives from which one can analyse the prevailing legal relations governing society—and **2)** the development of the *Economics* of Law and Economics—particularly as embodied in the work of neoclassical macroeconomists since Alfred Marshall. While Law and Economics have had an impact on both the legal and economic disciplines, there is no doubt that it "was institutionalized as a discipline in law schools rather than in economics departments," where it is just another branch of applied microeconomic theory rather than a disciplinary philosophy as it is in law.[14]

Taking this debate forward, public policy debates typically revolve around the question, ***In what direction shall we change the law?*** Law and Economics provide a systematic way to think about this question. The underlying logic inherent in this conceptual model is that much of public policy involves altering the *law*, for example, through **(i)** a constitutional amendment, **(ii)** a change in a working rule that alters the decision-making process by which judicial,

[12] Martha Minow, *Law Turning Outward*, TELOS 73, 79-100 (1987).
[13] Alan Hunt, *The Critique of Law: What is 'Critical' about Critical Legal Studies?*, 14 JOURNAL OF LAW AND SOCIETY 7, 5-19 (1987).
[14] Ron Harris, *The Uses of History in Law and Economics*, 4 THEORETICAL INQUIRIES IN LAW 664, 659-696 (2003).

administrative, or legislative decisions are reached; **(iii)** a change in a legal doctrine within common law adjudication; **(iv)** a change in the definition or assignment of private property rights; **(v)** the altering of a status right (i.e., an administrative eligibility requirement) by the executive branch, the legislature, or some government agency or department; **(vi)** expanding or diminishing the scope of communal rights; or **(vii)** transferring rights to resources heretofore held as open access to either private, status or communal property. The belief is that the goals of public policy will not be realized by changing the law *willy-nilly* or in an ad hoc manner, but by structuring and adopting those laws, rights, rules, and doctrines for which there is a known nexus between the said change in law and the desired outcome.

The view that public policy has no singular origin is reflected in Judge Rendlen's statement in ***Eyerman v. Mercantile Trust Co.,***[15] "**Public policy may be found in the Constitution, statutes, [working rules], and judicial decisions of this state or the nation.**" From the vantage point of Law and Economics, one must understand that a change in the law will alter the incentive structure confronting individuals and groups in society. This change in incentives will alter behaviour, and that new behaviour will ultimately and systematically affect economic performance. Much of positive Law and Economics tries to describe the exact nexus between policy options and their outcomes, with economic performance being measured or evaluated in terms of Pareto efficiency in exchange and production, and Kaldor-Hicks efficiency.[16] That nexus is captured in what has been termed the legal-centralist approach, which focuses on the central role of law in making policy. With this let us now discuss the role played by the judiciary in marrying *'Law and Economics'.*

3. PART II:

3.1 Imbibing Economic Principles in Judicial Decision Making

To me, the most interesting aspect of the law and economics movement has been its aspiration to place the study of law on a scientific basis, with coherent theory, precise hypotheses deduced from the theory, and empirical tests of the hypotheses. Law is a social institution of enormous antiquity and importance, and I can see no reason why it should not be amenable to scientific

[15] Eyerman v. Mercantile Trust Co., 524 S.W. 2d 210, 217 (1975).
[16] This approach, being quite systematic as compared to what lawyers "do" led Bruce Ackerman (1984, p. 22) to ask, "When they speak so resonantly of 'public policy,' do lawyers have the slightest idea what they're talking about?".

study. Economics is the most advanced of the social sciences, and the legal system contains many parallels to and overlaps with the systems that economists have studied successfully.[17]

The economic analysis of law concerns itself with the application of macroeconomic theory to the analysis of legal rules and institutions.[18] As an analytical framework, law and economics have had a significant influence on scholarly writing for a long time now. However, it was only in the early 1960s that economic analysis began to be applied rigorously to broad non-economic legal problems.[19]

Although 'law and economics' have often been promoted as a tool to be used by policymakers, several scholars have argued that judges either are or should be guided by economic principles when deciding cases. It was in 1947 that Judge Learned Hand formulated a new approach to judicial decision-making by using an algebraic cost-benefit[20] test for determining negligence.[21] For instance, Judge Richard Posner argued that judges should consider wealth maximisation as a guiding value in deciding common law cases.[22] To the extent that economic analysis helps identify which rules maximise wealth, the use of such analysis would be an important tool for judges. Judge Guido Calabresi has also argued that efficiency is a component of justice and therefore, judges should concern themselves with efficiency as they decide cases.[23]

Similarly, Edward Yorio has also argued that judges deciding tax cases should adopt efficiency rules whenever possible.[24] Over the past few decades, several of the most vocal advocates of 'law and economics' have ascended to the bench, including Richard Posner, Frank Easterbrook, and Guido Calabresi. Not surprisingly, they have to a lesser extent or greater degree used economic analysis to help them decide the issues they confront as jurists.

In the case of India, which is a constitutional welfare state where one of our most important goals is social welfare. Since our country is on the road to economic growth, economic welfare

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[17] Richard A. Posner, *Foreword*, in ESSAYS IN LAW AND ECONOMICS: CORPORATIONS, ACCIDENT PREVENTION AND COMPENSATION FOR LOSSES, Michael Faure, Richard A. Posner & Roger van den Bergh eds. (Maklu, 1989).
[18] Lewis Kornhauser, *The Economic Analysis of Law*, STANFORD ENCYCLOPEDIA OF PHILOSOPHY (17 July 2017), https://plato.stanford.edu/entries/legal-econanalysis/.
[19] Guido Calabresi, *About Law and Economics: A letter to Ronald Dworkin*, 8 HOFSTRA LAW REVIEW 553 (1980).
[20] The Learned Hand formula is an algebraic formula used to ascertain liability in negligence cases. According to the formula, when the probability (P) and magnitude (L) of harm resulting from the accident exceeds the investment in precaution (B), the defendant should be held liable. However, if B equals or exceeds PL, the defendant should not be held liable.
[21] United States v. United Shoe Mach. Corp., 110 F. Supp 295.
[22] Richar Posner, *Utilitarianism, Economics, and Legal Theory*, 8 J. LEGAL STUDIES 103 (1979).
[23] Peter Yorio, *Federal Income Tax Rulemaking, An Economic Perspective*, 51 FORDHAM L. REV. 1, 48-9 (1982).
[24] Edward Yorio, *Federal Income Tax Rulemaking, An Economic Perspective*, 51 FORDHAM L. REV. 1, 48-9 (1982).

and well-being of the citizens, especially the most vulnerable sections of the society, is an indispensable part of social welfare. All the wings of the State – the legislature, executive and judiciary– should take measures to ensure that this goal is achieved in the most efficient way possible, by the use of instruments such as laws, policies and judicial decisions. The legal regime in our country is already moving in the direction of economic welfare and efficiency, with recent laws such as the Insolvency and Bankruptcy Code and the Real Estate Regulation and Development Act and Constitutional amendments such as the ones made to incorporate the Goods and Services Tax.

The judicial wing, while undertaking the task of performing its judicial function, is also required to perform its role in this direction. The judiciary carries out the role of interpreting the law and it should harmonize its interpretation, wherever possible, with our social goal of economic development. The Supreme Court of India faced such a task in ***Shivashakti Sugars Ltd v. Shree Reguna Sugar***.[25] The law required that there must be a distance of at least 15 kilometres between two existing sugar factories. Due to the peculiar fact scenario, the question that arose was whether Shivashakti Sugar, which had not carried out crushing operations in the last five sugar seasons, was an existing sugar factory. Now, the company had undergone an expenditure of approximately INR 300 crore in establishing the factory with loans raised to the tune of Rs. 237 crore and operational cost of INR 150 crores. It had also employed 377 persons on a regular basis and indirect employment was more than 7000 persons. It was imperative that, in a case with such large economic stakes, economic considerations should not be overlooked while making a decision. Public purpose demanded that the factory remains in operation and both equitable and economic factors tilted in its favour. Moreover, no other purpose would be served if thousands lost their employment.

As a result, the court held in favour of the continuation of the factory, constructively interpreting the law to hold that the factory was not a continuing one. In the judgment, while citing Richard Posner and Ronald Coase and highlighting the importance of the economic analysis law, we observed that:

"**43.**.....The judicial wing, while undertaking the task of performing its judicial function, is also required to perform its role in this direction. It calls for an economic analysis of the law approach, most commonly referred to as "Law and Economics".

[25] Shivashakti Sugars Ltd v. Shree Reguna Sugar Ltd., (2017) 7 SCC 729.

44...... The first duty of the Court is to decide the case by applying the statutory provisions. However, on the application of law and while interpreting a particular provision, the economic impact/effect of a decision, wherever warranted, has to be kept in mind. Likewise, in a situation where two views are possible or wherever there is a discretion given to the Court by law, the Court needs to lean in favour of a particular view which subserves the economic interest of the nation. Conversely, the Court needs to avoid that particular outcome which has a potential to create an adverse effect on employment, growth of infrastructure or economy or the revenue of the State."

In cases where economic interest competes with the rights of other persons, courts need to strike a balance between the two competing interests and have a balanced approach. This aspect of competing interest has been dealt with in the famous case of ***Raunaq International Limited v. IVR Construction Ltd. & Ors.***[26], where Justice Manohar and Justice Kirpal, in their judgment, did not grant an ***interim stay*** in favour of the petitioner, who challenged the process of government auction, on the ground that the grant of such a stay and the delay involved may escalate cost and this may be in contravention of public interest. The bench observed that, "***The court must take into account the cost involved in staying the project and whether the public would stand to benefit by incurring such cost***."

Another case that comes to my mind is an intellectual property case that came before the Delhi High Court. There was an alleged infringement of the Trademark by Pearl Pet, a manufacturer of plastic containers. The petitioner sought an injunction to cease Pearl Pet's production until resolution of the case. Since Pearl Pet was employing hundreds of employees in its factories, granting an injunction to cease production would cause irreparable damage. Therefore, the balance of convenience and public interest necessitated that I refuse to grant such an injunction as the economic interest of individuals is a crucial part of public interest.[27]

It is imperative, now more than ever, that the inter-discipline of economics and law should be considered by the courts of the country, not on an ad-hoc basis as has been done till now, but on a continued and sustainable basis. Judges ought to consider the economic analysis of the law before giving their decisions because public interest and social good are inextricably linked to the economic welfare of the citizens. Supreme Court judges as the final adjudicators and

[26] Raunaq International Limited v. I.V.R. Construction Ltd. & Ors., (1999) 1 SCC 492.
[27] *See,* Shamnad Basheer, *Report on NUJS Event: "Injunctions v. Damages in IP Cases by Justice Sikri"*, SPICYIP (Feb. 25, 2009), https://spicyip.com/2009/02/report-on-nujs-event-injunctions-v.html.

interpreters of law, carry the responsibility to bear in mind the economic impact of their decisions. The plenary powers under Article 142 of the Constitution of India provide one such avenue for judges to ensure economic welfare through fair and equitable means.

3.2 How Economic Approach in Law Ensures Growth

It is necessary that while exercising their functions, the lawmakers and judges not only achieve the desired social goal of welfare but also attain it in the most efficient manner possible. As I have highlighted before, efficiency is a foundational element of the economic analysis of law. A normative analysis of law entails finding the most efficient method to attain the desired social goal; and law, policy and judicial decisions can act as a vehicle to attain such efficient outcomes.

However, finding the most efficient outcome is not an easy task, it requires complicated and protracted calculations and wide variables which need to be considered. A commonly acknowledged fact by economists is that markets, in their ordinary state, are more efficient than regulations. They must therefore be allowed to function as independently as possible. When possible, the legal system will force a transaction into the market. When this is impossible, the legal system attempts to *"mimic a market"* and guess what the parties would have desired if markets had been feasible.

In order to mimic the market and improve efficiency, law and economics stresses that transaction costs should be as little as possible. The private legal system must facilitate this by performing three functions, all related to property. ***First,*** the system must define property rights; this is the task of property law itself. ***Second,*** the system must allow for the transfer of property; this is the role of contract law. ***Finally,*** the system must protect property rights; this is the function of tort law and criminal law. These set the foundations for individuals to interact freely.

Laws regulating market behaviour allow free market dynamics to play out between individuals, to the maximum extent possible, and interfere in the limited situations of market failure or violation of rights. One example of market failure is the existence of monopolies; a situation where one party can extract more profit from a good than a healthy market would allow. Laws, such as antimonopoly and competition laws, can be used as a tool to ensure that monopoly situations are hard to bring about and maintain. Similarly, Insolvency and Bankruptcy Laws[28],

[28] *See,* Ian F. Fletcher, *Law of Bankruptcy (Legal topics series),* MACDONALD & EVANS (1978).

laws of corporate finance, and other similar market laws endeavour to address situations of market failure.

In cases where transaction costs such as information cost, opportunity and administrative costs are high, the law plays a greater role in efficient exchanges by enforcing and allocating legal entitlements. One such example was given by Ronald Coase in his paper, ***The Problem of Social Cost***, where he observed that scholars have also been effective in extending the tools of economic analysis into areas of law that do not regulate the market behaviour of individuals. These include rules of evidence, environmental law, family law, the legislative and administrative processes, constitutional law and so on. Economic analysis has also been used to evaluate esoteric and amorphous concepts such as justice. '***The Economics of Justice***' undertakes a positive analysis of justice as wealth maximization, at length. In such areas, where markets do not play a role, the only way to assess the law is to make economic studies of non-market behaviour and evaluate the results.[29] Let us now delve into the most intriguing part of this discussion where I shall shed some light on the need for nuanced approaches for the holistic confluence of law and economics.

4. PART III

4.1 Need for Nuanced Approaches in the Field

I had said a few years ago that ***law is a social institution of enormous antiquity and importance, and I can see no reason why it should not be amenable to scientific study. Economics is the most advanced of the social sciences, and the legal system contains many parallels to and overlaps with the systems that economists have studied successfully***. Though, there have been a few judgements of the higher courts which endorse this view, but still a lot has to be done to fully imbue an economic approach in judicial pronouncements. The Courts have to adapt to the nuanced approaches to overcome the many hurdles that come in their way. Some of the obstacles are jurisprudential, hence an answer which fulfils the legality requirement has to be devised.

[29] R. H. Coase, *The Problem of Social Cost*, 3 THE JOURNAL OF LAW & ECONOMICS 1-44 (1960), http://www.jstor.org/stable/724810.

For example, in an adversarial system, the approach of the courts is primarily binary, where they are adjudicating cases in favour of or against something, and thus have the negative power to strike down what is wrong, but not create something positive. This causes a vacuum as a result of their decision-making. But the Indian Supreme Court can very well fill this vacuum by applying the power of substantive justice under Article 142 of the Constitution of India. The court can resort to this power, especially in cases where the interface between 'law and economics' is concerned. The courts should also examine alternatives thus avoiding the vacuum that can be created due to its narrow approach.

The fact that the decisions of courts enforcing laws, even in the case of non-economic laws, have an economic impact means that there can be such a thing as an economic perspective on law enforcement. This economic perspective can deal with the substance or the interpretation of the law (for example by pointing out the economic implications of some interpretations of ambiguous laws) or the process of law enforcement (for example by pointing out how the efficiency of the judicial proceedings could be improved while guaranteeing due process and the protection of the rights of defendants). There is also a need to build a post-judgment audit system in the judiciary whereby the court will assess its judgments after a few years of implementing its directions. This would create a corrective mechanism within the judiciary in future cases while undertaking judicial decision-making on highly sensitive economic and antitrust matters.

As most judges throughout the world have not been trained in economics, one of the questions raised has been the extent to which they should rely on court-appointed economic experts to help them discharge their duties. A related and complex question is what should the role of economic experts working for the court be in judicial proceedings. Whereas economic experts can usefully inform judges on some of the complex technical issues raised by the cases, in the end, it is the courts which must pass judgment on those cases. For this process to run smoothly, however, judges must be able to precisely define which questions they want economic experts to answer. This, in turn, means that judges must understand enough economics to be able to be precise in formulating the questions they want experts to investigate.

Although there may be many subsets of nuanced approaches but I am highlighting the three most important ones, which are:

a) Human Rights in the economic analysis of law, where we will see the intrinsic linkage of economics and human rights.

b) Secondly, we will explore how the doctrine of proportionality can be used as a methodical tool in balancing 'law and economics'. Proportionality helps in appreciating the scientific evidence and preventing the court from following general notions.

c) Thirdly, I would narrate how the use of Alternate Dispute Resolution and particularly Mediation increases the economic efficiency of law.

4.2 Human Rights and Economic Analysis of Law

Human rights and economics are concepts that are intrinsically linked to each other. It can be cooperative and in some situations, competitive. On the one hand, one must admit that asserting human rights demands economic means, and on the other hand, the efficacy and efficiency of the agent's economic decisions presupposes a significant degree of liberties. There is, therefore, an economic dimension to human rights as much as a human rights dimension to economics. At the same time, they often have conflicting language. Economics is characterized by its goals of the pursuit of isolated individual's personal interests leading to social welfare from that perspective. It often reduces society's complexity to scientific laws and is reluctant to include human rights into its equation.

Human Rights on the other hand, bolstered by international instruments and constitutional principles, are intrinsic and indivisible entitlements which cannot be given an economic measure. They are inalienable rights which must not be sacrificed at the altar of any amount of social good, efficiency or compensation. One of the first persons to have pointed out the conflicting logic of economics and human rights is Noam Chomsky in his two-volume work on the ***Political Economy of Human Rights***.[30]

The human rights exception to economic analysis of law was co-opted into its conceptual foundations and technical apparatus by scholars like Amartya Sen and Martha Nussbaum. They critiqued the centrality of individual and social utility in welfare economics and argued for individual entitlements, opportunities, capabilities, freedoms, and basic human rights, especially rights to be free from government interference in certain areas of choice. Amartya Sen through his ground-breaking works on the '**capabilities approach**' emphasizes that

[30] EDWARD S. HERMAN AND NOAM CHOMSKY, THE POLITICAL ECONOMY OF HUMAN RIGHTS (South End Press 1979).

"entitlements, capabilities and functioning" of individuals are better predictors of individual and social behaviour than self-interested utilized maximization.[31]

Nussbaum says that these capabilities include "***legal guarantees of freedom of expression....and of freedom of religious exercise***" as aspects of the general capability to use one's mind and one's senses in a way directed by one's own practical reason.[32] They also include guarantees of non-interference with certain choices that are especially personal and definitive of selfhood and of the freedoms of assembly and political speech.

Equality and inequality are best assessed in terms of capabilities – rather than in terms of GDP, consumption or utility – while poverty may be best characterized in terms of the absence of deprivation of certain basic capabilities to do this or to be that. In the words of Amartya Sen: "***The available data regarding the realization of disease, hunger, and early mortality tell us a great deal about the presence or absence of certain central basic freedoms***".[33] Therefore, human rights and capabilities are at least as important as utility in the economic analysis of law and should be given the greatest importance while analysing or modelling law and policy.

4.3 A Sentinel's toil in the balancing of approaches: The doctrine of Proportionality

The '*Economic analysis of law*' explicitly pegs the effectiveness of a law on tangible measures such as its social efficiency and the social goals of laws. The most desirable law is the one which is the most efficient in achieving its objective. This is unlike other approaches of analysing law which often leave the criterion of the social good unclear or substantially implicit. However, if the courts are totally influenced by the human rights approach or in contrast the economic approach to arrive at a conclusion in a particular case, then the outcome would be disproportionate. Let us understand this with two examples.

For instance, in the *Emission Standard case*[34], if the court's decision intended to stop more polluting vehicles from plying on the road in the interest of public health which is a facet of the right to life under Article 21, then the court achieved little by banning those vehicles. This

[31] *See* generally, Robeyns, Ingrid and Morten Fibieger Byskov, *The Capability Approach*, THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY, https://plato.stanford.edu/entries/capability-approach/.
[32] *See* Amartya Sen, *Equality of what?,* in 1 TANNER LECTURES ON HUMAN VALUES (SM McMurring ed., 1980); Amartya Sen, *Capability and Well-being* in THE QUALITY OF LIFE (Sen and Nussbaum, 1993).
[33] Amartya Sen, *Freedom, Agency and Well-Being, in* INEQUALITY RE-EXAMINED (Oxford, 1995), https://doi.org/10.1093/0198289286.003.0005.
[34] M. C. Mehta v. UOI, AIR 2017 SC 2430.

is because the banned vehicles were eventually sold at discounted rates before the cut-off date set by the court, resulting in significant losses to the auto industry. This not only defeated the purpose of the ban but also caused a great deal of financial agony to the auto sector which is known to have one of the highest multiplier effects on the economy.

In fact, such a decision is a classic example of what **American legal philosopher Lon Luvois Fuller** in his paper titled "***The Forms and Limits of Adjudication***"[35] had called problems of polycentricity, which is a more theorised description of the intuition that implementing social welfare rights called for a kind of policy analysis, that is different from that associated with classical civil and political rights. Fuller compared polycentricity with a spider's web— a pull on one strand will distribute the tension throughout the web as a whole in a complicated pattern.[36] When applied to adjudication, polycentric problems normally involve many affected parties and a somewhat fluid state of affairs. As a result, the adjudicator is inadequately informed and cannot determine the complex repercussions of a proposed solution.

In the emission standard case, the analysis of the court suffered from the problem of polycentricity when the court went by the intent of the Auto Fuel Policy which meant to ensure the induction of lesser polluting vehicles in a phased manner. While this policy laid out clear timelines for new standards to become applicable, a precedent existed where the auto industry on an earlier occasion was allowed to clear old inventories with some relaxations to enable the transition to new emission norms in a smooth manner. Therefore, the benefit of the doubt could have been given to the auto sector by allowing them reasonable time to dispose-off the old inventory of vehicles. This could have been done with a warning to both government and the industry that in the future such exemptions cannot be expected. This would not have hampered justice particularly because the availability of compliant/ suitable fuel was not uniform all across the country. There were other factors too which led to automobile pollution; fuel is not the only one.

Similarly in **the *Liquor Ban case***[37], the gaping hole was with regard to enforceability. The judgment was pronounced to rein in road accidents due to drunken driving and the court passed an order prohibiting the sale of alcohol within a distance of 500 metres from the national and state highways in the country. However, the Supreme Court did not provide any empirical

[35] Lon Fuller, *The Forms and Limits of Adjudication*, 92 HARVARD LAW REVIEW 353-409 (1978).
[36] Balram Pandey, *The Supreme Court and The Constitution: An Indian Discourse*, ILI LAW REVIEW (Winter Issue 2020).
[37] State of Tamil Nadu v. K Balu & Anr., Civil Appeal Nos. 12164-12166, 2016.

rationale for prescribing a specific distance of 500 metres for the ban on liquor sales on highways. Many studies conducted after the judgement was pronounced showcase that there was no decrease in the number of road accidents.

Overall, the evidence suggests (based on official data as well as a primary survey) that there was no significant reduction in drunken driving cases after the judgment. On the other hand, the evidence also suggests that only policing is an ineffective mechanism to rein in drunken driving incidences. These facts raise a serious question about the effective enforceability of the judgment and therefore the courts in India will do well to assess the impact ***ex-ante***, especially when an issue concerns substantive economic and technical dimensions.

The solution lies in the *normative* analysis, which is useful to organize, design and reform the legal architecture in such a way that it ensures the most efficient outcome possible. It is a potent tool at the disposal of legislators and judges, who enact and interpret the law, to improve the quality of our laws and legal rules. As Judge Richard A. Posner pointed out in his book *Frontiers of Legal Theory*[38] that "***in its normative aspect, law and economics advice judges and other policymakers on the most efficient methods of regulating conduct through law.***"

In my opinion, the tool of this normative analysis is employing the doctrine of proportionality which can be used as a methodical tool in balancing both the legality requirements and the economic impact of the judgement. Proportionality helps in appreciating the scientific evidence and preventing the court from following general notions.

In fact, the doctrine of proportionality can also be employed by the courts in large-stake competition law matters. Since, the role and scope of modern economic analysis in competition policy have been changing, thus, characterizing this change as one towards a "***more economic approach***" is the need of the hour. Indeed, antitrust and merger analysis has always been based on economic principles. The question for effective enforcement is not one of "**more**" or "**less**" economics, but rather what kind of economics and especially how the economic analysis is used – or indeed sometimes may be abused – in the context of guidelines or cases.

The change in the practice of Indian competition policy is all about the way in which economic principles and economic evidence are brought to bear in the context of decision-making. The assessment of decision-making in light of modern economic principles that are robust and empirically tested, as well as the reliance on a number of empirical methodologies that help

[38] RICHARD A. POSNER, FRONTIERS OF LEGAL THEORY (Harvard University Press 2004).

identify a theory of harm, is at the core of this trend. However, there are also non-significant dangers and there is a clear potential to abuse economics, not least by various special interests. As a result, the proper and professional interpretation and generation of economic evidence are essential for the credibility of the process to work towards better decision-making.

In this context, it is interesting to recall that there seems to be a substantial increase in the use of economics in antitrust. But what still lacks is the use of a methodological tool which has to potential to assist in balancing the approaches, which is, primarily the role of the adjudicators. Let me illustrate this with a real-life example. In the year 2018, an appeal came before a bench comprising myself and Justice Ashok Bhushan in the Supreme Court against the orders passed by the Competition Appellate Tribunal ("**COMPAT**"), which found that suppliers of liquefied petroleum gas cylinders were in contravention of Section 3(3)(d) of the Competition Act of 2002, for rigging their bids in the tender floated by Indian Oil Corporation Limited ("**IOCL**"), in relation to the supply of 105 lakh cylinders between the years 2010 and 2011.

The COMPAT, by the said order, (a) upheld the findings of the Competition Commission of India ("**CCI**"), insofar as it found the suppliers guilty of contravening Section 3(3)(d) of the Act; and (b) reduced the amount of penalty imposed on the suppliers. As a result, the suppliers filed instant appeals on the ground that there was no cartelization and that they had not contravened Section 3(3)(d) of the Act. On the other hand, the CCI challenged the latter part of the order whereby the penalties imposed on the suppliers were reduced.

Before this, the CCI had concluded that the suppliers colluded and formed a cartel, which led to bid rigging, based on the following factors:

(a) Existence of an active trade association in which many of the suppliers are members. The primary interest of the trade association, it was concluded, is to ensure that no new entrants are able to join. Further, the trade association also ensures that all the members are able to receive a portion of the order. The CCI concluded that it is for this reason that the bids submitted in various standards which are floated by IOCL at different places are almost identical despite varying costs;

(b) CCI inferred this from the fact that 2 (two) days prior to the submission of bids, the association conducted a meeting which most of the suppliers attended. Further, six common agents were appointed who submitted the bids on behalf of these suppliers;

(c) IOCL requires gas cylinders of a particular specification and in large numbers, every year. Further, there are very few manufacturers and suppliers of this product to IOCL and two other buyers. For this identical product which is to be supplied by all the suppliers, there is no substitute and no significant technology change.

Now, the economic analysis of law comes in full sway as the nature of the market was to be determined in order to decide the issue of cartelization. We looked into the economic principles of monopsony and oligopsony and found that **monopsony consists of a market with a single buyer. When there are only few buyers the market is described as an oligopsony.** In the instant case, it was emphasised by the Regulator-CCI that in such a situation a manufacturer with no buyers will have to exit from the trade. Therefore, the first condition of oligopsony stands fulfilled. The other condition for the existence of oligopsony is whether the buyers have some influence over the price of their inputs. It is also to be seen as to whether the seller has any ability to raise prices or it stood reduced/eliminated by the aforesaid buyers.[39]

At this juncture, the proportionality test can be used to balance the interest of law and economics in determining the influence of buyer over the price of their inputs while corroborating the credibility of evidence which is led. Proportionality acts as a methodological tool in carrying out this exercise as it aids in determining the **relationship between the benefit obtained from accomplishing the proper purpose and the harm caused to the statutory limitation viz., Section 3(3)d.**

The **proportionality *stricto sensu* test** aids the adjudicator in the assessment of the anti-competitive effects generated by business behaviour and gives him choices – among all those means that may advance the purpose of the limiting law – while balancing the economics of scale. Balancing is central to the life of law and in the jurisprudence of antitrust, it is central to the relationship between contractual rights/ commercial autonomy and the public interest, since the purpose of competition law is ensuring a fair marketplace for consumers and producers by prohibiting unethical practices designed to garner greater market share than what could be realized through honest competition.

Balancing reflects the multi-faceted nature of the business and it is an expression of the understanding that the law is not "all or nothing." Law is a complex framework of values and

[39] RICHARD WISH, COMPETITION LAW (5th ed. Oxford University Press, 2003).

principles, which in certain cases are all congruent and lead to one conclusion, while in other situations are in direct conflict and require resolution.

Given the evolvement of competition law and policy towards a more effects-based analysis, the proportionality principle becomes increasingly significant. Moreover, the application of the rules of competition increasingly requires not only a full proportionality test (*i.e.* looking also or mainly at proportionality *stricto sensu*) but a full substantive cross-proportionality test in order to assess and balance the pro- and anti-competitive effects of agreements and practices.[40]

The fact that the application of the rules of competition is increasingly governed by a full substantive proportionality test, with the resulting impact on the scope of judicial control, shows how profoundly the gradual switch from a more form-based to a more effects-based assessment of market behaviour affects the legal nature of competition law and policy.[41] There are a lot of advantages of applying proportionality in antitrust cases as it impacts the application of the principles of equal treatment and legal certainty. Equal treatment requires an effects-based analysis more than a mere comparison of clauses and forms. It requires a comparative analysis of the impact of corporate or government behaviour, and the rather more difficult concept of material discrimination becomes more important than formal discrimination.[42]

4.4 Using Mediation to Increase the Economic Efficacy of Law

Before concluding this address, it would be trite to discuss the advantages of imbuing ADR and in particular Mediation in the dispute settlement practice. ADR not only aims to restore or preserve the dynamics of the contract but also encourages the resumption of dialogue between the parties, which is why ADR has become the ***de facto*** choice of the parties for resolving commercial disputes. This was aptly highlighted by the great Justice V. R. Krishna Iyer in his eloquent remark that "***Commercial causes, we may observe in prolegomenary fashion, should as far as possible be adjusted by non-litigative mechanisms of dispute resolution, since***

[40] *See* e.g. E. ELLIS, THE PRINCIPLE OF PROPORTIONALITY IN THE LAWS OF EUROPE 187 (Hart Publishing, 1999); N. EMILIOU, THE PRINCIPLE OF PROPORTIONALITY IN EUROPEAN LAW 288 (Kluwer Law International, 1996).
[41] J.H. Jans, *Evenredigheid revisited*, SOCIAAL ECONOMISCHE WETGEVING: TIJDSCHRIFT VOOR EUROPEES EN ECONOMISCH RECHT 270-282 (2000); *See* RICHARD WISH, COMPETITION LAW 157, 207, 231, 440, 663 (5th ed. Oxford University Press, 2003).
[42] *See* e.g. FAULL & NIKPAY, THE EC LAW OF COMPETITION para. 3.210 (Oxford University Press, 2nd ed., 2007); L.RITTER AND W.D.BRAUN, EUROPEAN COMPETITION LAW 153 (Kluwer Law International, 3rd ed., 2005).

forensic process, dilatory and contentious, hamper the flow of trade and harm both sides, whoever wins or loses the lis."[43]

The use of Mediation in commercial as well as matrimonial cases increases the economic efficacy of the legal process as mediation relies on a rationalist paradigm, which takes us towards an '***interest-based***' model of dispute resolution rather than the *'position-based'*. Many negotiation specialists believe that this is the most effective technique for shifting the focus of conflict from personal hostility to '***the problem***'.[44] Mediation as a form of ADR has also gained popularity because it acts as a means of resolving a variety of disputes, ranging from routine personal and family conflicts to high-value commercial disagreements. The cost of litigation and the amount of time lost in court proceedings while resolving commercial disputes shows us that there are many reasons to choose mediation which is not just mutually beneficial but also economically viable.

The practice of mediation decreases the ***opportunity cost*** of resolving a dispute which leads to an increased reward for the parties. Because of its unique and unmatched qualities, which no other system possesses, mediation ropes conciliation of both dispute and relationship. The policymakers should emphasize upon these qualities of mediation not only in statutes and other rules but also in a wide range of non-regulatory approaches such as training for disputants and professionals, technical assistance for ADR organizations and in grievance redressal mechanisms for parties regarding the mediation process. These efforts of the policymakers will encourage the use of mediation in resolving disputes and will thus increase the economic efficiency of the legal process.

5. CONCLUSION

It is commendable to see that the movement which was founded by a handful of scholars has assumed a gigantic force today. The discipline of '*law and economics'* is now well established, with numerous associations and several journals across the world specifically dedicated to this

[43] Agarwal Engineering Co. v Technoimpex Hungarian Machine Industries, (1977) 4 SCC 367, ¶1.
[44] The pioneering text espousing this view of interest-based bargaining, first published in 1981, is ROGER FISHER, WILLIAM URY & BRUCE PATTON, GETTING TO YES: NEGOTIATING AGREEMENT WITHOUT GIVING IN, (2nd ed., 1991).

discipline. In India, Gujarat National Law University and its Centre for Law and Economics have significantly contributed to the development of jurisprudence in this field.

Here, I would like to add that as we make progress in the field, we must be careful about not making law the handmaiden of economic theory, but rather using the analytical strengths of economics in conjunction with the empirical data that law furnishes, thus enriching both fields. A century and a half ago, John Stuart Mill said of English philosopher and political radical Jeremy Bentham, that he approached the world as a stranger. And, if the world did not fit his theory, utilitarianism, he dismissed what the world did as nonsense. Mill then said that what Bentham did not realize was that often that nonsense reflected the unanalysed experience of the human race.

The future of *"law and economics"* lies in this sort of a mutual relationship. Also, the discipline has expanded its understanding by leaps and bounds, but much is yet to be discovered. There are relevant legal issues that are not adequately explained in the current economic theory. The book entitled ***The Future of Law and Economics***[45] by Judge Calibresi recognizes a few such legal issues. Judge Calibresi attempts to expand the scope of *'law and economics'* by establishing a bilateral relationship between both disciplines. The constant assumptions in economics, like the rational actor model, are also being challenged. New areas such as ***behavioural economics*** and ***neuro-economics*** are being explored as tools to analyse law and account for human subjectivity and psychology. As the great Greek polymath Socrates had famously said that "***the only true wisdom is in knowing you know nothing***", therefore we as practitioners and students of law and economics need to keep our curiosity alive and our reasoning sharp, so that we venture further than ever before.

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[45] GUIDO CALABRESI, THE FUTURE OF LAW AND ECONOMICS – ESSAYS IN REFORM AND RECOLLECTION (Yale University Press, 2016).

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INTERCONNECTEDNESS BETWEEN ECONOMIC THEORIES AND LEGAL PRACTICES

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ABSTRACT

Human activities are driven by the pursuit of flourishing and the avoidance of suffering. A crucial means for achieving such pursuits is the confluence of law with economic aptitude, the speech symbolises that. It delves into how economic principles influence legal frameworks, ranging from individual actions to collective endeavours. Concepts such as utility maximization, constitutional compliance, and societal welfare are scrutinized through an economic lens, illuminating the interconnectedness between economic theories and legal practices. The speech also touches the a critical aspects upon the limitations of traditional economic measures, such as GDP, in capturing the quality of life providing multiplicity of perspective highlighting the role law plays in the economy

Keywords*: constitutional compliance, restorative justice, externalities and reform*

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Profits, benefits, costs and burdens are not mere terms of economic thoughts. They have acquired economic dimensions and connotations, when both at an individual level and at a collective or a social level, measurements and evaluations have become necessary. These terms also derive their origin from human flourishing or human suffering. Whether or not species survival is relatable to flourishing or suffering, all human activities are driven by the natural pursuit of flourishing which means state of comfort, balance and joy, as also avoidance of suffering which connotes losses, pains, burden, and discomfort.

The very impulse, noticeable in many life species including human beings to be in a community or a collective can itself be described as a natural economic activity in as much as such an activity contributes to flourishing and avoids sufferings. Enhancing or increasing the utility of any activity, we understand, relates to flourishing. So also, elimination or reduction of burdens relate to suffering. How individuals do what in a state of freedom has implications for collective of people, organisations or governments can do.

There is a deep connection between the impulse to be in a community and the need for a political constitution. The differences in utilities that may be derived by individual action and those by collective action are fundamental to any study of collective organization. It may therefore seem appealing to talk about logical economic rationalization to explain the emergence of democracy and the accompanying democratic political institutions. Economists talk about as to how individual utility may be increased by collective action in two distinct ways. By collective action, some of the external costs that may come to be imposed by the private action of other individuals may be eliminated. A simple example given in economic literature is that the city policemen keep the thief from your door. Further, some additional or external benefits that cannot be secured through purely private behavior may come through collective action. Example given is individual protection against fire versus a community fire protection system. In both the situations we may be comparing the net direct gains or the net direct costs of collective action with the cost of organization, which in other words means the cost of organizing decisions collectively. Law being an institutional and collective action will require engagement on reducing the cost of organizing decisions collectively and enhancing the outcomes of such organization. In other words the costs of enforcement (involved in managing and supervising institutions as well as other human actors in the process) and the benefit derived must be constantly reviewed. In this analysis, we may undertake to consider

and examine law as a collective action and as a means of reducing external costs that may come to be imposed on the individual when acting voluntarily and purely privately.

Just as there is an explanation both economic, social and philosophical for the emergence of democratic political institutions, we may invoke similar thoughts to deal with law as a collective action and diverse economic models and analysis to verify and validate it. We still do not have strong verification and validation frameworks, in areas of law which are built omn a balance of constitutional values. The cost of constitutionally demanded action and the resultant social values may call for analysis of a different kind.

Classical and neo-classical economics have offered us many theories and approaches to understanding the fundamentals of human behavior. The rational behavior theory in the company of other perspectives on what motivations or persuasions affect or cause human behavior has its own relevance to social and economic policy making. The question as to what principles borne out of these understandings can be best utilized or invoked to bring down, keep under watch, and control, if not eliminate altogether deviant and harmful behaviour, is a question which seems to elude us. In the field of understanding and dealing with crimes from Durkheim to Sutherland to behavioural scientists, we have scripted many ideas. Notwithstanding domestic and global thinking and efforts to deal with and contain deviant behavior we find ourselves hugely dissatisfied or in disagreements. Generation of material resources for human welfare is lo longer a matter of private discretion like the local market or barter. Determination of private goods in the form of profit and wealth, while not prohibited, is viewed as fit subject for watch and Social control. Yet we read thoughts of doom and cynicism, reflections on failures of democracy and the need for ushering in substantive equality as to avert debilitation of rule of law. When we talk of failures, we talk about falling from set norms and ideals. This set norms and ideals are abstract values. Working arrangements always involve costs and benefits. When collective action is required, many factors add to or subtract. The engagement of looking at laws from their enforcement effectiveness has two levels or dimensions. One is the actual intended results or outcome for instance in health coverage the actual number of households covered. The other is the transformation of social values, attitudes, for instance in women's employment environments, equal remuneration and treatment of persons in sanitation services. Both dimensions have economic implications. Both may have to be measured by new quotients of economic formulas. Thoughts and economic models in relation to measures of behaviour in bribery or corruption may be usefully borrowed in these regards.

We are no longer in a world of pure private choices. The Constitution as collective choice and constitutional practice as collective action are occupants of the field of pure private choices. This may be because all voluntary or cooperative arrangements among individuals have not ensured the elimination of burdens and cores, or dealing with suffering and equalisation of burden.

To each individual there is a comprehensive perception of the good depending upon the value system about what is good being inherited and internalized. Depending upon the social and personal opportunities available, the attainment of the good may happen. The debate regarding opportunities and outcomes is well known.The interfaces created by law for the occurrence and promotion of opportunities for self-fulfillment thus become important. The gross happiness index or the gross contentment index, however, cannot be stated with ease. But we need such indicia to evaluate the relevance of a given law and its performance quotient. In his famous Difference Principle, Rawls advocated social arrangements that gave primacy to the need of the least-advantaged members of society, with advantage being measured in terms of possession of what he called the "primary goods". Primary goods are "things that every rational man" is "presumed to want". Rawls did not define an individual's advantage in terms of what he or she could actually achieve with the help of primary goods, but only in terms of the possession of such goods. In other words, he focused on the "means" rather than the "ends". This was deliberate. Rawls was concerned with principles of fairness in a "liberal" society that respected plurality of values. In such a society, different individuals will be expected to pursue different ends in keeping with their respective value systems, or what Rawls called their "comprehensive doctrine of the good".

It is said "the choice between voluntary action, individual or cooperative and political action, which must be collective, rests on the relative costs of social interdependence".

This takes us to the question namely the connection between the decision as to what activities deserve to be collectivized (through law) and the appropriate decision making rules for collective choice. Collectivization through law need not necessarily mean displacement of all roles by private actions.

Economists are thus grappling with these questions in other relevant contexts, and ask questions such as how rational individual will act as to maximize here expected "utility from social interdependence". This means that in a constitutionally determined collective (as

opposed to self sustaining and self aggregation prompted collective) the utility perception, or calculation, etc may no longer remain as free choices. But liberty and freedoms guaranteed by constitution are areas of private choices, even within legal frameworks. I understand that the movement from utility calculations in one set of collective organizations to another set of collective organizations, namely pre-constitutional while the subject of economies is also a subject of values that are ideological and philosophical. The externalities are there costs in one set will undergo changes in another set. All these are fit candidates in the law, and economics marriage.

Classical economics may have little to offer as explanations to deal with lawful behavior and unlawful deviations. Profits and payoff's and their retention and the legal principles maximizing them were the minimal areas of enquiry. further attempts towards explaining rational behavior or its absence as a means of dealing with a new law,and its demands have offered some understanding. However they seem not to take us further in pooling our insights and measures towards maximizing constitutional compliance. If constitutional compliance demands a paradigm shift in citizens' understanding of their rights and claims as mutual benefits to be equally shared and enjoyed, then surely either the same principles of behavioral changes vis a vis constitution should apply as regards compliances with ordinary laws.Can we take the help of some models and ideas in this regard.

In an Australian case, ***Melway Publishing vs Robert Hicks***, the court coined a phrase "Metaphysics of Market power ' to describe the clash between self interested conduct and its harms .In a way we are talking about the metaphysics of law and its combat with human conduct which seeks to pursue interests purely in individual or group fulfilment. Taking stock of multiple ways of and motivations for human conduct, that of a citizen, that of a civil servant, that of a shareholder,that of a CEO, that of a teacher, that of a medical practitioner, that of a pharma company, their common as also different reasons for behaviour, are matters for evaluation .it appears that if diverse values and purposes of laws aiming to alter or regulate human conduct for different common goods have to be successful,we may have to devise rules and principles in permutations and combinations.

What is the nature of activity of the State (Government)? Are the activities of the State comparable to the functioning of a firm or a company. At one level because the State is

mandated by the constitution to act in terms of certain directors, obligations, etc, it resembles the structure of a firm or a company which are bound by its Articles of association. But the project of association of people in a firm or a company is unlike the project of association of people under a constitution. The theory of firm by ***Ronald Coase***, cannot be invoked in a strict sense to the provision of the Constitution. The collective action element, though to some extent common in both situations, is considerably different. If state activity is however considered as being aimed at removing certain externalities or sharing the burden of externalities, which may necessarily arise in the domain of pure individual or voluntary action, we may, however look at the connection between law as a collective action, the demands to be fulfilled by law through collective action and the demands under the constitution for collective action. I suppose, all of this can be considered from an extended understanding of economic analysis.

The above perspective is sought to be presented to debate on how the study of law from certain fundamental features of economic thought and their application to constitution and constitutional demands would be appropriate.

We talk about maximization of utility derived by an individual from any single human activity. We further say that such maximization occurs, when the share of the individual in the net costs of organizing the activity is minimized. We then compare the cost reduction between different modes of organizing the same activity. An individual may expect to endure a cost which is a result of action of others over which she may have no direct control. Such costs, which are external to one's own behavior are called external costs. The cost which an individual may expect to incur as a result of one's own participation in an organized activity however, will be different. Economists call this ***decision making costs.*** How much of this literature can be rendered relevance to multitude of law makings in diverse areas?

Despite the fact that in the realm of criminal law, procedural codes defining administration of criminal justice process, sentencing guidelines, and also other limitations, brought about by precedents and codes of conduct for Judges, judgments very often happen to be a product of intuition and value judgment, as opposed to objective rational deliberations. Even when these two elements are combined, the influence of one over the other can be very subtle. We see it in the context of imposition of the death penalty. When aggravated forms of human conduct result in abhorrent crimes, for instance violation of the dignity of women, we enter into either vigilantism or excessive penal responses. The debates about desert as a ground for punishment

imposition, ranged from the abstract to what one may call hopelessly vague. You may also notice how suggestions regarding restorative justice are opposed by inflexible oppositions. Restorative processes such as victim-offender mediation, and the sentencing circles are said to be promising procedures. A good many restorative inflictions such as averse of service to the victims may have punitive elements. Why should there be a barrier in since attempts to restore comity between victims and offender and society taking place in criminal proceedings.

As we move into a more technology driven social organization, and as we move towards human behavior, prompted and persuaded by many visible and invisible factors, the reforms in criminal law may as well look at the cost and effect relationship from new angles, and punishment from multiple perspectives. Therefore we are looking at from an economic point of view institutions in criminal justice that are likely to be resistant to change, and those that may be open to change. It may also be useful to fuse results and outcomes flowing from what is called experimental gaming studies and the costs of punishments as well as the lack of desired effects in current penology efforts. In essence the question of evaluating criminal justice administration, has to now enter a wide range of or modified variation of burdens and benefits examination. These are potential fields for economics entering into law, legal procedures, and a refinement of justice administration tools.

Without further relapsing Into abstract thoughts let me ask a few questions about why we should connect law with economics or what justice utility we can derive by applying economic principles into the content and enforcement of any given law . All Statute law today are constitutional compliant. There cannot be any law which does not meet with constitutional stipulations. The idea of equal opportunities run through several social and governmental obligations. For instance women empowerment does not stop with employment or education. It must inform all laws that intersect treatment of women . Article 39A is another instance of equality in justice dispensation . Similarly child protection and welfare or juvenile justice one of the less supervised areas of social obligation . Our prison systems continue to be beset with many anachronisms and challenges. Besides laws relating to tax almost all laws deal with some or the other social, economic or political issues . They regulate a financial or economic subject . Securities exchange law is one such example. They may regulate environment related or environment impacting activities. They may provide in regard to supervising the cost of higher education. They may be in relation to food security or rural employment. All these legislations intend to bring about social or economic outcomes and which are to alter the unequal features

of the social order. The cost of the changes , the effectiveness of the changes, the ineffectiveness of the processes etc are all matters of economics. We need to enquire whether the contributions of Ronald Coase or Becker have relevance in the context of constitutionally driven ends and constitutionally structured means. This constitutionally driven ends and structured means may warrant a different level of engagement with human flourishing and human suffering.

As we are moving into a world in search of merger and integration of competing political ideologies and social solutions to claims and interests of peoples and countries,we need to ask fundamental questions about how do we evaluate the quality of life of an individual ,and of the community? The gross national product index, and related measurements are one level of measurements of quality of life. Robert F. Kennedy, an eloquent critique of what GDP does and does not measure, went on to note what it does not measure:

"The gross national product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials…. It measures everything, in short, except that which makes life worthwhile."

There can be two schools of thought in relation to all the above discussions. The question asked by ***Rick Fernandez,*** Google's head of learning and development, '*as we optimize our technology, how can we optimize our lives, so we can be our best selves*' while a question in the context of the emerging technology age, is also a question relevant to the fundamentals of connection between law and economics. If optimization of life fulfillment can happen now by a wide range of combinations of choices, both in collective and private actions, the invisible hands of Adam Smith may have to give way. I wonder whether we can learn from past systems of sound control based on the incorrigibility of human behavior which must yield to efforts to building social arrangements through law, in which the tendency to profit or benefit by imperfections or deviations may vanish. Is this a law and economics connection?

It is in the midst of the above we need to use and invoke the tools of economic thought to refine, perfect, and humanize our laws - both contents and procedures. Legal procedures must not be wasteful. They must promote altruism. They must incentivise best practices. They must balance discretion and certainty, transparency and accountability. Institutional accountability is not

merely a matter of Right to information. The index of every measure will be the justice quotient. Consolidation of our activities, howsoever dictated or guided by economic laws or principles, must ultimately converge with distributive justice. How can the tools of economic thoughts aid us and give us hope and strength of fulfilment?

INFORMATION'S 'UN'-CIVILIZATION: THE IMPERATIVE FOR A NEW APPROACH TO LAW AND ECONOMICS?

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ABSTRACT

This exploration of law and economics raises many related issues. First, we consider ways in which law and economics movement and theory may be said to have revolutionized legal thinking. Second, we illustrate the near-total commoditization of personal data by leading 'artificial intelligence' 'cyber firms and their coalitions, creating both digital warfare and modernized lawfare. Third, we dwell on Shoshanna Zuboff's central conception of surveillance capitalism, which constitutes the third modernity which stands for a future where "a genuine inversion and its social compact are institutionalized as principles of a new rational digital capitalism"; these present a scary picture of the "informational mapping of all of the territories on the planet", "the unremitting locating of individuals", and the "capture of body information and health and behavioural data". This continual data mining, fourth, introduces a "rogue mutation of capitalism marked by concentrations of wealth, knowledge and power unprecedented in human history, ostracizing "people from their individual self-direction". Fifth, explored are some ways of critiquing the very notion of 'information civilization". Sixth, in conclusion, we raise the question of the law and economics agenda about law as a soft technology trying to regulate hard technologies and how, if possible, to reverse the imageries of the 'end of law'.

Keywords: *data mining, information civilization, 'infoglut', future of law and economics, lawfare and warfare, 'surveillance' capitalism, 'platform power'.*

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1. INTRODUCTORY

I am delighted to be with you all to celebrate via this webinar at the conference on the Tenth year of the Law and Economics Studies Centre at GNLU in India. I salute Professor (Dr.) Ranita Nagar, Dr. Hiteshkumar Thakkar, and all the colleagues on this occasion for this magnificently sustained network which has indeed ushered in many an initiative in interdisciplinary studies. I regularly consult the Centre's journal and blog and have learnt a great deal from various entries and comments, which show a fine scientific and social sensibility.

I address many themes constituting difficult terrains and am fully aware of problems of strict time limits and temptation to evils of obfuscation and bouts of ostentatious learning that beset scholarly addresses. I will do my best to avoid a monologue and hope to learn from the discussion that follows.

As Cass Sunstein has recently observed: "the field of law and economics has revolutionized legal thinking. It may well be counted as the most influential intellectual development in law in the last one hundred years. It has also had a major impact on how regulators in the United States, Europe, and elsewhere deal with anti-trust, environmental protection, highway safety, health care, nuclear power, and workers' rights."[2] But as Kaushik Basu adds: "It is easy to go on and draw attention to the power of law and economics in many other areas, from shaping regulation relating to finance and banking, to fiscal policy and laws to regulate the fiscal deficit. It is clearly a subject that deserves attention". We must note also that this early law and economics movement, in contrast to the work in the 1960s, was much more concerned with inequality, and distanced itself from mainstream market economics. The disappearance of the ideas about equality appears to me as well counted to (what I call) the dread of' 'J' word in high economic theory.[3] One may justly talk about some wider issues such as, first what may be said to be the scope of law and economics[4] second, its impacts on the itineraries of law in society – (typically excluding miliary impacts);[5] third, if law and economics movement is well

[2] Sunstein, C. (2016, November 10). Listen, Economists!. *The New York Review*. https://www.nybooks.com/articles/2016/11/10/listen-economists/.

[3] Basu, K (2018). The Republic of Beliefs: A New Approach to Law and Economics. Princeton University Press.

[4] Kitch, E.W. (1983). The Intellectual Foundations of "Law and Economics" *Journal of Legal Education*, 33(2), 184-196.

[5] He rightly says (at 194) "Traditional jurisprudence, although supposedly the field of the philosophy and science of law, has been in practice a separate field of little relevance to legal scholarship. Law and economics introduced a set of methods and concerns that cut across fields and highlighted some of the central unities of the law. This has enabled people in different substantive fields to talk to one another and to identify and share common

and truly dead, what may take its place?[6] These are important arenas, but I here wish to confine only to the last question.

2. THE PIZZA STORY

It is well to begin with an apocryphal of a customer ordering his favourite Pizza but gradually denying his favourite pizza; it is not about the classical division of labour in society the advent of classical political economy, or the changing modes of production, but rather about new forms of economy, ownership, dispossession, and alienation. Here, in this well-circulated story on the net a caller who simply wishes to order a pizza is increasingly told bits and pieces of his conduct and states of being by a global corporation that holds all the disparate data about her personality, food habits, health, bank and credit card accounts, passport expiry, and tax and transaction details. In one sense, the customer has freedom and agency- after all, she has the power to terminate the conversation, shop for another pizza outlet, or change her food habits to less intrusive ways. But she has then fewer market options—to live in neoliberal times as a degrowth person, were it possible, but no more as a customer in the marketplace or a consumer in a global market economy. Put differently, human agency, freedom, and privacy have increasingly become illusory; being human is to be, and become, aggregate data-systems, already appropriated and commoditized by the global market forces. Or, as Zuboff puts it: "we are the sources of surveillance capitalism's crucial surplus: the objects of a technologically advanced and increasingly inescapable raw material-extraction operation. Surveillance

concerns". He also insists that:" Legal scholars have, of course, long realized the importance of historical and comparative studies. But these studies have been largely descriptive. Law and economics provide an analytic framework that can provide unifying direction to comparative and historical work" and instances fields such as:" For instance: (a) "Contractual relations have had varying scope within societies. What social variables account for the varying scope accorded to social ordering through contract? (b) What effects have different forms of economic ordering had on the productivity of societies? (c) Do legal institutions operate systematically to enhance human welfare; do they operate to protect and maintain the position of those in political power; do they have no effect; or should they be understood in some entirely different framework? If these questions should be answered differently in different societies, or at different times, what accounts for these differences? (at 191).
See, Baxi, U. (2012). Global Development and Impoverishment. In M. Tushnet, & P. Cane (Eds.), *The Oxford Handbook of Legal Studies*, (pp 455-482) Oxford Academic; Sheeran, S., & Sir Rodley, N. (Eds.). (2013). *Routledge Handbook of International Human Rights Law*. Taylor & Francis.
Baxi, U. (2016). *The Way Ahead: Towards a Social Economics?*. International Conference on Law and Economics, IIT Kanpur, India. https://www.iitk.ac.in/ICLE2016/doc/ubaxi.pdf.
See, also, White, M.D. (Ed.) (2015). *Law and Social Economics: Essays in Ethical Values, Theory,Practice, and Policy*. Palgrave Macmillan.
If someday a discipline called military/defense law and economics stream were to come into fully fledged existence, one would study, among other things, the human rights costs of prolonged and localized armed conflicts situation; the political economy military doctorships; the global armament markets; defense production corporate governance, and procurement models; the integration vs accommodation of international humanitarian law; and of course the military uses of artificial intelligence.
[6] *See*, the last section of the paper.

capitalism's "actual customers are the enterprises that trade in its markets for future behaviour."[7]

There is something quaint about the truism that there are no human beings, agency, or privacy available to us anymore, even if we may cling to illusions (or hallucinations) of rational choice-making. Shoshana Zuboff details in *Surveillance Capitalism* treats precisely this feat achieved by digital economy but probably less deterministic narratives open up when we listen to dissenting voices offering different notions of 'informational capitalism'. Are the days of contemplating Karl Marx's oeuvre or Max Weber's work on critique of society, law, and economics gone forever?[8] Or nearer our times, the monumental works of James Willard Hurst?[9] And should I add further the lifetimes of law and economics movement which are now vanishing before our own eyes?

3. SURVEILLANCE CAPITALISM AND INFORMATIONAL CIVILIZATION

This essay focuses on Shoshanna Zuboff's central conception of surveillance capitalism which constitutes the third modernity and stands for a future, where "a genuine inversion and its social compact are institutionalised as principles of a new rational digital capitalism." The 'third modernity' would consist of "sincere progression and its unique strain of social contract of digitalized market economy, which is in alignment with the individual's society is comprised of and derive their legitimacy from its democratic institutions" [54]. Of course, in pages 4-41, she elaborates on "social forces that expand opportunities for good life" such as: (1) "Education and knowledge work increased mastery of language and thought, the tools with which we create personal meaning and form our own opinions; (2)"Communication, information, consumption, and travel stimulated individual self-consciousness and imaginative capabilities/attitudes - in ways that could "no longer be "contained by predefined roles or group identity; (3) improved "health and longer life spans provided the time for a self-life to deepen and mature"; and (4)"fortifying the legitimacy of personal identity over and against a priori social norms".

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[7] Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. Public Affairs; this work hereafter will be referred to in the paper simply by the page number in the parentheses.

[8] Rheinstein, M. (Ed.) (1954). *Max Weber On Law In Economy and Society.* Harvard University Press; Trubek, D.M. (1986). Max Weber's Tragic Modernism and the Study of Law in Society, *Law & Society Review*, 20(4), 573-603; Trubek, D.M. (1977). Complexity and Contradiction in the Legal Order: Balbus and the Challenge of Critical Social Thought About Law, *Law & Society Review*, 11(3), 529-569.
One does not know, for example, if Shoshana Zuboff quite endorses Weber's varied theses about law and capitalism but certainly, he is quoted to embellish some of arguments concerning the early development of cyber or surveillance capitalism.

[9] Konefsky, A.S. (2000). The Voice of Willard Hurst, *Law & History Review*, 18(1), 147-166.

Let us get closer to all this by a sister concept of Zuboff's second concept, informational civilization (to which Professor Ranita Nagar has now rightfully added the prefix "un"). According to Zuboff, iPhones, iPads, and iTunes opened the door for the possibility of "democratized information in the context of individualized economic and social relations" [55], a new model for a third modernity; but it was Google, with its AdSense and content-targeted advertising, at first, and Gmail, in a second moment, that laid the groundwork for "a new economic order."[82].

Surveillance capitalisms "births a new species of power" that Zuboff names as 'instrumentarianism', which "knows and shapes human behavior toward others' ends. Instead of armaments and armies, it works its will through the automated medium of an increasing ubiquitous computational architecture of 'smart' networked devices, things, and spaces"[7].

It uses massive-data collection, which establishes "practices for extracting information and knowledge about individuals in order to foster prediction and sales practices based on the exploration of individuals' intimate spaces. This data mining is increasingly based on more information/data mining and is acquired through Big Data [By 2020 more than 44 zettabytes (44 trillion GB) will be generated and approximately 16 zettabytes may be used in the context of Big Data applications. It is believed that by 2025 the total amount of Data will be as high as 180 zettabytes. All this is overshadowed by the Dark Web [Internet of Things where PCs and censors talk with each other] and leads to drones and lethal automatic weapons systems (LAWS, as the USA defence department abbreviates this in an unconscious irony). All this happens by a behavioural surplus that underlies the new business model[10].

Put another way with Zuboff, "the increasing computerization of public and private spaces", the "informational mapping of all of the territories on the planet", 'the unremitting locating of individuals", and the "capture of body information and health and behaviour data" present a scary picture of how surveillance capitalism firmly defies 'boundaries all the time, seeking the most exhaustive collection of data possible'. For it any "kind of data is of interest" and "free" products are offered, as surveillance capitalism's ultimate goal is to capture personal information, where the real product is developed from the processing of this information' [417].

A "rogue mutation of capitalism marked by concentrations of wealth, knowledge and power unprecedented in human history", Zuboff maintains, "ostracizes people from their individual

[10] How much data is generated each day? (2019, April 17). *World Economic Forum*. https://www.weforum.org/agenda/2019/04/how-much-data-is-generated-each-day-cf4bddf29f/.

self-direction". 'Simultaneously, it elicits a novel, cosmopolitan emporium of the domination and reorientation of human demeanour. Zuboff calls this "the commercial sphere of the comportment residue that rebrands upcoming human actions as sales articles for speculation" where "comprehension plays second fiddle to computation, when it comes to information". Surveillance Capitalism, like mass production; is "an American invention... [That] became a global reality" [24]. The development of this invention would have occurred in the US, but the "consequences of these developments are on the world"[24].

Surveillance capitalists are corporations that act as the torchbearers or adopters of this new strain of commercial enterprise. Zuboff singles out Google [63] and Facebook [91] as the most peremptory "patron saints"? of surveillance capitalism but Microsoft and Amazon are also explicitly enumerated, while Apple is still straddling at the fence [9]. According to Zuboff, surveillance capitalism jeopardizes the colossus quest for "our elemental right to the future tense" [20]. SC dismantles humans' "ultimate entitlement to aspire which bestows upon them the agency to conceive of such a thing as a hereafter (a worldly one) in the first place" [20].

The ceaseless quest for a more immutable "ever after" [65] leads to a "crusade" committed to devise a novel, all-encompassing global supremacy that "is founded on impeccable surety" of "surveillance capitalism's incubation in lawless Space", a striking way of the demise of state regulation and the capture of the cleansed space by opaque forms of corporate governance law and regulation that amount to a "law unto oneself". Zuboff speaks of the very structures of "invasion and conquest" of "operating procedures to which billions of innocents are subjected each day", and perennial ways of "information warfare" and even "rendition operations" that violate "all boundaries and … claim dominion over all people and goals, both at Facebook and within other surveillance capitalist companies"[268], generating a "sense of boundarylessness".

Moreover, "affective computing" [269] leads to situations where "personality and emotion are claimed as observable behaviour and coveted for their rich deposits of predictive surplus". Now, "the personal boundaries that shelter inner life are officially designated as bad for business by a new breed of mercenaries of the self-determined to parse and package inner life for the sake of surveillance revenues". Their "expertise disrupts the very notion of the autonomous individual by rewarding 'boundarylessness' with whatever means are available—offers of 'elite status, bonuses, happiness points, discounts, "buy" buttons pushed to your

device at the precise moment predicted for maximum success—so "that we might strip and surrender to the pawing and prying of the machines that serve the new market cosmos" [278].

We live in a peculiar way, in what Walter Benjamin prophetically termed 'now-time'.[11] It is now better known as 'Hencity': the science of what will be. The study of history is almost extinct – as it has been ousted by the "study of Hencity"; Hencity is more than just forecasting the future; it is the art of knowing what shall come to pass. When one inserts businesses trading in Evil itself. [12]

Zuboff's book provides an excellent basis for understanding dispossession, universalization, and dehumanization, which treats humans as objects, or organisms, both materialized in informational data and subjected to technics of instrumentation. They are mechanisms for the extraction of value from behaviour monitoring and a logic that already leads to power asymmetries, which Zuboff identifies. In its latest incarnation, behavioural modification comes to life as a global digital market[13] architecture, unfettered by geography, independent of constitutional constraints, and formally indifferent to the risks it poses to freedom, dignity, or the sustenance of the liberal order" [309]. She asks: "Where is the hammer of democracy now when the threat comes from your phone, your digital assistant, your Facebook login? Who will stand for freedom now, when Facebook threatens to retreat into the shadows [306] and if "we dare to be the friction that disrupts economies of action that have been carefully, elaborately, and expensively constructed to exploit our natural empathy, elude our awareness, and circumvent our prospects for self-determination? [307]. Surely, surveillance capitalism summons civil society to act in defence of democratic principles and the autonomy of individuals and collectives. This powerful analysis provides an arsenal of practices for the renaissance of freedom, dignity, and privacy.[13]

4. TOWARDS CRITIQUING INFORMATIONAL CIVILIZATION

Many aspects of this powerful presentation puzzle us. There is no gainsaying that what Zuboff is saying is in fact a global societal change but whether it is a shift from the notion of 'network society to the paradigm of 'information civilization' is, indeed open to analysis. It is trite to

[11] Hamacher, W. (2001). *'Now': Walter Benjamin on Historical Time*. In Friese, H., *The Moment: Time and Rupture in Modern Thought* (pp. 161-196) Liverpool University Press.
[12] Lem, S. (1985). *The Futurological Congress (from the Memoirs of Ijon Tichy)*. Houghton Mifflin Harcourt.
[13] Laniuk, Y. (2021). Freedom in the: Lessons from Shoshana Zuboff, *Ethics & Bioethics*, *11*(1-2), 67-81.
Laniuk observes (at p. 68) that: "If one dared to scale down this almost five-hundred-page book to a single sentence, that sentence most likely would be the following: "The essence of surveillance capitalism is the annihilation of freedom and its replacement by a machine-like certainty."

say that social change may eventually contribute to civilizational' change and that the 'societal' many do not exhaust the 'civilizational'. The notion of civilization at least entails the idea of lounge durée, not of an instant civilization that speaks of Hencity, where we abolish altogether the concept of the past.

Out of an initial count of about 300 million, the world's digital population now, in 2023, is estimated to be 5.4 billion people with China, India (2.93 billion) and the United States (331 million) ranking higher worldwide (measured by the number of internet users). The world population is estimated at 9.8 billion in 2050, and 11.2 billion in 2100. It seems that dizzying speed of Silicon Valley talk has made us oblivious of the 'digital divide' that erects a division between information-poor and rich-societies. But may the non-digital other still be presented as a historically vanishing breed?

Further, the notion of 'informational civilization' trembles when we realize the facts of global production. According to Forbes, the companies "on the 2023 list account for $50.8 trillion in sales, $4.4 trillion in profits, $231 trillion in assets and $74 trillion in market value" and the "cumulative profits, assets and market value are all down slightly from last year, though this is the first time total revenue has surpassed $50 trillion: unsurprisingly the U.S. leads the way with 611 companies on the ranking, and China comes in second with 346" out of 58 countries represented by the publicly traded companies on the list. All this should lead us to re-examine the assertion that company "nevertheless posted a record $4.2 trillion in combined annual revenue over the last 12 months, up from about $4 trillion the year before and $3.3 trillion two years before." The latter is impressive but does not show that capitalism has gradated to 'information civilizations;' in comparison with big corporate business. The continuity with older forms of corporate capitalism seems to persist.

One must also note the Marxian critique, which is based on the original distinction in Karl Marx's Das Capital between the productive forces and relations of production. Zuboff is certainly aware of this distinction and uses the term "Information capitalism" in several places. She considers informational capitalism as a sinister "rogue mutation" of capitalism. The same phenomenon is described by many as "computerized society, digital society, information society, knowledge society, knowledge-based society, network society, ICT society, Internet

society, communication society, cyber-society, media society, post-industrial society, postmodern society, virtual society".[14]

But all this ought not to conceal the fact that we are, after all, thinking capitalism. As Jonathan Friedmann explicitly emphasizes: "Capitalism has not changed in its general tendencies to the deepening of commodification, the increase in the rate of accumulation of fictitious capital relative to real accumulation, the increasing lumpenization of large portions of the world's population". While all "these processes are abetted by the new high technology" these are certainly not the "cause but are the symptoms of a capitalism in dire straits, a situation quite predictable from the logic of the system". According to him, the "only new quality would be the ideological claim that we live in a new society, breathing "the strange air of radical identity or self-identity among those intellectuals who are both representatives of the privileged classes and translators of ordinary liberalism into the language of radicalism".[15] Fuchs is even more forceful in his conclusion that neither "an information society" should be "reduced to the level of the productive forces" nor to "the level of the relations of production". This is because the "first reduction will result in the assumption that we live in a new society, the information society", the second "that nothing has changed, and we still live in a capitalist society". The "informational forces of production … are mediated by class relations, which means that the establishment of information technologies … and knowledge work …are strategies to advance surplus value exploitation" whereby capital "hopes to achieve higher profit rates. The idea that the notion of society can today solely be constructed by reference to the informational forces of production is an ideological illusion".[16]

5. LAW, ECONOMICS, AND THE PLATFORM POWER

What should law, adjudicative law, and jurisprudence do in an era of platform power that characterizes the pre-eminence of digital sovereignty? Regulation not by the industry but by the State seems to furnish one response through the development of "an analytically sound conception of platform power", the power "to link facially separate markets and/or to constrain participation in markets by using technical protocols."[17] Julie E. Cohen expresses a second, and allied, concern by what she names "infoglut"—a kind of "information abundance",

[14] Fuchs, C. (2013). Capitalism or information society? The fundamental question of the present structure of society, *European Journal of Social Theory*, *16*(4), 413-434.
[15] *Id.* at 418; see for a fuller statement, Friedman, J. (2002). Modernity and Other Traditions. In Knauft B., *Critically Modern: Alternatives, Alterities, Anthropologies* (pp. 287-313). University of Indiana Press.
[16] *Id.* at 431.
[17] Cohen, J.E. (2017). Law for the Platform Economy, *UC Davis Law Review*, *51*, 133-204.

"unmanageably voluminous, mediated information flows that create information overload": how may the State, pitted against surveillance capitalism's productive forces devise effective strategies for counteracting infoglut? Third, it how does it (as it ought to) develop "coherent and publicly accountable methods for identifying, describing, and responding to systemic threats - nascent, probabilistically defined harms to be realized at some point in the future' [341].

Julie Cohen basically draws our attention to interlinked concepts of 'platform' and 'platform power'. Her starting premise is that "the platform is not simply a new business model, a new social technology, or a new infrastructural formation (although it is also all … those things). Rather, it is the core organizational form of the emerging informational economy" whose main functions are: "the propertization of intangible resources, the concurrent dematerialization and datafication of the basic factors of industrial production."[18] However, the regulatory fields are both complementary and distinctive. Very often the platforms create their own law, adjudication, and enforcement. This is most visible in the industry development of self-regulation. As has been shown, "most general purpose platforms ban or limit pornography, representations of extreme violence, harassment, hate speech, representations of self-harm, and promotion of drug use very much like 'coordinated law-making', they" develop and share policy guidelines and construct regulatory institutions and practices to regularize the processes of content flagging and removal".[19] But the paradox is that "the space of networked digital communications" emerges as a "space devoid of protections for vital human freedoms, even as the activities conducted in that space become more and more fundamental to the exercise of those freedoms."[20]

When we look at the models of law and regulation, we come across three recent models of "digital empires" (as notably explored by Anu Bradford)[21] ; these are furnished by the law and

[18] *Id.* at 135.
[19] *Id.* at 202, basing herself on the analysis made by Tarleton Gillespie.
[20] *Id.* at 199.
[21] Bradford A. (2023). *Digital Empires: The Global Battle to Regulate Technology*. Oxford University Press; Baxi, U. (2024, January 5). How AI is changing what sovereignty means. *The Indian Express*. https://indianexpress.com/article/opinion/columns/ai-is-changing-what-sovereignty-means-9095702/; *Author Talks: Anu Bradford discusses the race to become the next technology superpower* (2023, November 6). McKinsey and Company. https://www.mckinsey.com/featured-insights/mckinsey-on-books/author-talks-anu-bradford-discusses-the-race-to-become-the-next-technology-superpower.
This accessible book is further rendered so by Bradford (in an *Author Talk*s, blog-Raju Narisetti chats with Anu Bradford), where she emphasizes the 'horizonal' aspect of this confrontation: "To make clear that there is increasingly a consensus around the world that technology needs to be regulated. But there's no consensus on what the regulation ought to look like. I argue that there are three primary ways to think about a digital economy and its regulation. We have the American market-driven model, the Chinese state-driven model, and the European

jurisprudence of the three 'digital empires' espoused by the USA, PRC and the EU, that articulate various global trade and culture wars.

The US model is moved by the avatars of markets fundamentalisms and marked by freedom of contract and property and the well-entrenched images and materialities venerating the 'Nightwatchman state", and 'free and fair competition'. It is also increasingly based, as Bradford says, on techno-optimism that essentially signifies no regulation or regulation with a 'light touch' promoting high incomes and super-profits.

Bradford presents the model of the PRC as offering recipes of authoritarian legality, putting the nation first. This means the people and in turn means the Party, and the Supreme Leader, who is the embodiment of both. To use the favourite phrase of mine, from a title of the book by the Ghanaian thinker Claude Ake, the leader and the regime specialize in "democratization of disempowerment" (techniques of coercion and standardless use of force).It performs many a miracle; one that concerns us here is the paradox of a growing digital economy with patterns of redress-less interference of the State in the structures and functions of digital industry.

The third model presented by Bradford is the EU model which frontally privileges human rights and inclusivity in a normative framework that stresses a "Human centric development". Human rights values as well as aspirations stand indispensable for inclusive and sustainable development and the prime function of law and policy is seen to lie in normative governance dedicated to the preservation of human dignity. Although Anu Bradford thinks that the PIC model is globally ascendant, I would think that the jury of future history is still out deliberating on which, if any of these models, is pertinent for human and social development in the next quarter century.

6. TOWARDS A CONCLUSION

The dying of law has often been proclaimed since the young Soviet martyr jurist E.B. Pashukhanis[22].

rights-driven model. So, the horizontal battle, then, encapsulates this set of three different models that are competing for influence in the global digital economy".

[22] Zanetti, G., Sellers, M., & Kirste, S. (Eds.). (2023). *Handbook of the History of the Philosophy of Law and Social Philosophy: Volume 3: From Ross to Dworkin and Beyond*. Springer International Publishing; Melkevik, B. (2023). Pashukanis, Evgeny Bronislavovich. In *Handbook of the History of the Philosophy of Law and Social Philosophy: Volume 3: From Ross to Dworkin and Beyond* (pp. 233-238). Springer International Publishing.; Baxi, U. (1993). *Marx, Law, and Justice.* NM Tripathi.

but the advent of information society, and certainly informational civilization and digital sovereignty and digital subjects that represent new forms of power and control in a world undergoing now a new industrial revolution (named the fourth IR) has sharply focussed attention to the end of law in digital society.

We take here only one poignant example which shows again but in more profound way the death of law (contra Mark Twain who famously said that the reports of my death are wildly exaggerated!) Ugo Mattei[23] speaks of a "corporate takeover" of the law from the State.[24] This relatively new "corporate assault"; everyone must learn that now "corporate accumulation learns its logic the hard way: the owner of the platform makes the rules. The user must accept the rules: take-it-or-leave-it! You do not consent to the rules? Then you must stay out." Put another way: "On the Internet frontier (and this is the main difference from colonial expansion) there is really no need for law in order to accumulate capital.

Algorithms, smart contracts, and firewalls are more than sufficient. For the first time in the history of capitalism, accumulation lawyers are unnecessary".[25] Furthermore, it "is so much cheaper to use QR Codes rather than law as controlling processes that there is scant hope that, in the wake of neoliberal values, law will survive much longer".[26]

Ought not, before it is too late, the law and economics agenda, both of theory and movement, raise the question about law as a soft technology trying to regulate hard technologies and how, if at all possible, reverse the imagery of the end of law?

[23] Mattei, U. (2023). The Death of Law, *Global Jurist*, *23*(1), 1-5.
[24] *Id. at 2.* Reminiscent of, he says, "the corporate takeover of Western institutions, a silent takeover morphing over two decades between Noreena Hertz's The Silent Takeover (2001) and Camila Vergara's Systemic Corruption (2020)" referring "not only to legislative capture but also to seizure of every apparatus or power with a political impact"; adding also Ugo Mattei & Laura Nader, Plunder: When the Rule of Law is Illegal (Blackwell 2008).
[25] Mattei, *supra* note 23, at 4.
[26] *Id.* at 5.
"Courts of law, law schools, attorneys, notaries, casebooks, legal codes and texts, dissenting opinions, and doctrinal discussions are increasingly perceived as wastes of time and money, useless transaction costs for capital accumulation."

STUDY ON THE APPLICATION OF FORENSIC ANALYTICS IN EARLY-STAGE OCCUPATIONAL FRAUD DETECTION*

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ABSTRACT

Occupational fraud is the most prevalent threat affecting developed and developing countries. According to the Association of Certified Fraud Examiners, India has the highest occupational fraud rate among Southern Asian countries. As technology advances, criminals are looking for innovative ways to commit crimes. The effects of fraud on companies include loss of reputation, weakening of investors' confidence, reduction of profit, and lowering moral values of employees. The study aims to evaluate the most recent preventative measures organizations have implemented to reduce occupational fraud. The researchers have highlighted the value of forensic analytics in detecting and preventing occupational fraud. This research is based on a mixed method. Results suggest forensic analytics is crucial for detecting occupational fraud at early stages.

Keywords: *Forensic analytics, Occupational fraud, Employee fraud, Forensic auditing*

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1. INTRODUCTION

Many reported cases include Enron, Satyam, PNB loan fraud, ABG shipyard, DFHL scam, etc. A global survey of fraud in 2022 by the Association of Certified Fraud Examiner (ACFE) estimated that over 3.6 billion dollars were lost through the 2110 occupational fraud cases analyzed from 133 countries. Fraud poses a significant problem, leading to substantial financial losses on a global scale. Fraud is an intentional action aimed at gaining unauthorized benefits through deception or unethical practices that others rely on.[5]

1.1 Conceptual Framework

Fraud Triangle

Manipulating financial reports undermines the credibility of financial statements, distorts financial performance, and endangers corporate sustainability (Rezaee & Davani, 2013)[6]. Despite its detrimental effects, fraudulent financial reporting remains a strategy some companies employ to maintain their survival and competitiveness in the global business environment. Even major fraud scandals in companies like Enron have failed to fully alert business leaders to the importance of eliminating fraudulent practices (Alleyne & Amaria, 2013)[7]. Therefore, understanding the root causes of fraudulent financial reporting is essential for minimizing its harmful effects.

Contrastingly, four broad types of pressures for corporate fraud have been identified: financial pressures, vice pressures, job-related pressures, and other pressures (Albrecht et al. 2008, 2010)[8]. Financial pressures and vice pressures alone constitute approximately 95% of these pressures. Additionally, various individual and corporate pressures serve as significant motivational factors for committing fraud, such as financial desperation, inability to meet obligations, and overwhelming debt burdens.

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[5] ORGANIZATIONS WORLDWIDE LOSE TRILLIONS OF DOLLARS TO OCCUPATIONAL FRAUD, https://www.acfe.com/about-the-acfe/newsroom-for-media/press-releases/press-release-detail?s=2022-RTTN-launch (last visited Jun.2, 2024).

[6] Zabihollah Rezaee & Hossein Davani, *Does Financial Reporting Fraud Recognize Borders? Evidence from Bank Fraud in Iran*, 5 JOURNAL OF FORENSIC & INVESTIGATIVE ACCOUNTING 224–238 (2013).

[7] Beverley Alleyne &Pesi Amaria, *The effectiveness of corporate culture, auditor education, and legislation in identifying, preventing, and eliminating corporate fraud*, 7 INTERNATIONAL JOURNAL OF BUSINESS, ACCOUNTING AND FINANCE (2013).

[8] W. Steve Albrecht, *Chad Albrecht & Conan C. Albrecht, Current trends in fraud and its detection*, 17 INFORMATION SECURITY JOURNAL: A GLOBAL PERSPECTIVE 2–12 (2008). & Chad Albrecht et al., *The relationship between South Korean chaebols and fraud*, 33 MANAGEMENT RESEARCH REVIEW 257–268 (2010).

Fraud Diamond

The Fraud Diamond concept expands upon the fraud triangle by introducing "capability" as a fourth factor. This addition enhances the original model, which only included three elements (Wolfe & Hermanson, 2004)[9].The Fraud Diamond is an enhanced model for understanding and analyzing fraudulent behavior. It builds upon the original fraud triangle by incorporating a fourth element called "capability." While the fraud triangle focuses on pressure, opportunity, and rationalization as the key factors that lead individuals to commit fraud, the Fraud Diamond adds the dimension of an individual's capability to carry out the scam (Albrecht et al., 2010)[10]. This element considers the skills, position, and personal traits that enable a person to exploit their environment and commit fraudulent acts successfully. The fraud diamond provides a more comprehensive framework for identifying and preventing fraud by including capability.

Agency Theory

Agency Theory involves the concept that one or more principals employ an agent or agency to carry out tasks under a contract. This aims to achieve the outcomes desired by the principals. The principals compensate the agents for their work (Jensen & Meckling, 1976)[11]. However, the agent and the principal do not always have the same interests. If the principal needs more information and can effectively oversee the agent, the agent might act in ways that benefit themselves rather than the principal. This misalignment, which results in negative consequences for the principal, is an agency problem (Donaldson & Davis, 1991)[12].

Stewardship Theory

Stewardship Theory argues that the assumptions of Agency Theory about operators acting selfishly are incorrect. Instead, it claims that operators want to be excellent stewards, motivated by their dignity, beliefs, and satisfaction from their work. As managers stay longer with a company, they start to identify more with it, aligning their image with its reputation. They see

[9]Wolfe David T & Hermanson Dana R, *The Fraud Diamond: Considering the Four Elements of Fraud*, 74 THE CPA JOURNAL 38–42 (2004).

[10]Chad Albrecht et al., *The relationship between South Korean chaebols and fraud*, 33 MANAGEMENT RESEARCH REVIEW 257–268 (2010)

[11] Michael C. Jensen & William H. Meckling, *Theory of the firm: Managerial Behavior, agency costs and ownership structure*, 3 JOURNAL OF FINANCIAL ECONOMICS 305–360 (1976).

[12] Lex Donaldson & James H. Davis, *Stewardship theory or agency theory: CEO governance and shareholder returns*, 16 AUSTRALIAN JOURNAL OF MANAGEMENT 49–64 (1991).

their interests as closely tied to the company and its owners. This perspective is the foundation of Stewardship Theory.

Stewardship Theory suggests that managers are motivated not by self-interest but by a desire to be good stewards of their resources and responsibilities. According to this theory, managers derive satisfaction and motivation from their work, driven by personal values, integrity, and a sense of duty. Over time, as managers become more connected to the company, they begin to see their and its success as intertwined. This leads them to act in the company's and its owners' best interests rather than purely for personal gain.

According to the PricewaterhouseCoopers (PwC) Global Fraud Survey 2022, fraud and other forms of economic crime comprised 46% of all cases[13]. Although customer fraud and asset misappropriation are serious concerns, the detrimental impact of cybercrime is even greater. People created a digital occupation transformation due to the COVID-19 outbreak. The business has significantly reduced fraud by enhancing its technical capabilities and internal controls. Corporate fraud occurs when a company or an employee engages in dishonest or unlawful activities (Cohen et al.,2010)[14]. Sahara India Pariwar's financial accounting has been found to have falsified revenue and profit numbers in order to attract customers and investors. This internal fraud has had a significant impact on the company's ability to operate effectively. The role of internal auditors in assessing fraud risk and managing risk assessment is critical. Various fraud risk assessment methods have been developed by The Association of Certified Fraud Examiners (ACFE) defines Occupational fraud as "the use of one's occupation for personal enrichment through the deliberate misuse or misapplication of the organization's resource or assets" (ACFE,2022)[15].

Occupational fraud is different from other types of crime because the victims are unaware of their losses. Both public and private sector organizations have been affected by dishonest behavior from their employees. It's not surprising that the ACFE has reported the highest rate of occupational fraud. Occupational fraud can be categorized into three main types, as listed below.

[13]PwC's Global Economic Crime and Fraud Survey 2022, https://www.pwc.com/gx/en/services/forensics/economic-crime-survey.html, (last visited Jun.2, 2024).

[14]Jeffrey Cohen et al., *Corporate fraud and managers' behavior: Evidence from the Press*, 95 Journal of Business Ethics 271–315 (2010).

[15]Occupational fraud 2022: A report to the nations, https://acfepublic.s3.us-west-2.amazonaws.com/2022+Report+to+the+Nations.pdf (last visited Jun 11, 2024).

Asset misappropriation: Employees or third parties sometimes take advantage of their positions to steal an organization's assets or resources for financial or personal gain. This type of fraud results in significant global losses, with 86% of cases being reported worldwide. Most commonly, company directors, employees, or individuals entrusted with assets are found to be involved in these fraudulent activities.

Financial statement fraud occurs when an individual intentionally misrepresents an organization's financial statements to deceive users. High-ranking individuals, such as the company's Chief Financial Officer or Controller, may be involved in the fraud, allowing them to manipulate valuable company information. Notable examples of fraudulent financial statements include cases at Enron and Satyam. Corruption and bribery are other types of occupational fraud that offer consideration to a member of the organization to influence their judgment. Based on the types of occupational fraud, every region of the world is plagued by corruption. Assets misappropriation stands out as the least detrimental fraud scheme. "Financial statement misrepresentation is the least common but most costly type of fraud scheme." (Aghili, 2019)[16].The below table depicts that occupational fraud has been categorized based on the characteristics and level of fraud.

Types of Frauds	Description
Conflicts of Interest	Employees or managers have an undisclosed financial interest in transactions that negatively affect their organization.
Bribery	Money or gifts are given or offered to officials to fulfil their duties.
Illegal gratitude	A person who gives public officials by consideration of personal gain.
Economic extortion	Vendors or salespersons benefit the company's employees by making influential judgments.
Theft of cash on hand	Someone has stolen cash or cheques from safe deposits or vaults in the organization.
Theft Cash	Cash or cheques were stolen after preparing books of accounts while in transit before bank deposits.
Inventory all other assets	Someone involves the misappropriation of non-cash items such as inventory, company confidential information, and assets.
Net-worth/Net Income Overstatements	The higher officials or employees stated that the income was high enough to attract investors.

[16]Shaun Aghili, *Fraud Auditing Using CAATT: A Manual for Auditors and Forensic Accountants to Detect Organizational Fraud* (2019).

Net-worth/Net Income Understatements	The higher officials or employees report that the financial statement is less than the actual amount.

Table 1: Types of Occupational Fraud[17]

1.2 Occupational Fraud Reports from ACFE

ACFE started the fraud survey in 1996 on mainstream occupational fraud and abuses, known as Report to the Nation. In 1996, Certified Fraud Examiners shared data regarding occupational fraud and abuse cases worth $15 billion. A global survey of fraud in 2022 by the ACFE estimated that more than 3.6 billion dollars were lost through the 2110 incidents analyzed from 133 countries (ACFE,2022). Certified fraud examiners estimate that fraud costs organizations approximately 5% of their annual revenue. The most prevalent type of occupational fraud globally is asset misappropriation. Corruption was the most common scheme in every part of the world. The organization with the lowest number of employees suffered the highest losses ($150,000). According to the data, real estate companies are more vulnerable to fraud than other businesses.

Year	**Data Collection**	**Number of occupational fraud cases**	**Amount of Loss**
1996	2608 Certified Fraud Examiners (CFEs)	1498	$15 billion(total)
2002	2500 Certified Fraud Examiners (CFEs)	663	$7 billion(total)
2004	Not mentioned	508	$761 million(total)
2006	Not mentioned	1134	$15.9 million
2008	Not mentioned	959	$17.5 million
2010	106 Countries	1843	$16.0 million
2012	98 Countries	1388	$14.0 million
2014	More than 100 Countries	1483	$14.5 million

[17]Shaun Aghili, *Fraud Auditing Using CAATT: A Manual for Auditors and Forensic Accountants to Detect Organizational Fraud* (2019).

2016	114 Countries	2410	$15.0 million
2018	125 Countries	2690	$6.3 billion(total)
2020	125 Countries	2504	$3.6 billion(total)
2022	133 Countries	2110	$3.6 billion(total)

Table 2: Occupational Fraud Cases and Amount of Loss[18]

1.3 Victims of Occupational Fraud

The majority of reported frauds (69%) happened in non-profit organizations, with 44% in private companies and 25% in public companies. Private and public companies lost approximately $120,000 and $118,000, respectively. The ACFE estimates that non-profit organizations have a median loss of $60,000 and are only responsible for 9% of reported fraud occurrences (ACFE,2022). Smaller businesses will suffer extensive losses due to a lack of fraud control, untrained employees, and an inability to acquire other resources (Peltier, 2009)[19]. There are more cases of occupational fraud in the banking and financial industries. Different victims and perpetrators can be found in the list of fraud categories (Singleton & Singleton, 2013)[20]

Perpetrator	Victim	Types of Fraud
Corporate Owners and Managers	• Customer • Stockholders • Creditors • Competitors • Bankers • Company/Employer • Insurance carriers • Government agencies	• False financial statement • False representations • Embezzlement • Insider trading • Conversion of assets • Corruption of employees

[18]OCCUPATIONAL FRAUD 2022: A REPORT TO THE NATIONS, https://acfepublic.s3.us-west-2.amazonaws.com/2022+Report+to+the+Nations.pdf (last visited Jun 11, 2024).

[19]Dominic Peltier-Rivest, *An analysis of the victims of occupational fraud: A Canadian perspective*, 16 JOURNAL OF FINANCIAL CRIME 60–66 (2009).

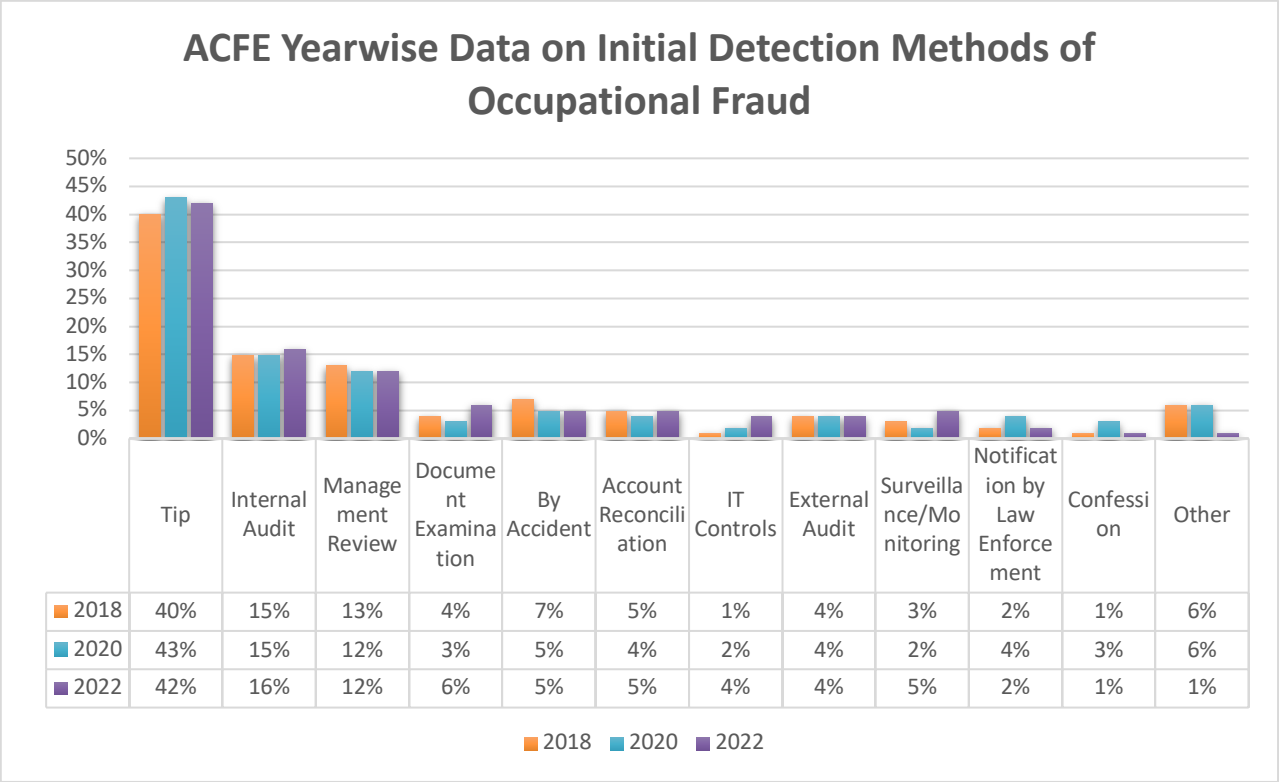
[20]Aaron J. Singleton & Tommie W. Singleton, *Fraud auditing and forensic accounting* (2013).

Corporate Vendors, Suppliers, and Contractors	• Customers • Vendors	• Overbilling • Double billing • Corruption of employees • Fraudulent checks
Corporate Employees	• Employers	• False employment application • False expense claims • Theft • Corruption • Embezzlement

Table 3: List of perpetrators, victims, and types of fraud (Source: Author's Compilation)

1.4 Detection of Occupational Fraud

The detection of fraud is the first step to a successful investigation. It is also essential to prevent fraud since fraud examiners can take action to enhance their capacity to detect fraud. As a result, an employee may be motivated to keep ethics so that fraud will be detected and possibly prevent further misconduct. Despite the growing number of fraud detection measures available to companies, tips remain the most prevalent way occupational scams are identified. Most fraud cases uncovered were detected by tips (42%), nearly three times more than any other method (ACFE,2022). Internal audits have played a significant role in reducing fraud and maintaining profitability for all corporations. Compared to the previous year, the internal audit's efficiency in detecting deceptive practices increased by 16 percent in 2022.



	Tip	Internal Audit	Management Review	Document Examination	By Accident	Account Reconciliation	IT Controls	External Audit	Surveillance/Monitoring	Notification by Law Enforcement	Confession	Other
2018	40%	15%	13%	4%	7%	5%	1%	4%	3%	2%	1%	6%
2020	43%	15%	12%	3%	5%	4%	2%	4%	2%	4%	3%	6%
2022	42%	16%	12%	6%	5%	5%	4%	4%	5%	2%	1%	1%

Figure 1: Initial Detection Methods[21]

1.5 Forensic Analytics

The investigator may observe symptoms and red flags of fraud. Once fraud has been detected, the investigator determines whether it is fraud. There might be a false positive when investigating fraud. This is because there should be many data to analyze. An investigator might then overlook some key facts (Gee, 2015)[22]. The company is continuously on the lookout for unusual occurrences. ACFE reported 53 percent of fraud incidents in 2018, and hotlines have helped boost employee reporting (ACFE, 2022)[23].

"Occupational fraud differs from other crimes in that the victim is unaware of the loss until the crime is found" (Nigrini, 2020)[24]**. "**The acquisition and analysis of electronic data to recreate or discover fraud, inaccuracy, or biases are known as forensic analytics. "Forensic Data Analytics(FDA) is used to find patterns and communicate through structured and unstructured data analysis using advanced statistical methods. Forensic analytics can quickly determine some types of fraud, such as financial statement fraud, embezzlement, and corruption. The role

[21]OCCUPATIONAL FRAUD 2022: A REPORT TO THE NATIONS, https://acfepublic.s3.us-west-2.amazonaws.com/2022+Report+to+the+Nations.pdf (last visited Jun 11, 2024).
[22]Sunder Gee, *Fraud and fraud detection: A data analytics approach* (2015).
[23]OCCUPATIONAL FRAUD 2022: A REPORT TO THE NATIONS, https://acfepublic.s3.us-west-2.amazonaws.com/2022+Report+to+the+Nations.pdf (last visited Jun 11, 2024).
[24]Mark J. Nigrini, *Forensic analytics: Methods and techniques for forensic accounting investigations* (2020).

of forensic analytics lies in investigating, treating, and examining financial crime offences, which means that the development of appropriate fraud detection techniques is of great importance. Forensic accounting procedures are applied to reduce the possibility of account failure and review vital information. Forensic accounting combines accounting, auditing, and investigation expertise to support legal arguments. We can consider someone who has detective and financial management talents as a forensic accountant. After the incident of fraud, a forensic accountant will be engaged with the company. The purpose of an occupational fraud investigation is to ascertain the existence, type, and scope of the fraud, as well as the identity of the perpetrator (Okoye,2009)[25]. They are also called upon to analyze the business accounting system and suggest guidance based on their experience strengthening internal control and internal check processes to minimize theft and fraud.

We have a list of fraud symptoms that data can do meaningful analysis to accomplish the audit objectives for forensic analytics testing. A basic test, such as Benford's Law, is used in the analytics part.

The essential steps that are focused on the forensic analytic task are: -

[25]Emmanuel Ikechukwu Okoye*, The role of forensic accounting in Fraud Investigation and Litigation Support SSRN* (2009), https://ssrn.com/abstract=1788822 (last visited Jun 11, 2024).

Figure 2: Basic Steps of Forensic Analytics[26]

Gathering valuable data for analysis is critical before deciding on an analytics test. To fix inherent faults and be helpful, the data must be clean. Data can be found in various forms, as a single file or in a database. The sound data is almost ready for analysis to begin. Forensic data requires familiarity with statistics and summaries. The test's objectives will be met only through data gathered from the organization. To do so, look for asset theft schemes, significant financial statement misstatements, bribery schemes, and questionable transitions[27].In addition to the data types relevant to the test, such as financial, structured, or unstructured data and historical data, other types of data may not be appropriate, such as non-financial, budget, and statistical.

1.6 Forensic Analytics Tools

Excel: This is a basic spreadsheet that's popular for use in fraud analysis. Excel offers an essential Excel add-in called Excel Analyser for auditing and erasing hidden data errors. However, it took much time, and the accuracy was imperfect.

[26]Mark J. Nigrini, *Forensic analytics: Methods and techniques for forensic accounting investigations* (2020)
[27]Mark J. Nigrini, *Forensic analytics: Methods and techniques for forensic accounting investigations* (2020)

IDEA: When a forensic audit has an issue to address, IDEA is the most effective data analysis tool. It is also utilized for substantive testing. IDEA enables audit professionals to collect evidence, analyze risk, find patterns, and deliver knowledge to help them make better decisions based on facts (Gee,2015)[28]. It will always be advantageous if the subject can assess data volume and the expense of gathering the necessary electronic data. IDEA plays a significant part in the investigation of duplicate transactions, the extraction of anomalous transaction items, the analysis of complex data, and the creation of audit transaction samples.

ACL (Audit Command Language) Analysis 10: One of the best analytical tools available for fraud analysis is this one. It is used to identify illegal transactions by converting meaningless data into reports. ACL Analytics 10 is powerful and quicker than the previous version. It can access, examine, and keep track of transactions from any source using ACL. It categorizes data patterns and unusual entries. Applying Benford's Law locates unexpected occurrences of digits in naturally occurring data sets. The tool checks for missing values and duplicate transactions, including payment claims and expenditure reports.

Raytheon's VisuaLinks: It is analytical software designed to link entities and associations in data to reveal suspicious transactions through graphical representation**.** It provides information about concealed fraud irregularities. Collecting numerous fields of data can reveal the strategies criminal organizations use. VisuaLink examines money laundering patterns, shows the severity of financial crimes, improves counterintelligence's capacity to detect terrorist plots, and supports all strategic and tactical initiatives.

Centrifuge Visual Network Analytics: This software application is frequently used in businesses to analyze fraud. It focuses on identifying the connections between particular entities and using statistical methods to find hidden red flags. This tool analyses the data quickly and is user-friendly.

1.7 The Use of forensic Analytics to detect Occupational Fraud

Organizations often experience their most significant financial losses due to occupational fraud. According to the Global Fraud Survey 2020, 37% of fraud was committed by people within the organization, making it challenging for firms to detect and immediately take preventative measures against it. More than one-third of Intellectual Property theft was committed by both employees and contractors, according to the 2020 Kroll Global Fraud and

[28]Sunder Gee, *Fraud and fraud detection: A data analytics approach* (2015)

Risk Report. Every company is exchanging a significant amount of information. Missing values, concealed data, fraudulent transactions, etc may be present in the dataset. The organization receives a vast amount of data that touches all elements of the operations. As a result, it is getting tough to commit without leaving some electronic footprint. The FDA's steps must be examined in order to search for fraudulent activity. To find hidden patterns and anomalies that point to fraudulent behavior after training the model. The researcher focuses on identifying occupational fraud with the help of forensic analytics at the initial stage.

2. REVIEW OF LITERATURE

Holtfreter (2005)[29]Research found that top-level employees are the most likely to commit occupational fraud**.** The author argued that occupational fraud should not be classified as white-collar fraud since it does not require any particular skill or vast knowledge to perform asset misappropriation. Corruption was found to be a common practice of fraud across the world, and employees in higher positions can quickly understand financial statements and alter them for monetary gain. The study's significant findings suggested that companies should create anonymous reporting mechanisms for their employees to detect fraud better.

In their research, Bierstaker et al. (2006)[30]suggested that each organization develop and maintain a fraud policy to guide their employees. Fraud hotlines are considered not an effective tool, but they enhance fraud deterrence and getting the confidence to share information without fear. Using analytics techniques can help detect fraud, whether it changes the trends and ratios of the financial statement. It covers the categories of fraud within non-profit organizations and the characteristics of victims and offenders, using data from a certified fraud examiner. By analyzing data, it has been highlighted to trace possible ways fraud losses may be prevented or mitigated.

Singleton et al. (2011)[31] highlighted in their book that the fraud cycle starts with the fraudster's preparations before completing the fraud act. Fraud auditing is a specialized methodology and strategy to identify fraud. Risk management serves as a mechanism to prevent fraud in the company, and the three fundamental phases of the anti-fraud program are prevention, detection, and reaction.

[29]Kristy Holtfreter, *Is occupational fraud "typical" white-collar crime? A comparison of individual and organizational characteristics*, 33 JOURNAL OF CRIMINAL JUSTICE 353–365 (2005).

[30]James L. Bierstaker, Richard G. Brody & Carl Pacini, *Accountants' perceptions regarding fraud detection and prevention methods*, 21 MANAGERIAL AUDITING JOURNAL 520–535 (2006).

[31]Aaron J. Singleton & Tommie W. Singleton, *Fraud auditing and forensic accounting* (2013).

Sharma et al. (2012)[32]Reported that an organization's internal auditing system failed to identify accounting fraud, and forensic accounting procedures were used to determine the company's financial fraud. Data mining techniques have proven helpful in fraud detection due to the significant hurdles in dealing with massive data quantities and the intricacies of economic data. Regression analysis is a commonly applied method for fraud detection since it is a highly effective instrument. Data mining tools have become crucial for detecting financial crime in recent years.

Umar et al. (2015)[33] recommended reducing occupational fraud using fraud hotlines, whistle-blowing, effective internal control, and forensic accounting. Occupational fraud has caused severe economic and non-economic harm because of occupational fraud. The author summarizes the estimated cost of the Water Management and Enron corporate scandals.

Gelder et al. (2016)[34] This study aimed to predict workplace crimes by examining individuals' characteristics and proximate variables operating now of decision. Based on the hypothesis that the decision to commit a crime is influenced by factors beyond cognitive factors, individuals with lower scores are more likely to commit crimes. The choice to do the act is heavily influenced, if covertly, by how individuals feel about the circumstance—the felt attraction and perceived danger impact professional criminal choice for both conscientiousness and honesty-humanity.

Mustafa Bakri et al. (2017)[35] The authors observed the impact of fraud risk and asset theft integrity using data from the Royal Malaysian Police. One goal was to find the link between the components of the fraud triangle and the occurrence of fraud cases.

Ngozi (2018)[36] This paper introduced occupational fraud as a crime that is hard to detect due to the lack of fraud detection methods in the United States of America's private and public businesses. Based on qualitative research, he provided the reason behind the impact of the lack of detection methods.

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[32]Anuj Sharma & Prabin Kumar Panigrahi, *A review of financial accounting fraud detection based on data mining techniques*, 39 INTERNATIONAL JOURNAL OF COMPUTER APPLICATIONS 37–47 (2012).

[33]Ibrahim Umar, Rose Shamsiah Samsudin &Mudzamir Mohamed, *The types, costs, prevention and detection of occupational …* (2015), https://core.ac.uk/download/pdf/42984298.pdf (last visited Jun 11, 2024).

[34]Jean-Louis van Gelder & Reinout E. de Vries, *Traits and states at work: Lure, risk and personality as predictors of occupational crime*, 22 PSYCHOLOGY, CRIME & LAW 701–720 (2016).

[35]Haniza Hanim Mustafa Bakri, Norazida Mohamed & Jamaliah Said, *Mitigating asset misappropriation through integrity and fraud risk elements*, 24 JOURNAL OF FINANCIAL CRIME 242–255 (2017).

[36]Ngozi D Queenchiku, *The Effectiveness of Detection Measures Against Occupational Fraud In The United States* (2018).

Suh et al. (2018)[37]they have investigated the effect of ethical culture and monitoring control in mitigating the link between organizational investment and professional fraud. The researcher collected the sample from 392 Korean banking personnel to develop structural equation models. It was discovered that ethical culture and monitoring control, two moderating variables, were linked to higher expenditure in countering occupational fraud.

Ortiz (2018)[38] This study discusses occupational fraud and makes strategies to mitigate it. Several Puerto Rican restaurant owners took part in face-to-face, semi-structured interviews for this study to share their effective methods for reducing occupational fraud.

Suh et al. (2019).[39] This paper expressed the opinion that some studies had found that the banking crises were primarily caused by workplace fraud and abuse. The main goal of this study is to explore risk management as a way of safeguarding financial institutions from internal vulnerabilities caused by occupational fraud. The analysis highlights that efforts to combat fraud should focus on eliminating opportunities for fraud through effective deterrence and prevention techniques.

Abu Amuna et al. (2020)[40] This study states that it is essential to create specialist training programs for employees in important departments, especially those in internal audit and internal control, because they are more closely connected to noticing indications of occupational fraud.

Omair et al. (2020)[41] The study defined fraud detection and prevention techniques as essential for fraud risk management. Fraud reduction or prevention is the goal of fraud prevention. Since it is impossible to control every occurrence of fraud, fraud detection techniques must be used constantly to safeguard against cases that were not stopped. Examining corporate procedures to find potential fraud sources is part of a good fraud detection strategy.

[37]Joon Bae Suh, Hee Sub Shim & Mark Button, *Exploring the impact of organizational investment on occupational fraud: Mediating effects of ethical culture and monitoring control*, 53 INTERNATIONAL JOURNAL OF LAW, CRIME AND JUSTICE 46–55 (2018).

[38]Angel Ortiz Garcia, *Strategies to reduce occupational fraud in small restaurants*, https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=6520&context=dissertations (last visited Jun 11, 2024).

[39]Joon B. Suh, Rebecca Nicolaides & Richard Trafford, *The effects of reducing opportunity and fraud risk factors on the occurrence of occupational fraud in financial institutions*, 56 INTERNATIONAL JOURNAL OF LAW, CRIME AND JUSTICE 79–88 (2019).

[40]YOUSSEF M. ABU AMUNA& FRIS ABU MOUAMER, IMPACT OF APPLYING FRAUD DETECTION AND PREVENTION INSTRUMENTS IN REDUCING OCCUPATIONAL FRAUD: CASE STUDY: MINISTRY OF HEALTH (MOH) IN GAZA STRIP SSRN (2020), https://ssrn.com/abstract=3643587 (last visited Jun 11, 2024).

[41]Badr Omair & Ahmad Alturki, *Multi-dimensional fraud detection metrics in business processes and their application*, 11 INTERNATIONAL JOURNAL OF ADVANCED COMPUTER SCIENCE AND APPLICATIONS (2020).

John et al. (2020)[42] The paper deals with detecting and preventing refund fraud in online retail shopping. Fraud detection techniques are divided into 1. Proactive and reactive techniques 2. Manual and automated methods. The development of the computerized system and data collection has led to vast structured and unstructured data databases.

(Nigrini, 2020)[43]In his book, he defined the process of forensic analytics, which proactively identifies fraud and other anomalies and provides various helpful tools.

Saluja (2021)[44] described that the internal audit process has a prominent role in detecting fraud. A complete internal audit check is impossible if it shows signals of fraud. By training employees, they will be much more dedicated and create a positive approach to their work. Experts suggested more training methods to create a better working environment in the organization, which are as follows:

- Having an idea of vigilance
- Focus more on behavioral red flags of fraud.
- Creating a proper reporting method
- Appoint fraud examiner

3. RESEARCH METHODOLOGY

The study of the research approach requires a systematic research method. Typically, researchers outline the procedures used to investigate a specific research subject in this field. The term "methodology" describes the approach taken when conducting research. A methodical approach to solving the research problem is known as research methodology (Sileyew, 2020)[45]. According to Clifford Woody, conducting research comprises describing and redefining issues, creating hypotheses or suggested solutions, accumulating, organizing, analyzing data, generating conclusions, and testing those deductions to see whether the formulating hypothesis is supported.

According to this study, companies are aware of internal fraud within their walls. When delving into the business, it becomes apparent that occupational fraud poses a significant challenge for

[42]Shylu John, Bhavin J. Shah & Pradeep Kartha, *Refund fraud analytics for an online retail purchases*, 3 JOURNAL OF BUSINESS ANALYTICS 56–66 (2020).
[43]Mark J. Nigrini, *Forensic analytics: Methods and techniques for forensic accounting investigations* (2020).
[44]Shefali Saluja, *Detection and Prevention of Occupational Fraud An Ex post analysis of selective frauds* (2021).

[45]K J Sileyew Goh et al., *Forensic analytics using cluster analysis: Detecting anomalies in Data*, 32 JOURNAL OF CORPORATE ACCOUNTING & FINANCE 154–161 (2021).

the organization. This paper explores the importance of forensic analytics techniques and forensic accountants in organizations. Forensic analytics is vital in identifying suspicious transactions that can bring businesses down.[46].

3.1 Objectives of the study

1. To Focus on understanding and identifying occupational fraud.
2. To Evaluate the most recent actions taken by private and public organizations to prevent fraud.
3. To find the value of using forensic analytics to detect and prevent occupational fraud.

3.2 Research Design

This research is based on Mixed Research methods. Mixed research is a type of study that collects both quantitative and qualitative data. The first section of the research is based on secondary data collection, collected from the most recent reports published by organizations like ACFE, PWC, EY, etc., to understand the general trends in occupational fraud.

Two questionnaires have been prepared. The first questionnaire was prepared for employees of public sector and private sector enterprises. The second questionnaire was prepared for forensic accounting professionals, fraud examiners, and chartered accountants. For questionnaire preparation, the researcher sent the questionnaire to practising Forensic Accountants for review before finalizing it.

3.3 Data Collection

The collection of data is a crucial step in the research process. This study primarily utilizes survey research for qualitative analysis. Data was gathered via email distribution and the sharing of survey links on social media. The researcher distributed the survey link to convenient respondents via LinkedIn and WhatsApp. The researcher's LinkedIn posts are accessible to everyone.

Secondary Data

Data from diverse secondary sources have been gathered through a desk examination. Reports and project materials from each manufacturing sector are included. Regarding the research

[46] *Forensic analytics in fraud investigations Identifying rare events that can bring the business down*, https://www2.deloitte.com/us/en/pages/advisory/articles/forensic-analytics-in-fraud-investigations.html (last visited Jun.2, 2024).

objectives, the primary source is ACFE- Report to the Nation. In addition, the research has gathered information about occupational fraud.

- Websites- National Crime Record Bureau (NCRB), Price Waterhouse Chopper (PWC), Deloitte, EY (Ernest Young), Shodhganga, J store, Z-library, Google Scholar, Research gate. etc
- Reports- NCRB, PWC, EY, Deloitte, KPMG
- E-books- Fraud Analytics strategies and methods, Fraud Auditing and Forensic Accounting...etc
- Books- Forensic Analytics, Fraud Audit using Computer Assisted Auditing Tools and Techniques (CAATT), New Era of Forensic Accounting...etc

Primary Data

It came directly from the information source. With trusted analyses that had a direct link to the occurrence of the events, the primary data were more trustworthy and gave decision-makers a higher degree of confidence. The primary data gathering focused on two groups: fraud examiners and employees.

The researcher has developed two survey forms that encompass the concepts of occupational fraud and forensic analytics. One of the forms is sent around among the organization's recognizable employees. Both governmental and commercial (Private) entities provided the data collection. The other type focuses on information gathered by forensic accountants, chartered accountants, and fraud investigators in India. The researcher chose a group of people who work in India. Respondents have shared their views and provided their opinions on forensic analytics approaches.

3.4 Sample Size

This research aims to collect 20 responses from public and private sector employees and 10 responses from forensic accounting professionals, fraud examiners, and Chartered Accountants. The questionnaire includes questions related to Forensic Analytics and occupational fraud.

3.5 Sample Collection Method

Data have been collected through convenience sampling and snowballing sampling. The researcher distributes the survey form and shares a link on social media platforms like LinkedIn.

4. RESULTS AND DISCUSSION

This section discusses the results from the online survey collected based on the study. The researcher distributed the questionnaire via email and social media sites like LinkedIn, and based on convenience sampling, data was collected.

4.1 Analysis of Ideas and Indicators of Occupational Fraud in the Organisation

In this research, 20 employees from the public and private sectors have responded. Questions like name, email ID, occupation, satisfaction level, salary, pressure in the organization, etc., have been asked in the questionnaire. Out of 20 respondents, 19 belong to private sector enterprises, and only one response was received from employees of public sector enterprises.

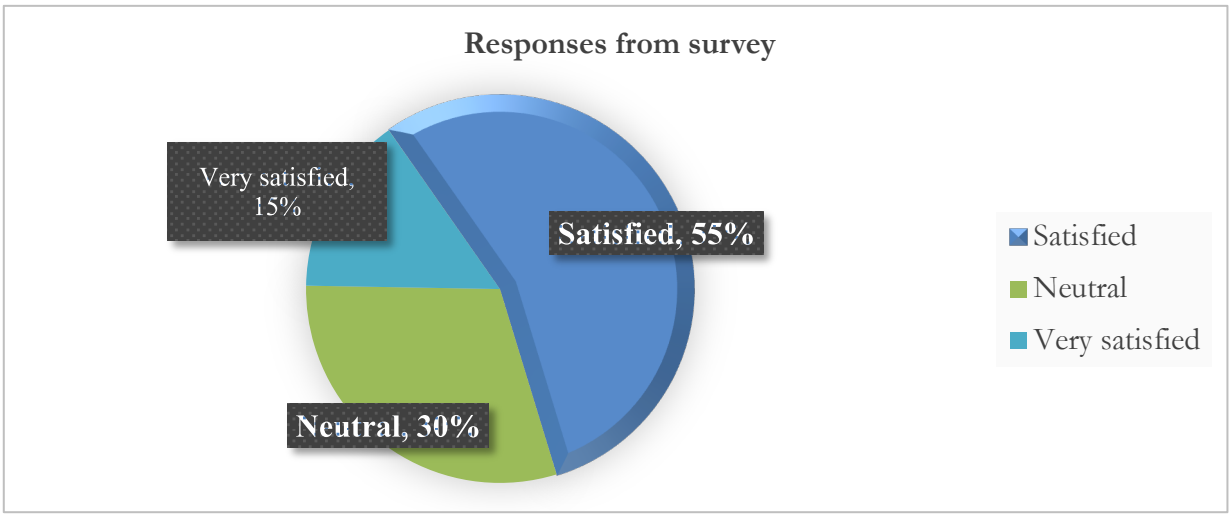

Figure 3: Level of job satisfaction

Figure 3: The pie chart depicts that the employees are satisfied with their jobs. Respondents' job satisfaction is reported to be around 55%. Here, 30% of respondents provided a neutral opinion, while 15% expressed extreme satisfaction. This level of job satisfaction results in a good salary, a favorable working environment, promotions, remuneration, and other benefits.

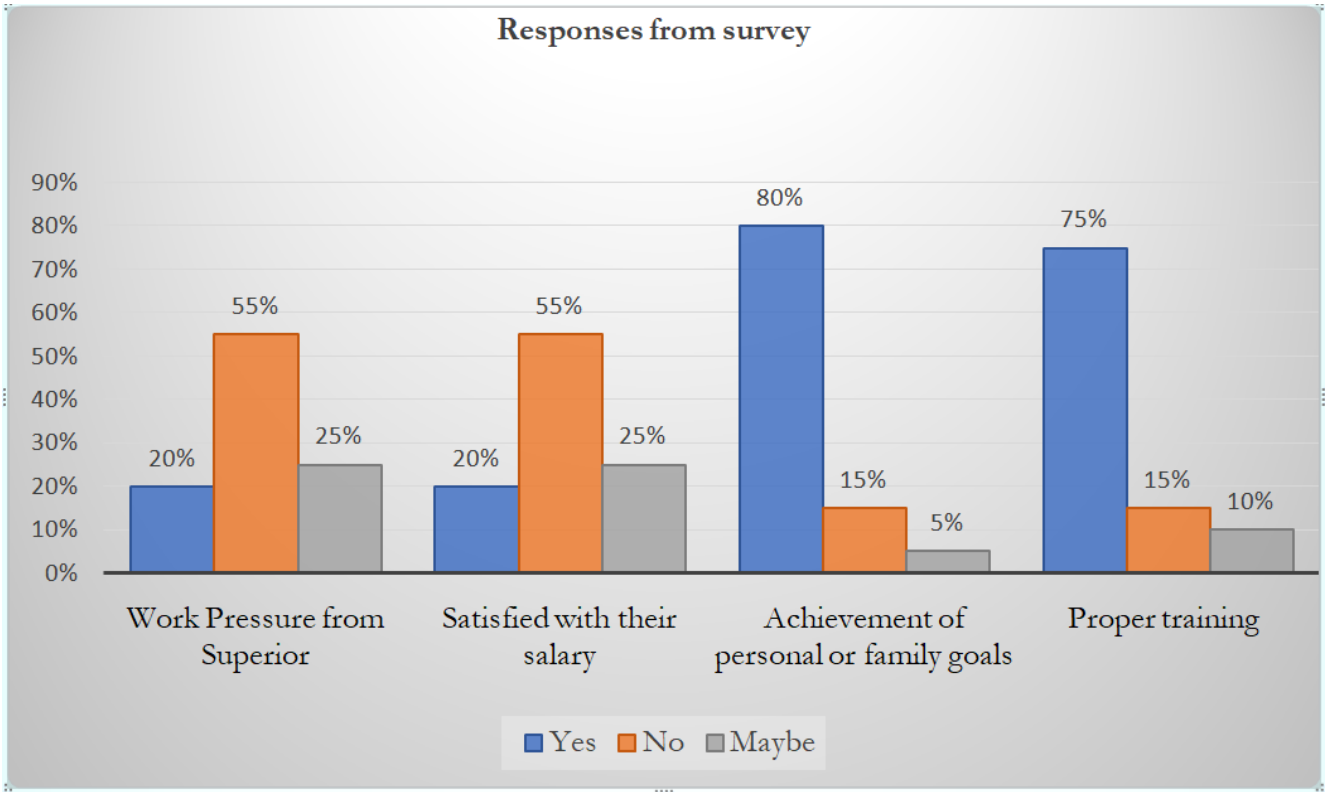

Figure 4: Responses of the survey from four questionnaire

Figure 4: The bar graph shows aggregated responses to four questions circulated among the employees. It shows that 55% of respondents claim not to have felt pressure from superiors. Twenty percent of respondents said they occasionally felt pressure from their superiors, and twenty-five percent said they did. It could happen due to work overload, challenging tasks, etc. Another part shows whether the employees are meeting their salary expectations or not. The majority of them (55%) are respondents whose salaries fall short of their expectations. Twenty percent of respondents said they were happy with their salary, and the remaining responses needed clarification.

Also, the employee's income will allow them to attain their family's or personal goals. Eighty percent of respondents said they could accomplish their individual or family goals better. Others cannot achieve their goals because they are unhappy with their salary. Everyone has different demands; sometimes, corporations cannot meet their salary expectations. In another case, the company should intentionally pay employees a fair wage for their work. The majority of them respond that the business offers appropriate training. Employee skill development improves performance and productivity. Only 15% of employees in their company need proper training. Training has a significant role in reducing employee turnover and enhancing employee

retention. The employees do not want to work in an area in which they have no skills. It creates work pressure, stress, employee turnover, fraud, etc. It will be a hardship for the business environment.

4.1.1 Factors that determine a good working environment

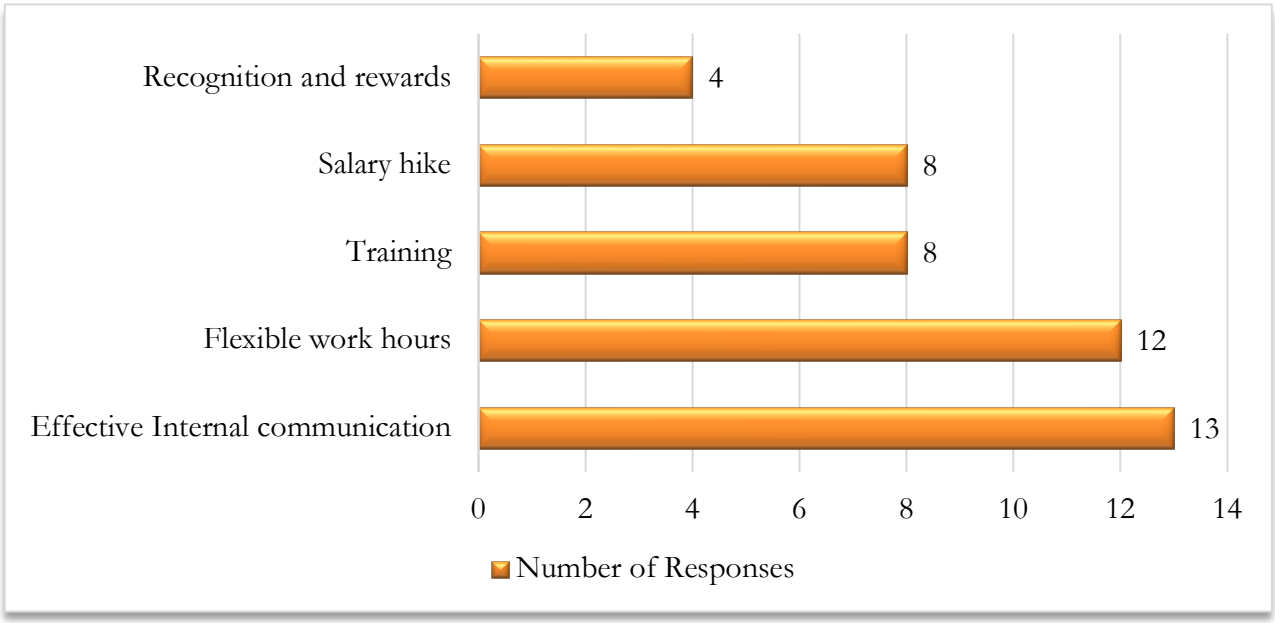

Figure 5: Good Working Environment

Fig 5 shows that the researcher is interested in understanding what a good working environment means to the employees. Effective internal communication gets results from most of them (68.4 percent). The following three choices are flexible working hours (63.2%), training (42.1%), and salary increase (42.1%). The organization has to maintain a good working environment to reduce fraud.

4.1.2 Track of Attendance

Biometric attendance tracking is used by 70% of the respondents. The attendance register is used by 20% of responders. The organization measures its attendees, productivity, and working hours through attendance. While some organizations employ specialized software, others do not use an attendance system. The organization should keep proper attendance to identify payroll fraud, ghost employees, etc., through forensic audits.

4.1.3 Occupational Fraud

Occupational fraud is known to 45% of the respondents. Most of those surveyed (35%) are

unaware of occupational fraud. Due to reputational damage and the difficulty of detecting fraud, most occupational fraud cases are not disclosed to the public. It demonstrates how the organization's proper fraud prevention strategy is ineffective.

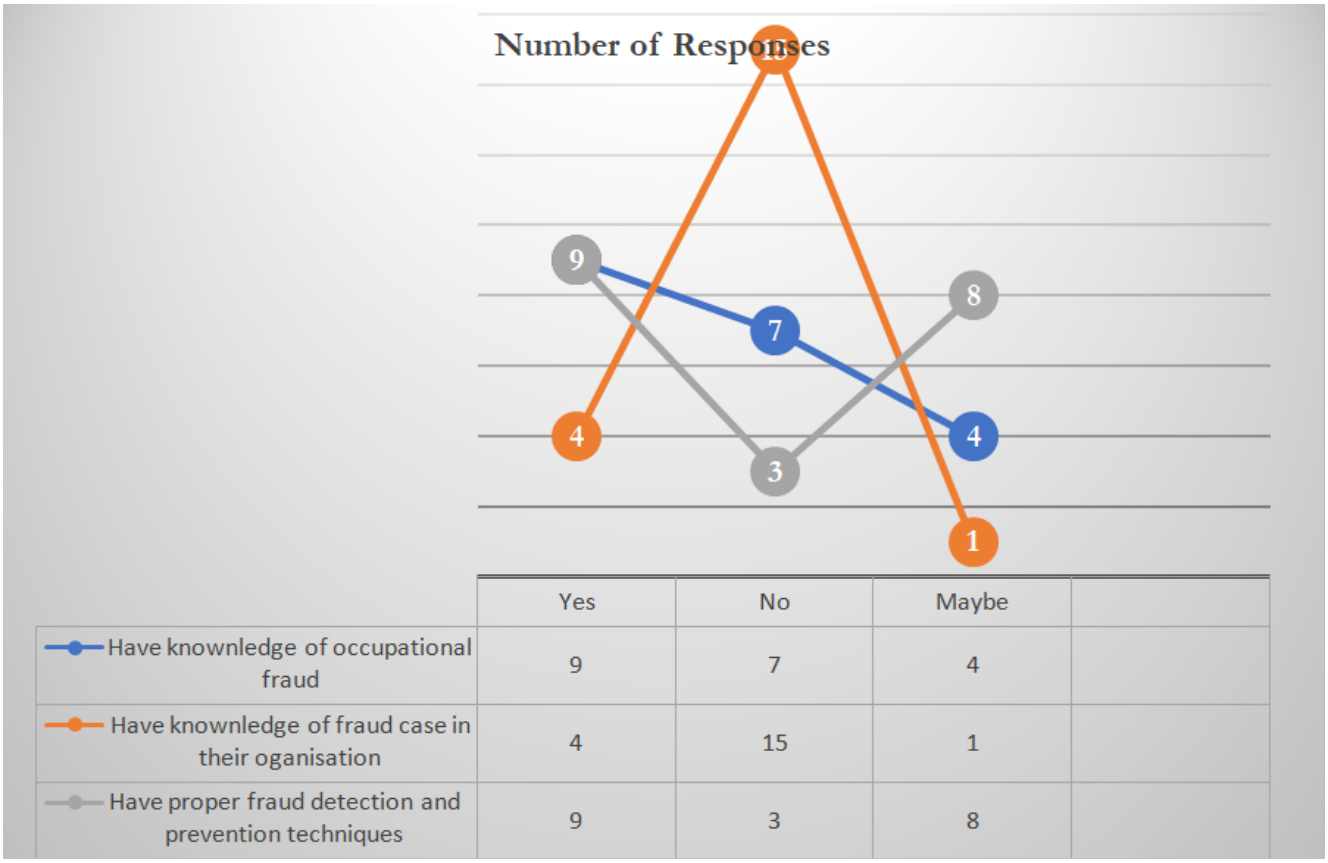

Figure 6: Occupational fraud

Figure 6 conveys that most respondents do not know about the fraud incident reported in their organization. Most respondents do not know their organizations' fraud detection techniques and tools. The business level will drop if the organization doesn't have proper techniques to mitigate the fraud. Listening and monitoring employees can be used to reduce the level of fraud. Every employee within the company should have known about the fraud risk policy, including the different types of fraud and the associated penalties. The strategies and processes adopted by a corporation to protect its assets, guarantee the accuracy of its accounting records, and prevent and identify fraud and theft are known as internal controls. Internal control measures and the segregation of workers' duties are crucial in lowering the risk of fraud. Regularly reviewing and updating fraud detection tactics is essential to ensure the staff is productive.

4.1.4 Aware of types of fraudulent reporting in their organization

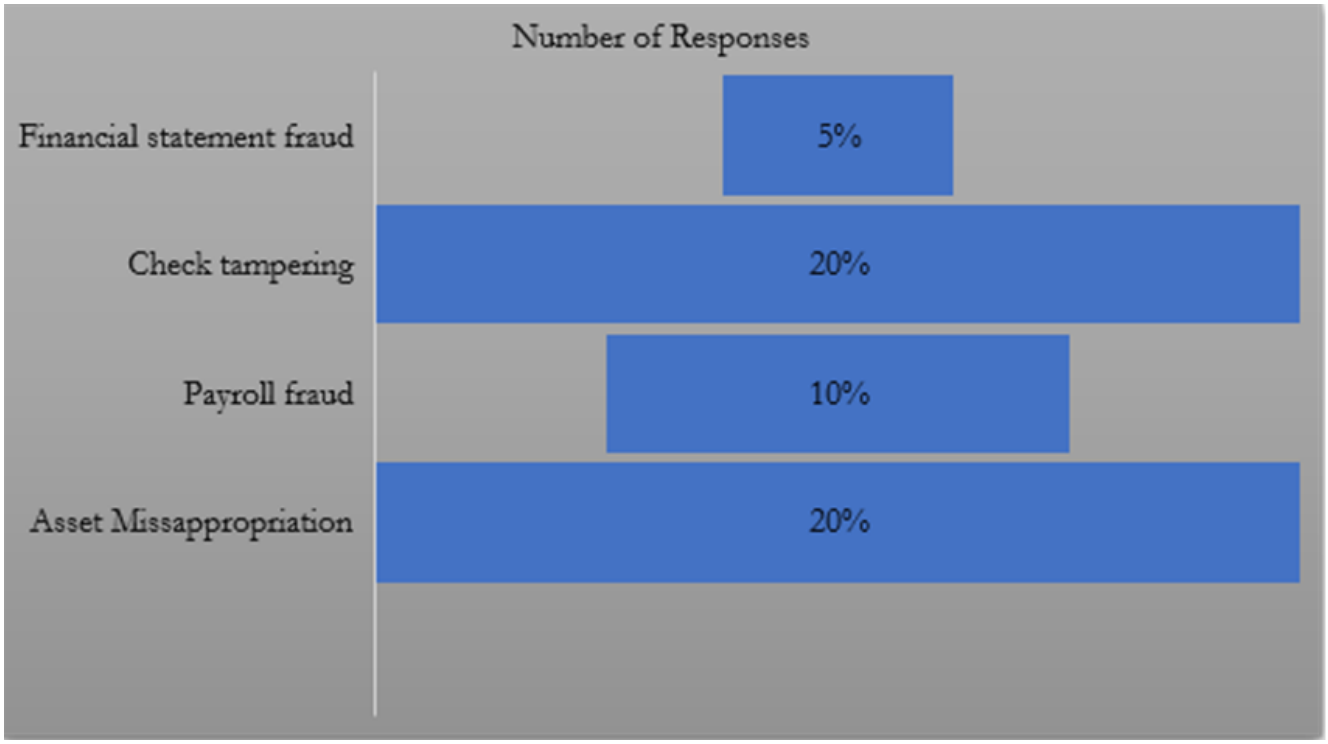

Figure 7: Types of occupational fraud

Figure 7 displays the type of occupational fraud reported in their organization. The two most common types of fraud reported by the organization are check tampering and asset misappropriation.

According to this survey, employees may be unaware of the fraud prevention measures in place at their company. Only a tiny portion of the respondents responded to this question. Organizations should have a good understanding of effective internal control systems, updated business software, and yearly security system changes.

4.2 To analyze the value of forensic analytics

The following respondents provided information to the researcher.

- Chartered Accountant (60%)
- Forensic Accounting Professional (20%)
- Certified Fraud Examiner (10%)

- Chartered Accountant and Certified Fraud Examiner (10%)

4.2.1 Concerned about the risk of occupational fraud in the organization

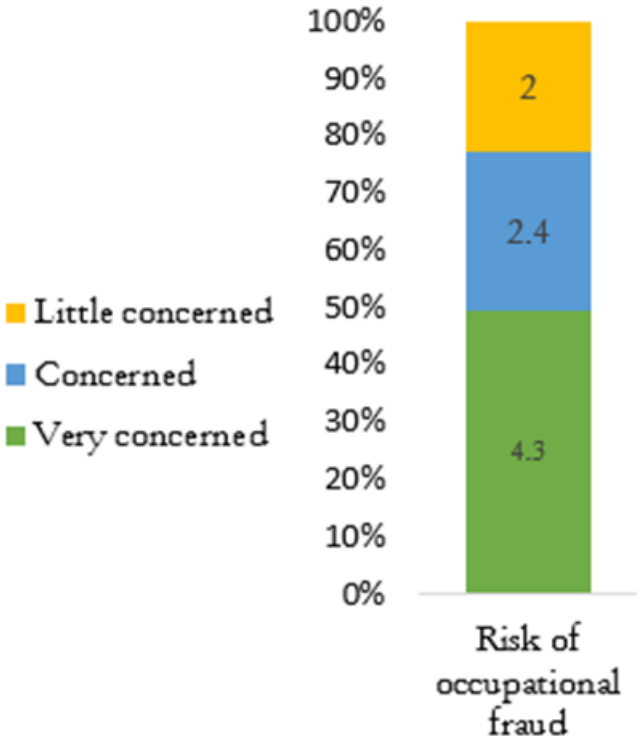

Figure 8: Risk of occupational fraud in the organization

Figure 8 shows that most organizations are concerned about the possibility of occupational fraud. 60% of Organisations are apprehensive about occupational fraud.

4.2.2 Steps to Prevent Occupational Fraud

Figure 9: Points in the questionnaire

Figure 9 indicates the steps that are taken by the organization when the fraud signs are visible. Eighty percent of respondents said they collect or keep evidence. When they discovered red flags, gathering and preserving the evidence for future legal purposes was essential. They will then communicate with higher officials in your organization and appoint a forensic accountant.

4.2.3 Usage of Forensic Analytics Tool

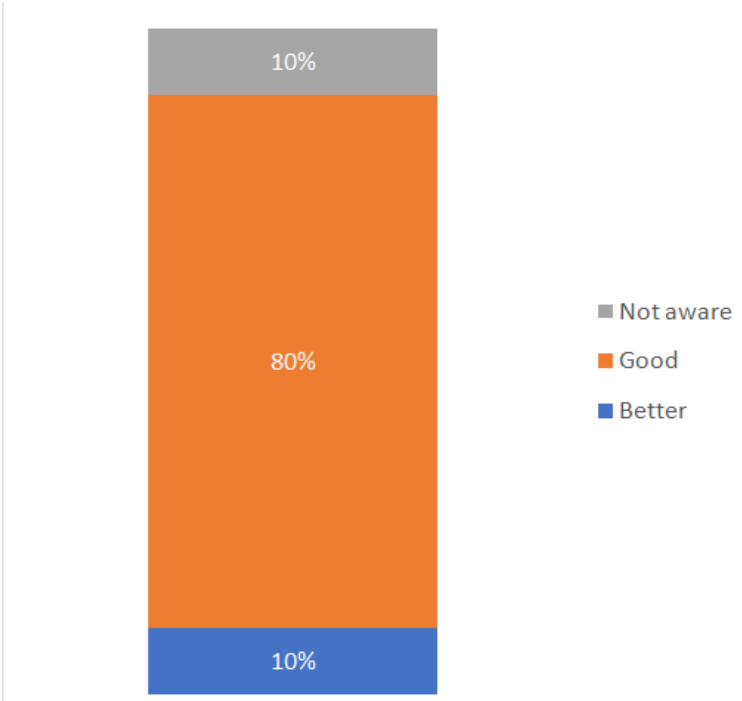

Figure 10: Use of forensic analytics tool in the organization

Figure 10 shows that the respondent has been knowledgeable about forensic analysis software. The forensic analytics tool is well known by 80% of respondents. Only 10% of those surveyed needed to be made aware of the forensic analytics tool. The use of forensic tools for fraud detection and prevention received overwhelmingly positive responses from the respondents. It is a proactive tool businesses use to reduce risk and become more reactive to fraud.

4.2.4 Methods and tools used to detect fraud

		Responses
Methods	Data mining	4
	Data Science	1
	Big data analysis	5
	Business Intelligence	6
	Forensic audit	6
	Deep learning algorithms for precision over mined data	1
Tools	Interactive Data Extraction and Analysis	4
	Statistical Package for Social Sciences	1
	Audit Command Language	3
	Excel	7
	Python	3
	Amazon Redshift	1

Table 4: Tools and techniques

Table 4 illustrates the tools and techniques used to identify occupational fraud. Business intelligence and forensic audit were highlighted by 60% of respondents. Following this, extensive data analysis and data mining are further strategies used to uncover fraud.

The above analysis shows that 70% of respondents use Excel software for fraud data analysis. Excel has a free version and a user-friendly interface. Fraud examiners and forensic accountants use Excel software at the initial stages of analysis. Excel will give accurate results and make the results a visualized form. IDEA software is used by 40% of respondents. Nowadays, IDEA is one of the practical tools that fraud investigators and forensic accountants use in the organization. IDEA can give quick report generation.

4.2.4 Effective Forensic Analytics Tool

Excel is the most common response type from respondents. If the available data is analyzed, it is pretty effective. Excel spreadsheets have long been the standard for data security. Following this, the respondents bring up IDEA and ACL. Any firm may successfully monitor all of its transactions to find fraud using ACL technology. IDEA is most helpful when there is an audit, financial investigation, or financial statement fraud issue. IDEA can import a wide range of data types, conduct sophisticated comparisons of many data sources using Benford's Law, and quickly analyzeenormous amounts of financial data to provide insights. It can also quickly find data gaps and duplication.

4.2.5 The importance of forensic analytics tools at the early stage of detection

In response to this open-ended question, the respondent stated that the selection of an analytical tool depends on the organization, industry, business vertical, the format of data available, and desired outcome, and all of these factors are compared to the services offered by different analytical tools to determine which is best for the specific organization. The most effective investigative and compliance insights to limit increasing risk levels concerning data breaches, data privacy, insider threats, fraud, loss, and wastage are provided by forensic data analytics (FDA) services. According to the ACFE, organizations that adopt proactive data monitoring may cut their fraud costs by an average of 54% and identify scams in half the time. Forensic accountants can use Forensic Data analytics technology to identify trends and anomalies that may help detect real-time fraud. Large amounts of data from inside and outside a corporation may now be reviewed to discover patterns, links, correlations, anomalies, and other insights. This technology enables companies to monitor their operations in real-time or near to it, taking preventative action to notice high-risk or suspicious activity as soon as possible.

5. CONCLUSION

The organization cannot estimate the exact loss due to occupational fraud because the victim was unaware of the loss. The victim realizes their negligence once the loss occurs. Approximately 75 percent of respondents report fraud within their organization. According to the Global Fraud Survey 2020, 37% of fraud was committed by people within the organization, making it challenging for firms to detect and immediately take preventative measures against it. One of the methods that forensic accountants or fraud examiners employ to detect and prevent fraud is forensic analytics. Advanced forensic analytics and technology are far less prevalent in fraud investigation and risk management. According to the survey's findings,

forensic analytics tools are particularly beneficial for conducting a quick investigation into occupational fraud. According to the EY Global Forensic report, the FDA has a crucial role in reducing money laundering, cyber breaches, and occupational fraud. The significant responses from chartered accountants, fraud examiners, and forensic accountants agree that forensic analytics benefits an organization. Excel is frequently utilized for forensic analytics methods. IDEA is viewed as a powerful forensic analytics tool. Nearly half of the respondents said raising management's awareness of the advantages of the FDA was necessary, even though more than 57 per cent of respondents said their board of directors engages in strategic decisions relating to the FDA. Forensic analytics plays a significant role in data protection and effective governance regulation in organizations**.** In the future, advancements in forensic analytics will have a leading role in the field of investigation. Organizations can enhance compliance controls, minimize risk effectively, and adjust courses as needed after evaluating data and drawing appropriate conclusions. The study's results suggest that forensic analytics can effectively detect occupational fraud at an earlier stage.

Limitation:

- Due to time and resource constraints, data was collected from only 30 respondents.
- The researcher can access a few respondents in the geographical range.

Further Scope of Study:

- Further research can be conducted on various case studies using forensic analytics tools to reduce annual fraud by organizations.
- Further research can be conducted by the researchers to train organizational staff on whistleblowing and fraud auditing tools.
- In the future, research can be conducted on new technologies to assist forensic accountants in detecting fraud at an early stage.

ANALYSIS OF LEGAL PROVISIONS FOR CHILD LABOUR IN HANDLOOM SECTOR: A CASE STUDY OF WEST BENGAL

Sumana Lahiri, Nausheen Nizami[1]

https://doi.org/10.69893/gjle.2024.000063

ABSTRACT

This research reviews and analyses the existing labour legislations and their applicability to child labour in India. Employment of children not only deprives them of their time for primary education and enjoyment, but also it deprives them of capabilities to be a productive and skilled worker in later years of life as they lose their apprenticeship time in earning daily wages. Engagement of children in work leads to a weaker productive workforce for an economy as the skill acquisition time is compromised and in majority of the cases, child labour is not able to complete basic educational standards owing to the early experiences of work-life conflict. As child labour affects children socially as well as psychologically, there is a need to have stricter enforcement of laws that prohibit engagement of children at workplaces. However, as India is home to one of the largest informal sector workforce, employment of children is common in certain sectors such as handloom, construction, agriculture, etc. Children are employed for economic reasons and mainly to supplement household income. This research uses findings from empirical survey conducted on child labour in handloom households of West Bengal to analyse the gaps in legal provisions prohibiting this malpractice.

Keywords: *Child labour, handloom sector, legal provision, labour code, policy*

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1. INTRODUCTION

India's handloom industry is the largest cottage industry and has nearly with 27 lakh looms (Handloom Census 2019-20) and is largely household-based. Since, the working is household based, members of the family including the children come together and contribute to the production process. Such households are termed as weaver household, allied worker household, master weaver handloom and other worker household (Handloom Cen sus, 2019-20). This paper shall use the operational term of handloom household in its subsequent sections. Weaving households have been distributed as per purpose of loom and the number of such households in West Bengal is the second highest i.e. 1.74 lakh for domestic use and 1.96 lakh for commercial use (Handloom Census 2019-20).

This research studies children working in handloom household at West Bengal to ascertain their status as child labour. In recent years, the essence and practice of child labour has changed as a result of legislative enforcement, increased awareness of child exploitation and international pressure among service and commodity purchasers. Despite this, child labour has become more evident as work has shifted from more formal settings such as factories to business owners' homes or families. The business owners are the parents of the children who are into handloom industry across generations. The production process in handloom is majorly categorized into weaving and allied activities. Allied activities are defined as pre-loom (such as warping, tying, winding, dyeing, tying and dyeing, sizing, loom setting and manual card punching) and post loom (calendaring). The Child Labour (Prohibition and Regulation) 2016 permits work among children to the extent that it is conducted only after school hours or during vacations in non-hazardous activities. In today's times, engagement of children is rising among household enterprises and informal sectors, particularly in the post-pandemic times (Child Labour in India, UNICEF).

2. LEGISLATIONS FOR CHILD LABOUR IN INDIA: CRITICAL INSIGHTS

Child labour in India is a long-standing problem that is inextricably linked to the country's socio-economic structure. Historically, children worked in a variety of jobs, frequently related to family occupations and rural economies. Child labour is a result of multitude factors such as poverty, cultural traditions, lack of access to education and the vastness of the informal sector. It was common in rural and developing industries prior to independence. During British

colonial authority, child labour increased, particularly in textile mills and mining sectors, where youngsters worked long hours in hazardous conditions. The path from recognizing child labour as a serious issue to enacting legal provisions to counteract it, has been long and complicated. Initially, the incidence of child labour was not on the national agenda as the focus was more towards nation-building and economic development. However, throughout time, the continuation of child labour and its consequences for social fairness and children's rights drew attention, resulting in concerted efforts to eradicate it. The predicament of child labour began to get attention in the late nineteenth and early twentieth century. Moreover, the role of Raja Ram Mohan Roy and Ishwar Chandra Vidyasagar who promoted education and welfare rather than child labour has been important in shaping legal provisions in India post-Independence. However, there was little meaningful action or legislation aimed explicitly at child labour during this time period. Under pressure from Indian reformers and the international world, the British government began to enact regulations governing working conditions. For example, the Factories Act of 1881 established certain limitations by limiting working hours for children and demanding age verification for employment. However, these regulations were poorly executed and failed to significantly alter the pervasive practices of child labour. Rebuilding and modernizing India was a massive challenge for the new administration that assumed office after the country's independence in 1947. Among the many problems that needed immediate response was child labour. Article 24 and Article 21A of the Indian Constitution, which was ratified in 1950, contain provisions that guarantee children's right to education and safeguard them from exploitation. One of the first laws passed in Independent India to control child labour was the Factories Act of 1948. As per the law, it was not permissible to employ children under the 14 years of age to work in factories. But the scope of this Act was narrow; it primarily addressed the organized sector, excluding the large informal economy, which was more likely to involve child labour. In the subsequent decades, various other laws and policies were introduced to curb child labour, such as the Mines Act of 1952 and the Child Labour (Prohibition and Regulation) Act of 1986. These laws marked a gradual shift from merely regulating to more proactive measures aiming at curbing child labour.

The Indian judiciary has been instrumental in combating child labour, interpreting the law and filling in legal gaps when needed. This included cases such as M.C. Mehta v/s State of Tamil Nadu (1996) where the Supreme Court case established a theory of compensating jurisprudence for the rehabilitation of child labourers and led to the identification and prohibition of hazardous businesses employing minors. The 1982 case of People's Union for Democratic

Rights v/s Union of India brought attention to labour regulations being broken during the construction of the Asian Games' infrastructure, which raised concerns about the use of child labour. Similarly, the contributions of the International Labour Organization (ILO) and the United Nations Children's Fund (UNICEF) by offering frameworks and standards for ending child labour have significantly influenced Indian legislation and policies. In order to adhere to international norms, India has had to ratify several important ILO agreements, including Convention 138 which had defined the minimum age for employment. There is another Convention 182 which defines the worst kinds of child labour.

The existing legal provisions and schemes which account for child labour in Handloom Industry (handloom households) at West Bengal (State) and India (Central) level are listed in Table 1.

Table 1: The legal provisions and schemes which account for child labour in Handloom Industry

Legal Provision/ Scheme		**Level**	**Year**
Article 23		Central	1948
Article 39		Central	1976
Child Labour (Prohibition and Regulation) Act, (CLPRA)		Central	1986
National Child Labour Project Scheme		Central	1988
The West Bengal Child (Prohibition and Regulation)		State	1995
Child Labour (Prohibition And Regulation) Amendment Act		Central	2006
Right of Children to Free and Compulsory Education Act		Central	2009
Child Labour Amendment Bill		Central	2016
Social Protection Scheme	Kanyashree	State	2013
	Duare Sarkar	State	2020

Source: Author's own

The Indian Constitution has measures to protect the rights of children. Child labour is a concurrent topic in India's federal government, which gives powers to the central as well as state governments to legislate against it. In the next paragraph, we discuss the application of such legislations in the current scenario at handloom industry.

3. MATERIALS AND METHODS:

To capture the present situation of children working in handloom household in handloom industry given the unavailability of appropriate data, field-work is conducted in selected rural and urban areas. The target population is of handloom households in five districts of West Bengal and these districts have been identified as i.e. Bankura, Nadia, Hooghly, Murshidabad and Purba Bardhaman. The choice of each district is based on the fact that these districts have one of the highest concentration of handlooms. The choice of municipalities, towns and villages has been undertaken in a manner that they belong to the same Gram Panchayat in order to ensure diversity of sample respondents and diversity of stakeholders involved in the case of handloom households. The target sample are the child labourers who have been engaged in the family labour of the handloom household.

The research methodology has made use of both descriptive research and exploratory design. The research is based on empirical data collection as well as judicious use of secondary data. Empirical data has been collected using field work wherein interviews have also been conducted on target sample using the instrument of semi-structured schedule. The secondary data has been collected from the government records, Acts and Laws, reports, research papers, policies, schemes and ministry reports. Besides quantitative data, qualitative data has also been collected. In order to triangulate the findings, the study has made use of participant observation method as well as focus group discussion. These qualitative findings have been used to corroborate with the quantitative analysis.

4. POLICY GAPS AND INCIDENCE OF CHILD LABOUR IN HANDLOOM HOUSEHOLDS: EMPIRICAL FINDINGS:

The enforcement and policy gaps of the existing Acts and Laws for child labour in India and West Bengal which are applicable specifically for handloom industries at the handloom households, have been investigated and discussed in this section. The limitations of legal provisions are recorded and conclusions are stated to closely understand the current scenario of children working in family enterprise of handloom industry. There is research stating the legal provisions and regulations of child labour (Khalaf Ibrahim Khaleel, 2022; Ranga Pranav, 2018; Katos K.K, Schulze G.G, 2005; Cigno Alessandro, 2004) but there is lack of evidence on the legal provisions on child labour in handloom industry. Our paper intends to bridge this

gap to the literature.

Article 23: Prohibition of traffic in human beings and forced labour states traffic in human beings, beggars and other similar forms of forced labour are prohibited. Any contravention of this provision shall be an offence punishable in accordance with law. Secondly, the state shall not discriminate on grounds of religion, race, caste or class or any of them on preventing the state from imposing compulsory service for public purpose.

However, the empirical results indicate violation of this article as children have been found to be working at business owner's home on account of pending parent's loan from the business owner. The sample children were engaged in weaving activity even during the field work and had also worked in the pre loom activity earlier.

Article 39: The article states that the strength and health of workers i.e. men, women and children are not abused and they are not forced by economic necessity to enter vocations unsuited to their age or strength.

The main determinants of child labour according to the primary survey are:

- Poverty is the primary cause of child labour.
- Cultural norms contribute to child labour by normalizing the practice and strengthening the belief that children should work and learn the craft.
- Breakdown of extended family support leading children to work.
- In some communities, children are expected to contribute to the family's income from a young age, cutting on external worker cost and leading to their involvement in family work.
- Lack of financial assistance to outsource the allied activities majorly and weaving otherwise.
- Cultural norms create a social acceptance of child labour without realizing its adversities, making it difficult to address the issue effectively.

As analysed the determinants still create demand for child labour because of lack of economic arrangements. This has been a major limitation in the Handloom industry creating the Mahajan rule over workers and exploitation of labour.

Child Labour (Prohibition and Regulation) Act, 1986 (CLPRA)

As per the Child Labour (Prohibition & Regulation) Act, 1986, child labour is defined as any child between the ages of 5 and 14 who works in hazardous occupations or processes listed in List A, which is titled Occupations (Non-Industrial Activity), and List B, which is titled Processes (Industrial Activity). The employment of a child in any of the occupations or processes listed in the Schedule to the Act is prohibited as these occupations are deemed hazardous to the health and safety of children. Handloom is one of the listed occupations as well as its processes of dyeing, spinning and weaving are also listed indicating that they are unsafe for children.

The Child Labour (Prohibition and Regulation) Amendment Act, 2016, introduced more stringent penalties to strengthen the enforcement of the laws against child labour like: For a complete ban violation for employing any child under 14 years age, the penalty of imprisonment between 6 months and 2 years or a fine between Rs. 20,000 and Rs. 50,000, or both was listed. Adolescent labour violation is recorded if an adolescent (aged 14-18 years) is employed in hazardous occupations and processes and the penalty is imprisonment from 6 months to 2 years, or a fine of Rs. 20,000 to Rs. 50,000, or both. The penalty for a repeat offense is increased to imprisonment for a minimum of one year which can extend up to 3 years.

The amended Act also mandates the government to conduct periodic inspections and monitoring of establishments to enforce the provisions of the Act. The Act empowers the appropriate government to set up Child and Adolescent Labour Rehabilitation Fund, where the fines collected from the violators are to be deposited. This fund is to be used for the welfare and rehabilitation of children rescued from child labour. These penalties and fines are designed to serve as a significant deterrent for employers against the engagement of child labour.

National Child Labour Project (NCLP)

This program is implemented by central government and it aims to detect, remove, and gradually integrate children and adolescent workers into the rehabilitation process. As per this programme, the adolescent workers need to be liberated from work of hazardous nature, shifted to law-abiding occupations with enough skill training, the children are guaranteed access to formal education and vocational training. An important objective of this program is creating of

an enabling environment that leads to empowerment of children and promoted their enrolment in formal education. In West Bengal, the target districts are Murshidabad, Purba Bardhaman, Coochbehar, Paschim Bardhaman, Kolkata, Purulia, Paraganas North, Nadia, Paraganas South, Jalpaiguri, Dinajpur Uttar, Dinajpur Dakshin, Hooghly, Medinipur East, Birbhum, Maldah, Alipurduar, Medinipur West, Howrah, Bankura, Darjeeling.

The implementation of NCLPS will be closely coordinated with the state government, local governments, and civil society. The nodal agency for prohibiting child labour are the State Governments and the Ministry of Labour and Employment in India. A significant role is also played by other players, including the labour unions, district administrations, local communities, civil society organizations, research organizations, NGOs, academicians, and law enforcement. In order for the plan to operate effectively, it aims to institutionalize monitoring and oversight in addition to establishing the implementation structure.
The Ministry of Labour and Employment, the Government of India provides 100% of the financing for the NCLPS, making it a central sector scheme. This scheme punishes the violators with a fine or imprisonment.

The policy stands on two approaches. The first approach used by NCLP is to give priority to workers who belong to scheduled castes and scheduled tribes. In the second approach, priority has been given to assess the situation of children who are engaged with the manufacturing sector of the state of West Bengal. The effectiveness of the policy lies in the hands of the active participation of trade unions, labour and employer associations. The employer associations in handloom industry have dissolved for various reasons and are not active. This makes it difficult to convince the households to curb child labour and rehabilitate them as per the second approach of the policy.

The West Bengal Child (Prohibition and Regulation), 1995

The Act aims to prohibit the employment of children in hazardous occupations and processes, aligning with the national law's objectives. This law restricts the use of ‘transmission machinery’, mentions ‘health and safety’ norms according to Factories Act, 1948, need for ‘age certificate’ but does not specify any clause for employment at household, textile industry employment and punishment for offenders.

The empirical findings provide evidence of children working mostly rolling in pirn or spinning across age groups. Spinning in every household were done by women where children helped the mother in the process. The process of spinning by hand involves spinning equipment with sharp edge made of metals. None of the sample households used safety caps for the workers irrespective of age. The process of Drumming involves huge equipment to be rotated by hand for spinning the yarn. Similarly, the process of Dyeing involves chemical dyes which are harmful for use by children at work. Calendaring requires physical strength for twisting and spreading the fabric and presence under harsh sunlight. Although, the law states guidelines for health and safety to be observed, yet there are evidences that point policy gaps in the handloom sector at household level. The business owners employing child labour didn't have any age proof verification document of the children.

Empirical findings indicate less incidences of sickness and injuries among children in relation to back-pain, skin disease, allergy, cuts and vomiting and the health issues were similar to those seen among adult handloom workers. As per the field study, the average hours of work for child labour are 5.5 each day to supplement the handloom household income.

Child Labour (Prohibition and Regulation) Amendment Act, 2006

According to this Act, "child" means a person who has not attained the age of eighteen years and as per this act it is prohibited to engage any child for any type of work such as: (i) Domestic work (ii) Agricultural operations (iii) Construction activities and operations of transport industry (iv) Work in shop, factory, any establishment or organization (v) Manufacturing, trading or processing activity of any item. This implies that any child may still work at his/her own residence or perform any domestic work. As per these provisions, any person or frim who violates this law is subject to legal imprisonment for a term which may extend to three months and a fine of Rupees Ten thousand. Any offence under this Act by a company would lead to imprisonment which may extend to six months and a fine between Rupees One to Ten lakhs and cancelling of the license.

Right of Children to Free and Compulsory Education Act, 2009

The Act prohibits schools from charging tuition fees for children completing elementary education. It requires private schools to reserve 25% of their seats for children from economically weaker sections and disadvantaged groups. Special training for age-appropriate admission for out-of-school children is to be provided to enable them to integrate with their

peers. The Act sets out norms and standards for school infrastructure, pupil-teacher ratios, working days, teacher working hours. It ensures that children are not discriminated against and are prevented from being subjected to any kind of abuse in schools. It prohibits certain practices like capitation fee, private tuition by teachers, and the running of schools without recognition. The Act mandates free and compulsory education for every child above 6 years to less than 14 years, under which the child cannot be expelled or withdrawn from school during this phase. However, the children working at handloom households do not get free education after class 8. It is also noted that since education is not free of cost post 8th standard, parents withdraw or children themselves work in household enterprises, as a clear violation of their right to free and compulsory education. Such incidences are seen more in the case of female child labour part of the sample. Another challenge in educating the children in such families is the poor infrastructure of the schools which demoralizes the enrolled students to continue formal education. There is a shortage of teachers and schools lack resources and pedagogical capabilities to provide quality education and showcase casual behavior in teaching and evaluating students.

Child Labour Amendment Bill, 2016

The Bill expands the prohibition of employment of children under 14 years to all occupations and processes, aligning it with the Right to Education Act, 2009, which mandates education for all children until the age of 14. A notable inclusion was the exception that allows children to work in family businesses, outside of school hours and during vacations, which was a contentious addition. The Bill introduced a new category called 'adolescent', referring to those between 14 to 18 years old, and prohibits their employment in hazardous occupations and processes. It increased the penalty for employing any child in contravention of the Act, which now includes imprisonment between 6 months to 2 years, and/or a fine between 20,000 to 50,000 Indian Rupees. The amendment made the offense of employing a child or adolescent in contravention of the Act a cognizable crime, allowing police to arrest without a warrant.

As per this Act, a child can work in a household enterprise after he has completed his school hours. Generally, any such provision which makes engagement of children permissible after a necessary condition leads to possible loopholes used by employers to engage child labour. Therefore, the employment of children in family enterprises is commonly seen and it is difficult to differentiate child labour in household enterprises from household work.

Handloom products are comparatively expensive for the customers and labour intensive for the workers. The weaving is the main activity which happens at every handloom household surveyed but the allied activities are the prerequisites for weaving. The families prefer to distribute the labour and assign children along with female members for completing pre-loom activities. This is done to reduce the cost of getting it done elsewhere and allocate more time for weaving. A weaver can weave basic cotton saree in a day whereas a machine can weave 6 to 10 sarees a day. As majority of the customers are price sensitive, so reducing the cost of handloom is a priority of the family. Also, majority of the families can't afford to outsource the allied work forcing the burden on children and other family members.

The Bill delegated the power to define hazardous occupations for adolescents to the central government, which can lead to critical omissions and the protection offered could vary based on government discretion. Allowing children to work in family businesses can affect their education prospects, despite the provision stating it should not interfere with school hours. The amendments do not adequately address the need for the rehabilitation and welfare of children who are rescued from child labour situations, which is crucial for their integration into the mainstream.

Social Protection Scheme

Schemes like 'Kanyashree Prakapla', 'Duare Sarkar', 'Sabooj Sathi' to reduce child labour, promote child rights and child protection held by Government of West Bengal. 'Kanyashree Prakalpa' scheme aims to improve the status and well-being of girls, particularly those from socio-economic disadvantaged families. It provides financial assistance to girls aged 13-18 years to continue their education and delay their marriage until the age of 18 years. Sabooj Sathi is a flagship initiative to provide bicycles to students from class IX to XII studying in government-run and government-aided schools and madrasahs. The scheme promotes increased attendance and reduces dropout rates, facilitating better access to education for children, especially in rural areas. Mid-day Meal Program aims to enhance school attendance and reduce dropout rates by providing free lunch on school days.

These Kanyashree Prakalpa, Sabooj Sathi and Mid-day meal schemes are designed to boost interest of children to attend school such as the initiative of providing bicycles help children to travel distances by themselves to reduce dropout rate. However, the implementation of these schemes has not penetrated to the remote areas.

'Duare Sarkar' aims at delivering government services directly to the people's doorstep. This program is designed to ensure that the benefits of various government schemes and services reach the citizens more effectively, especially those living in rural and remote areas. Unfortunately, the penetration of these schemes to the handloom areas studied did not happen suggesting possible leakages in implementation.

Labour Codes and the Scope of Child Labour in Handloom households in Future

India has a long history of labour regulations, with many state and federal statutes affecting employment relations in addition to over 40 central legislations. The goal of modernizing and streamlining existing regulations to make them easier to comprehend and more enforced was what spurred the need for reform. The Indian government sought to create four unique labour codes, each concentrating on a certain facet of employment, by combining these disparate legislation. Employers will find it easier to comply with this consolidation, and employees will have clear, comprehensive rights and obligations. The four labour codes are the Code on Wages, 2019; the Industrial Relations Code, 2020; the Code on Social Security, 2020; and the Occupational Safety, Health, and Working Conditions Code, 2020. These reforms aim to advance industrial peace and harmony while fostering economic growth, representing a substantial change in the legal framework governing India's labour market.

The four labour codes in India primarily focus on the regulation of employment conditions for adult workers and do not directly address child labour. These codes are more focused on wages, industrial relations, social security, and safety conditions of adult workers. That being said, the broader implications of these codes, such as improved working conditions, social security benefits, and the formalization of the workforce, could indirectly impact child labour by promoting better socio-economic conditions for families of handloom household, thereby reducing the need for child labour. This section analyses the labour codes strictly in the light of the findings from primary survey of handloom sector.

The Code on Wages, 2019

In order to control wage and bonus payments in all employments where any industry, company, trade, or manufacturing is conducted, the Code on Wages, 2019 was created. The Payment of Wages Act of 1936, the Minimum Wages Act of 1948, the Payment of Bonus Act of 1965, and

the Equal Remuneration Act of 1976 are the four prior laws that are combined into one code. Ensuring fair compensation for all workers, regardless of industry, is a primary goal of this code, which also aims to minimize wage inequality and provide a uniform minimum wage.

Handloom sector is largely informal in India. The payment and bonus for a handloom worker is based on his/her skill of weaving, state awards/ national awards, status in the community. The families in handloom household work as own account workers, employee or employer. Most of them are dependent on Mahajan for finances to purchase raw materials for weaving since financial institutions do not provide such loans. This deprived situation is of advantage to the Mahajans leading to inequality of income. If the wages are fairly paid, then there should not be a financial burden on the family and the child may be discounted at work.

The Occupational Safety, Health, and Working Conditions Code, 2020

The regulations pertaining to employee health, safety, and working conditions are consolidated and made more logical by the Occupational Safety, Health, and Working Conditions Code. The Act unifies thirteen legislations, such as the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act of 1996, the Factories Act of 1948, and the Contract Labour (Regulation and Abolition) Act of 1970. The law seeks to improve worker welfare programs, provide a safe and healthy work environment, and control working conditions across industries.

Handloom weavers often work in conditions that can impact their health, such as:

- Prolonged sitting or standing in the same position, leading to musculoskeletal problems.
- Exposure to dust and fibers, potentially causing respiratory issues.
- Use of heavy equipment like drums, sharp equipment like needles
- Movement at height to fix jacquard cards balancing on basic loom structures
- Strain from repetitive motions and manual labour.
- Potential exposure to chemical dyes and substances without adequate protective measures.
- Prolonged working in negligible ventilated workstation.

Additionally, many handloom weavers work in rural or semi-urban areas where healthcare access might be limited and poverty rates can be higher compared to urban areas. These factors, combined with the physically demanding nature of their work directly affects their overall health and life expectancy. It is found in our empirical survey that on an average weavers are able to work up to the age of 50 years because of the stated reasons, leaving them unemployed and unskilled for any other work in the later years of their life.

The Industrial Relations Code, 2020

The Industrial Relations Code, 2020, consolidates and amends the laws relating to trade unions, conditions of employment in industrial establishments, and investigation and settlement of industrial disputes. It integrates three primary laws: the Trade Unions Act, 1926; the Industrial Employment (Standing Orders) Act, 1946; and the Industrial Disputes Act, 1947. The code aims to simplify and streamline industrial relations processes and promote harmony between workers and employers.

The streamlined dispute resolution process could reduce the time and resources which handloom workers spend on resolving conflicts. However, the effectiveness of these mechanisms in the decentralized and informal handloom sector remains a concern. Collective bargaining provisions could empower handloom workers to negotiate better wages and working conditions if they are organized effectively. The flexibility in hiring and layoff policies may lead to more contractual and temporary jobs, which could affect the employment stability of handloom workers. On the other hand, it could also encourage small and medium enterprises (SMEs) within the handloom industry to expand and hire more workers, potentially leading to job growth. The code's provisions for trade unions and negotiating councils could help handloom workers in organizing and advocating for their rights. However, the actual impact would depend on the level of unionization and organization within the handloom sector, which is currently low. If the benefits of this code reach the grassroots level with concerted efforts from the government, industry stakeholders, and worker organizations, it is likely to reduce or increase child labour (as demand for handloom products will increase so production has to be increased) depending upon the community norms of the handloom household.

The Code on Social Security, 2020

The Code on Social Security, 2020, aims to provide a comprehensive social security system to all workers, including those in the unorganized sector. It amalgamates and modifies nine existing social security laws, covering benefits like pension, maternity benefits, gratuity, and insurance. Establishment of a social security fund for unorganized sector workers and universal social security coverage for all workers, including informal sector workers are the key provisions of this code.

Access to healthcare and safety programs will likely improve under the new code. This access is crucial for handloom workers who face occupational health hazards such as exposure to chemicals in dyes and physical strain from long hours of manual work. The provision for pensions and other retirement benefits offers financial security to workers who previously lacked formal retirement plans, addressing a significant vulnerability for aging handloom workers. Formalizing employment relationships in the handloom sector could lead to more stable income and job security, as well as legal recourse for dispute resolution and contract enforcement.

Currently, no such benefits in terms of advance, insurance, gratuity are given to the workers by the Mahajan or employers. On the contrary, the full wages are also not paid at the time of delivery of the product. The remainder of the wages along with marginal bonus are given to them based upon the profit of the Mahajan per financial year at the time of Durga Puja. Similarly, for public firms, employers do not pay the price of the product at the time of purchase from the handloom households and the payment is done late.

Cooperatives and Clusters used to give benefits like provident fund, pension, market price of labour, bonus as per the profit of the cooperative or cluster to all the member handloom workers but post-pandemic, most of them have either become inactive or are dysfunctional. If the handloom workers get the benefits of this code, then at least the children will be made to study and attain the basic education and this will increase the overall job security of the handloom households.

5. RECOMMENDATION FOR POLICY AHEAD

The role of family members including children is crucial in the economic activities of handloom households and their absence can affect the prospects of sustainable livelihoods. In order to ascertain if engagement of children in handloom sector is detrimental to children's health and psychosocial welfare (as seen in primary survey), carefully planned cross-sectional studies are required to undertake comparative assessments of: i) children who work in different sectors, with ii) children who combine work and school and with iii) children who just attend school as required. Most importantly, in order to determine long-term physical, mental, spiritual, moral, social development and education, longitudinal studies are required. This approach requires high-quality research conducted in collaboration with governments, NGOs,

and stakeholders. The recommendations for improving the legal provisions are based on the gap of existing policies and current handloom scenario at West Bengal.

It is interesting to note that majority of the children of the households are not paid for their working hours. This corroborates the assessment of the working children that their working is essential for households' general well-being. Therefore, legal provisions should introduce poverty reduction strategies, social safety nets, improve financial instruments that allow access to credit by tying up with financial institutions even at the most interior places of work, develop schemes/ policies for better labour market functioning so that families are not forced to demand children at work, conditional cash transfer for education and development activity of the children to the families.

The contribution of the male child labour in handloom work is found for longer hours in comparison to girls. It may be due to the fact that girls have to share household chores indicating an unequal distribution in the time allocation of the working children in handloom industry. Therefore, there should be incentives for children to attend school by eliminating discrimination against girls in school, making school timings flexible, reduce or eliminate school fees after Eighth Grade, improve teacher's attention for quality education and mentorship.

To conclude, child labour in formal manufacturing sector can be eliminated easily by enforcing acts and laws. However, it is very difficult to eliminate child labour from the informal manufacturing sector particularly where the industry is home based as in the case of handloom sector. Policy interventions to curb child labour need to first determining the type of work which is engaging child labour and its impact on their health and wellbeing. The elimination of child labour cannot be achieved in isolation within a short time. Legislation must encourage schooling and discourage labour by introducing and enforcing child labour laws, focusing on equality, decent work for all and enforcing compulsory education laws, as enshrined in the Constitution of India. The economic, legal and social policies are required to work harmoniously in the same direction to achieve the objective of combating child labour.

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A LAW & ECONOMIC ANALYSIS OF 'ORDINANCE RAJ' IN INDIA: NAVIGATING THE RULE V. STANDARD DEBATE IN THE LEGAL DESIGN AS A MECHANISM TO REDUCE POLITICAL CARTELIZATION

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ABSTRACT

The data available for the promulgation of the ordinances clearly shows that the number of ordinances that have been enacted post the judgement in the Krishna Kumar Case[2] is in no sense less than the ordinances that have been enacted during the years preceding the judgment. This is so despite the negative impact of the Krishna Kumar judgement on the utility that the executive ought to derive from the enactment of the ordinances. The authors seek to address this anomaly through the microeconomic models and present solutions through the lens of law and economics. This paper conceptualises the solution to the problem of the misuse and the abuse of ordinance-making power by proposing the formulation of the rules that shall seek to add objective grounds to test if the ordinance-making power has been used in a proper manner or it has been used with the mala fide intentions and ill-will on the part of the executive. The level of the delegation to the executive, that is, the scope of the decision-making with the, executive, has been analysed by proposing the total cost curve, which seeks to propose the optimum level of stringency in the rules so as to allow the scope for the legislature to meet the emergency situations as well. This is sought to be achieved by framing of such rules for the exercise of the ordinance-making power by the president and the governor, in such a way as to have the objective grounds for the test of the need for the ordinance-making power and also at the same time have the scope and lee-way to the legislature to decide, if the matter needs the enactment of the ordinance to meet the emergency that has arisen.

Keywords: *Repromulgation, Krishna Kumar Judgement, Efficiency Analysis*

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[2] Krishan Kumar Singh v. Union of India, (2017) 3 SCC 1.

1. INTRODUCTION

The legislature has been conferred with the duty to enact legislation in India and it is the business of parliament to enact the primary legislations in the country. However, in certain emergency situations, this power to enact primary legislations has also been entrusted with the executive head of the state, i.e. the President, who under Article 123 of the Indian Constitution, may pass an ordinance which shall have the same effect as the legislation passed by the legislature[3]. A similar power has been given to the governors of the state under Article 213 of the Indian Constitution[4].

The intent of the constitution makers as is ascertained from the Constituent Assembly Debates,[5] was not to create a parallel mechanism for the enactment of the legislations, it was merely to deal with certain exigencies that may arise and necessitate an immediate action by the legislature, but it is not possible to convene the parliament during that time to get the legislations passed. However, this has been misused by the various state and central governments over the period of time to pass "autocratic legislations", i.e. the legislations without the approval of parliament or without obtaining general consensus of the parliament, but solely at the whims and fancies of the ruling dispensation.

Although passing of statutes by way of promulgation of the ordinances is a constitutionally permitted means, the successive governments at both the central as well as the state level have been weaponizing this instrument to curb deliberations and discussions, in the parliament[6]. This clearly has led to undermining of the republican aspect of the Indian Democracy[7]. Such practices have in turn reduced the role of the parliament only to provide legitimacy to the decisions taken without any discussion and deliberation by the executive in the closed offices[8]. However, the democracy, that forms part of the basic structure of the Indian Constitution as adopted in the year 1973, in the case of *"Kesavananda Bharati Case v. State of Kerala"*[9], is not only restricted to some few basic minimum conditions to be followed such as conducting free and fair elections, but rather includes within its amplitude parliamentary deliberations and

[3] INDIA CONST. art. 123.
[4] INDIA CONST. art. 213.
[5] RK Garg v. Union of India, (1981) 4 SCC 675, 687.
[6] Jain, A., *Democratic Decay in India: Weaponising the Constitution to Curb Parliamentary Deliberation*. Nat'l L. Sch. India Rev., 34, p.246 at 248 (2022).
[7] Id. At 248
[8] Madhav Khosla and Milan Vaishnav, *The Three Faces of the Indian State*, 32(1) Journal of Democracy 111, 114-116 (2021).
[9] Kesavananda Bharati v. State of Kerala, (1973) 4 SCC 225.

adherence to the institutionalised mechanism for enacting the legislations[10]. Parliament has always played a very essential role in carrying this tradition of deliberations forward and promoting the public discourse. Such a practice of debates in the parliament also ensures accountability of the elected representatives for the decisions being taken and implemented[11].

When the ordinance making power was included to be part of the Indian Constitution, it was not *'perverted to serve political ends[12]'*. However, it is being consistently used by various governments to bypass the formally laid legislative procedure for passing legislations. According to the Statistical Handbook for 2021, as released by the Ministry of Parliamentary Affairs[13], a total of 714 ordinances have been promulgated between the period of 1952-2021. The yearly average for the promulgation of ordinances comes to be around 10.2 ordinances a year[14]. These figures clearly indicate that the provision which was added by the constitutional makers to deal with the emergency situations that may arise, is being used as a tool to bypass parliamentary scrutiny.

Although the literature on the misuse of the ordinance-making power of the President abounds[15], however, the issue has not been analysed from the law and economics approach; the authors seek to fill this gap in the literature by providing for law and economic analysis of the ordinance-making power, its misuse and its consequences. The authors also offer solutions based on this law and economic analysis.

The essay has been divided into six sections; in the first section, we present the constitutional provisions and important rulings of the apex court regarding the ordinance-making power of the President and Governor; the second section, discusses the application of law and economics on constitution, in the third section, we present the law and economic models to present a analysis of semantic problem of the repromulgation of the ordinances by analyzing the 2007 Supreme Court judgment in Krishna Kumar, in the third section, authors present a analysis of legalistic problem of an ordinance making using rationality analysis and game theory

[10] Supra note 4.
[11] Proksch, S.-O., & Slapin, J. B., *In The Politics of Parliamentary Debate: Parties, Rebels and Representation*, Cambridge: Cambridge University Press (pp. 1–14). (2014).
[12] Dr DC Wadhwa v. State of Bihar (1987) 1 SCC 378.
[13] Statistical Handbook 2021, Ministry of Parliamentary Affairs, Government of India available at Statistical Hand Book | Ministry OF Parliamentary Affairs, Government of India (mpa.gov.in).
[14] Author's Calculation based on data sourced from *supra* note 10.
[15] Singh, A., *The power of ordinance making in an emergency situation to avoid misuse*; Malik, R., Jain, S., & Kapruwan, D. (2020). Ordinance Making Power Is A Highjack Of Democracy-An Analysis Of The Trends From India. Bhardwaj, C. M. (2021). An analysis of the power to issue ordinance in India. *Statute Law Review*, *42*(3), 305-312.

conceptualizing ordinance making to be a convenient means of legislation, in the fifth section, we provide the recommendations, with the help of statistical analysis to cure this anomaly, and in the sixth section we conclude the essay.

2. LEGISLATIVE FRAMEWORK: ORDINANCE MAKING POWER

The Ordinance-making power of the President is defined in Article 123 contained in Chapter III of Part V of the Indian Constitution.[16] While the Ordinance making power of the Governor of the state is contained in Chapter IV of Part VI, Article 213[17] of the Indian Constitution. the power is described in the constitution as the 'Legislative Power' of the President and the 'Legislative Power of the Governor'. The power conferred upon the President to promulgate Ordinances under Article 123, is subject to two conditions: First that both the houses of the parliament should not be in session, and Second there should exist such circumstances that necessitate it to take immediate action.[18] Such an ordinance is deemed to have the same effect as any Act of the Parliament.[19] And the period of validity of such ordinance is six months from the date of promulgation or six weeks from the date of assembly of both houses of the parliament.[20] It shall also cease to have effect if a resolution disapproving the same has been passed by both houses of the parliament.[21] It may however be withdrawn earlier by the president[22]. The Legislative Power of the Governor contained in Article 213 of the Constitution is also similar to the one described above.[23] Although the Constitution has conferred power upon the President, it is formally vested with the Council of Ministers or the central executive and is used in practical sense at the satisfaction of the Council of Ministers[24].

Concerns have arisen around the misuse of this legislative power conferred upon the President and the Governor, by successive governments to enact legislation without parliamentary scrutiny and use the power even in cases where there did not exist such emergent circumstances that necessitated the promulgation of the Ordinance.

[16] INDIA CONST. art. 123.
[17] INDIA CONST. art. 213.
[18] INDIA CONST. art. 123 (1).
[19] INDIA CONST. art. 123(2).
[20] INDIA CONST. art. 123(2)(a).
[21] INDIA CONST. art. 123(2)(a).
[22] INDIA CONST. art. 123(2)(b).
[23] INDIA CONST. art. Art 213.
[24] RC Cooper v. Union of India , AIR 1970 SC 564, 587.

Historical Evolution of the Ordinance Making Power

Although the monarch in England was ripped off these prerogative powers around four hundred years ago[25], the Britishers used such powers to control and administer their Colonies.

The Indian Councils Act 1861, under its Section 23, conferred such power to issue direction bearing the force of law.[26] Further, the Government of India Act 1915, vide section 72[27] empowered the Governor General to promulgate such ordinances to deal with such emergent situations. This replaced the Government of India Act 1935, which also had such a provision contained in its sections 42, 43 and 44[28].

Hence, it can be concluded that the provision for the Ordinance-Making power has been adopted in the Indian Constitution from the earlier legislations, that have been enacted by the British Government.

The provision regarding the ordinances, was first introduced in the 'main principles' that were prepared by BN Rau[29] This provision has not been widely discussed in the Constituent Assembly also and was debated and passed in a single day on 23rd May 1949.[30] One of the most critical views presented in the assembly was that by Professor K.T. Shah, who while recognizing the fact that such circumstances may arise in future, which warrant the enacted of such important pieces of legislation in an emergency, said that even if we seek to justify it, it remains a *"negation of the rule of law",* all he proposed was that such a provision be drafted that such an ordinance does not last even a minute longer than such extraordinary circumstances may require.[31] Various members like HV Kamath, Pandit HN Kunzru, and B Pocker Sahib, also proposed multiple amendments to make the provision regarding the ordinances more precise. However, the same were not accepted by Dr B.R. Ambedkar and P.S. Deshmukh[32].

[25] Shubhankar Dam, *Presidential Ordinances in India: The Law and Practice of Ordinances*, 37-38 Cambridge University Press, New York (2014).
[26] Indian Councils Act, 1861, § 23, No. 24 & 25, Vict. c. 67., Acts of Parliament, 1861 (United Kingdom British India).
[27] Government of India Act, 1915, § 72, No. 5 & 6 Geo. 5. c. 61, Acts of Parliament, 1915 (United Kingdom British India).
[28] Government of India Act, 1935, § 42, No. 26 Geo. 5. & 1 Edw. 8. c. 2, Acts of Parliament, 1935 (United Kingdom British India)
[29] Shubhankar Dam, *Presidential Ordinances in India: The Law and Practice of Ordinances*, 55 Cambridge University Press, New York (2014).
[30] Ibid.
[31] Constituent Assembly Debates (CAD), Bk. 3. No. VIII, 208 (23 May 1949).
[32] Shubhankar Dam, *Presidential Ordinances in India: The Law and Practice of Ordinances*, 56 Cambridge University Press, New York (2014).

Judicial Response: Ordinance Making Power

The constitutional courts of the country have been answering various questions related to the ordinance-making power of the president since independence, some questions have been answered, however, there are others that still need a definitive answer by the courts.

The other question, with regard to the ordinance-making power of the president, is if the presidential satisfaction on the question of the existence of such a necessity to promulgate the ordinance is final or subject to judicial review. The opinion of the courts in the pre-independence times has been mostly that such a decision of the Executive is not justiciable[33] however this has been changing in the post-independence times, with various decisions in these lines.

In the case of RC Cooper v Union of India[34], the eleven judge bench of the apex court, although did not answer the question as the ordinance in question has been turned to an act and thus the issue being rendered academic, said that the said determination by the president is not final. Although a legislative attempt was made to declare such determination as final by insertion of Art 123(4) by the 38th Constitutional Amendment Act 1975[35], however the said clause was later repealed by the 44th Constitutional Amendment 1978[36].

The apex court has clarified in the cases of RK Garg[37] and AK Roy[38] have explained that the ordinance-making power of the President or the governor as the case may be are legislative powers and shall be subject to the same constitutional inhibitions as any other enactment by the parliament. Hence the question as to the nature of the power is settled by the apex court long back. However, these judgements ruled that the ordinances promulgated may be subject to judicial review on grounds of mala fide exercise of power, abuse of power as well as ill-will on the part of the executive.

The judgement in the case of AK Roy v. UOI has been mentioned in the case of SR Bomai v. Union of India[39] that as the express bar on the exercise of judicial review has been lifted by the

[33] See, MP Jain
[34] RC Cooper v. Union of India (1970) 1 SCC 248.
[35] 38th Constitutional Amendment Act 1975
[36] 44th Constitutional Amendment Act 1978
[37] RK Garg v. Union of India, (1981) 4 SCC 675.
[38] AK Roy v. Union of India, (1982) 1 SCC 271. The challenge in the said case was the National Security Ordinance and it was submitted before the honourable court that the power to promulgate an ordinance is an executive and not legislative power, however, this submission was rejected by the apex court.
[39] SR Bommai v. Union of India, (1994) 3 SCC 1.

44th Constitutional Amendment, the said determination by the president shall be justiciable on the grounds of fraud, ill will and oblique motives. These grounds for judicial review have been formally reiterated by the 7-judge bench in the recent case of the Krishna Kumar v. State of Bihar[40]. Thus, it is clear from the above analysis that the judicial review is available in the cases of arbitrary exercise of power by the executive.

The other major change in the ordinance landscape in the country post the Krishna Kumar Judgement is that in the case of non-introduction of the ordinance before the houses of the parliament, it shall be void-ab-initio and all the rights and liabilities thus created shall stand extinguished. This implies that it practically turns the situation as if no ordinance was ever promulgated. Put in other words the ordinance having the same force as an act, as is contained in 123(2), will depend on the occurrence of future events i.e. its presentation in the house of the parliament. It is seen that this presentation of the ordinance in the house of the parliament seeks to increase the costs of the executive in promulgating the ordinance, by making it subject to parliamentary scrutiny. This is further analysed in the subsequent section.

[40] Krishan Kumar Singh v. Union of India, (2017) 3 SCC 1.

3. APPLYING ECONOMIC ANALYSIS TO CONSTITUTION

We can look into the contents of the constitution by applying economics to various structures in the constitution, its objectives, and its outcomes. The Constitution is used to create public goods. And it itself can be seen as a product, and like the production of physical goods, every provision of the constitution has certain costs and benefits, it also involves inputs, both capital and factor inputs, derived from society. This can be illustrated with a simple example, that the provision in the constitution regarding the fundamental rights, while ensure the social benefits in form of making of an egalitarian society, where the citizens are ensured freedom, dignity and justice. This provision at the same time has some costs associated with it, such as the cost of enforcement of these rights (expenditure on courts, fees of lawyers etc). Similarly, each other provision in constitution also has certain costs and benefits associated with it.

In order to ensure that such costs are minimised and the benefits associated with the provisions are maximised, the mechanism of political competition is essential. Political competition lies at the very centre of the constitution, which can be reached by using rationality analysis, which simply means that the people make such decisions so as to ensure maximum benefit to themselves. Stakeholders within the constitution cannot be expected to work solely for the well-being of the country as they are also rational beings and do work according to their self-interest as proposed by public choice theory[41].

It is this political competition, which shall ensure that such decisions are taken as lead to an overall increase in social surplus. As the economic competition ensures the most optimal economic outcomes, similarly this political competition shall ensure the most optimal policies and practices being followed. In order to have political competition, we need to ensure accountability, which forms the bedrock of any democracy. Therefore, the vision of democracy is most efficient technique to analyse the market as it entails free competition. Democracy presents certain demands in form of aspirations of people, and policies made by leaders is the supply. To ensure that good beneficial policies are made the cardinal question arises that what is the most 'winning competition'?

[41] Buchanan, J.M., 1973. *Public choice and public policy* (No. 778-2016-51946, pp. 131-136).

The political competition along with accountability can be understood in two ways: through the market of votes and the separation of power.

Market for votes majorly pertains to the ensuring the free and fair elections, while separation of powers is to create a mechanism for checks and balances. In this piece, the authors mainly discuss the importance of political competition by focussing on the separation of power between the legislature and executive. The fundamental goal of this essay thus is to argue that modern economic analytic methods should be in the toolkit of any social or political theorist who wishes to think seriously about the practical institutional structure issues.

4. CONCEPTUAL FRAMEWORK: SEMANTIC ANALYSIS

Analysing the Impact of Krishna Kumar's Judgement

In this section of the paper, we seek to analyse the implications of Krishna Kumar judgment which has been formalised using objective variables and microeconomic models presented below.

As Explained above, post the Krishna Kumar Judgement[42], the costs for promulgation of the ordinance rise while at the same time, the expected utility from the promulgation reduces. For the purpose of this research, the authors seek to understand the expected utility of the executive in promulgating the ordinance, by way of following equation:

$$\pi(\alpha) - (1 - \pi)(\beta)$$

Wherein, π denotes the probability of successful end to the ordinance, i.e. it being enacted as a law. The α, denotes the utility it attains from the success of that ordinance. Naturally, $1 - \pi$ denotes the probability of ordinance meeting an unsuccessful end, i.e., it being disapproved by the legislature. While, β denotes the cost to the legislature in case of an unsuccessful end to the ordinance. These costs include, the cost of public backlash, the cost of non-attainment of the goal of legislation, and the cost of right and liabilities that extinguish with end to the ordinance, but were had been in force for the time being. Such costs, being subjective in nature, cannot be quantified in numerical terms, however, given the impact it has upon the electorate and party reputation in public, these still play a vital role, in any decision being taken by the government. Post the Judgement of Krishna Kumar, as it is mandatory to present the ordinance in the parliament in the next session, the probability of it meeting an unsuccessful end rises, as the government will not be able to postpone its presentation, according to its convenience, these

[42] Krishan Kumar Singh v. Union of India, (2017) 3 SCC 1.

concerns will be more visible in a coalition government that a full-majority one however, authors later show through data analysis that these trends exists even in majority government.

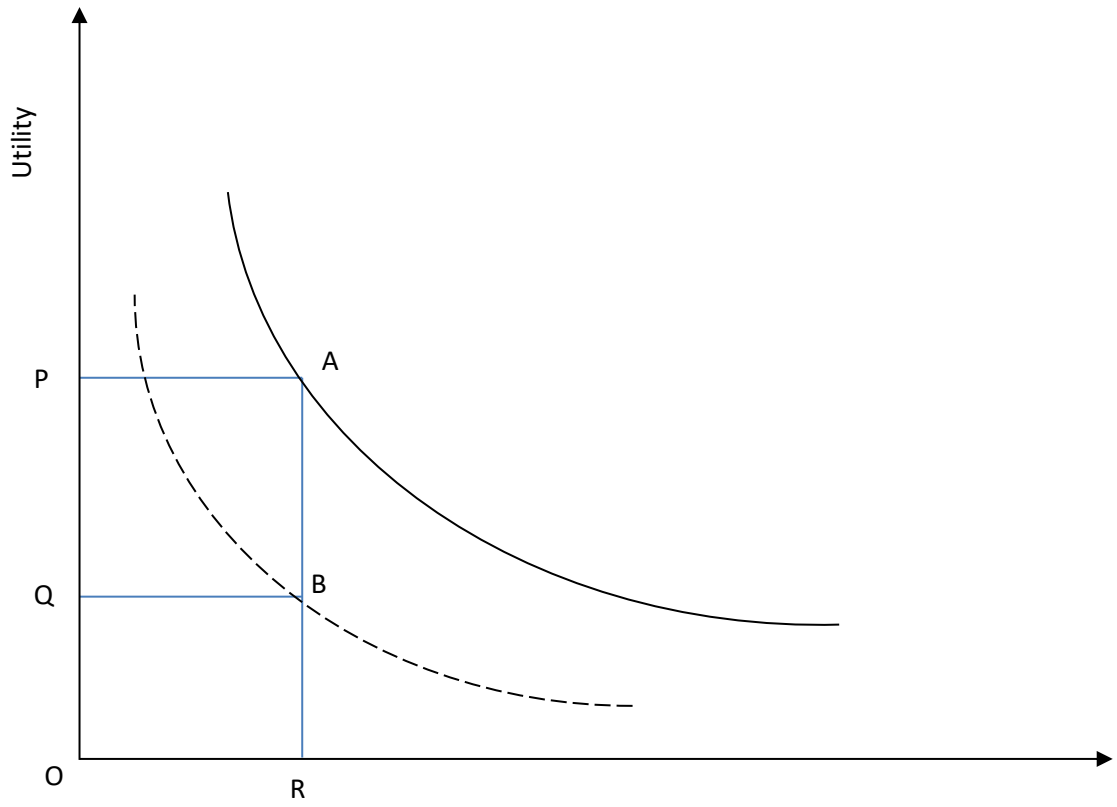


Figure 1

The diagram above captures this, as the downward sloping convex curve depicts the negative relationship between the utility to the executive and the bargain cost incurred by it in the process. Necessarily, a higher bargain and large number of negotiations will lead to lower levels of utility, as the freedom with the executive as is available in case of ordinance is reduced due to many factors such as opposition in parliament, public backlash as to the contents of the legislation, and other such costs.

As explained above, the Krishna Kumar Judgement reduces the total expected utility thereby causing a leftward shift in the total utility curve. Thus, the same level of bargaining now yields a lower utility to the executive and, it can be concluded that the number of ordinances should be reduced as the total utility to the executive from its promulgation has been reduced.

This doctrinal study has been carried out under a larger framework of the trade-off between parliamentary democracy and legislative expediency. From the statistical analysis, the author's findings suggest that even though according to the conceptual framework with the coming of Krishna Kumar's judgment, the number of ordinances should have been reduced there has been a constant increase in the number of ordinances.

Further, the authors seek to address this contradiction through the given microeconomic tools. Similar to the deterrent effect created by this judgement, it is argued that the judicial review of the ordinances shall also result in the deterrence being created and the reduced utility of the executive, however such a review is not possible in the cases where the satisfaction of the president is treated as subjective satisfaction and rests on his satisfaction. However, such a subjective satisfaction cannot be efficiently be a subject for the judicial review, until there are objective grounds laid for the exercise of such a power.

Such objectives grounds are existent in foreign jurisdictions such as Australia, United Kingdom and Canada, where 'emergencies' are better defined and statutorily laid[43]. The authors advocate for a similar rule to be laid in the country for the exercise of this power. This recommendation is supported by the model below. The proposed model seeks to provide a solution to address the problem of misuse of ordinance-making power by proposing detailed and extensive guidelines or rules for the use of power under Sections 123 and 213 of the Constitution, against the present standard of presidential satisfaction for promulgation of ordinances, as given in Article 123, or the governor's satisfaction under 213.

[43] Shubhankar Dam, *Presidential Ordinances in India: The Law and Practice of Ordinances*, Cambridge University Press, New York (2014).

Rules v. Standards: Delegation of Power

The authors present a game tree analysing the bargain between the legislature and the executive. Here, the executive gets to make decision in two scenarios: one where legal design entails rules and the other were legal design entails standard. The underlying idea is that when lawmakers adopt a standard, they allocate decision-making authority to someone else. Whereas, by laying down the rules, the powers of decision-makers can be constrained or liberated. This way rules and standards are related to delegation of powers. Further, whether the necessity of decision prevailed at the time of promulgation or not. For the purpose of this model, we take the ordinances promulgated under the conditions of genuine necessity. In this case once the ordinance can be subjected to judicial review or it cannot be. If no judicial review takes place the ordinance comes to an end. Whereas, if the judicial review takes place then outcomes will differ for the ordinances passed under the legal design with rules versus legal design with standards. In case of broad standards even if the decision is taken under necessity on judicial review either the court will strike down or uphold it. And in case of rules if decision is taken under necessity, on judicial review court will necessarily uphold it because now court will have objective criteria to determine if the necessity existed or not. This further implies that if ordinance was not promulgated for any collateral reasons but for the necessary want of such law, outcome of the judgment will be favourable for the executive who will have more certainty if the object they seek to achieve will be fulfilled or not. Thus, it can be said that defining of the clear rules may even be beneficial for the legislature in case of judicial review of the president or governor's satisfaction for the want of necessity to promulgate the ordinance.

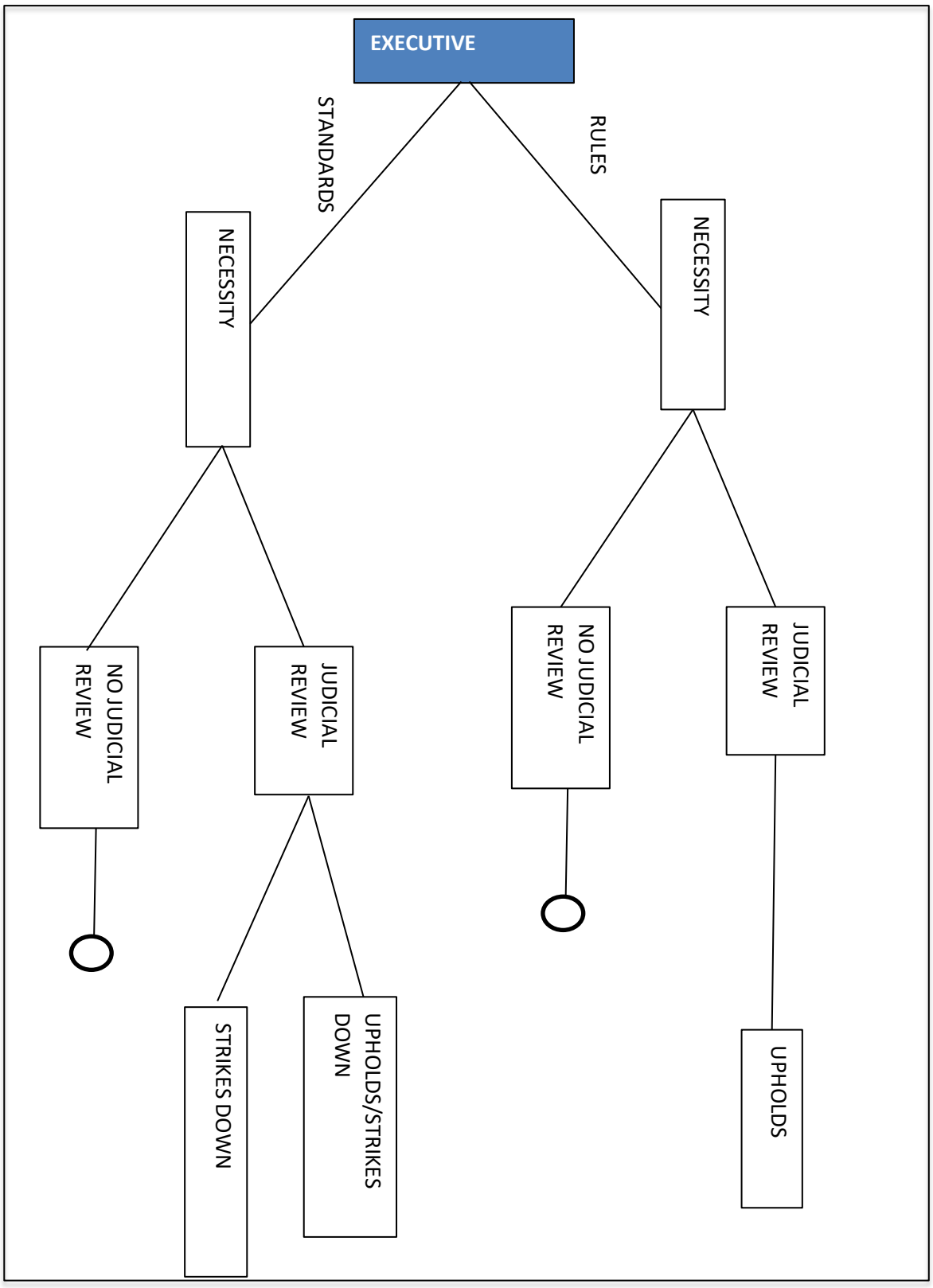

EXECUTIVE
STANDARDS
RULES
NECESSITY
NECESSITY
NO JUDICIAL REVIEW
JUDICIAL REVIEW
NO JUDICIAL REVIEW
JUDICIAL REVIEW
STRIKES DOWN
UPHOLDS/STRIKES DOWN
UPHOLDS

Figure 2

Having discussed the need for the proper rules instead of standard terms as "existence of necessity" it is essential to look at the amount of discretion that should rest with the executive in deciding the existence of such necessity or the level of strictness in defining the laws.

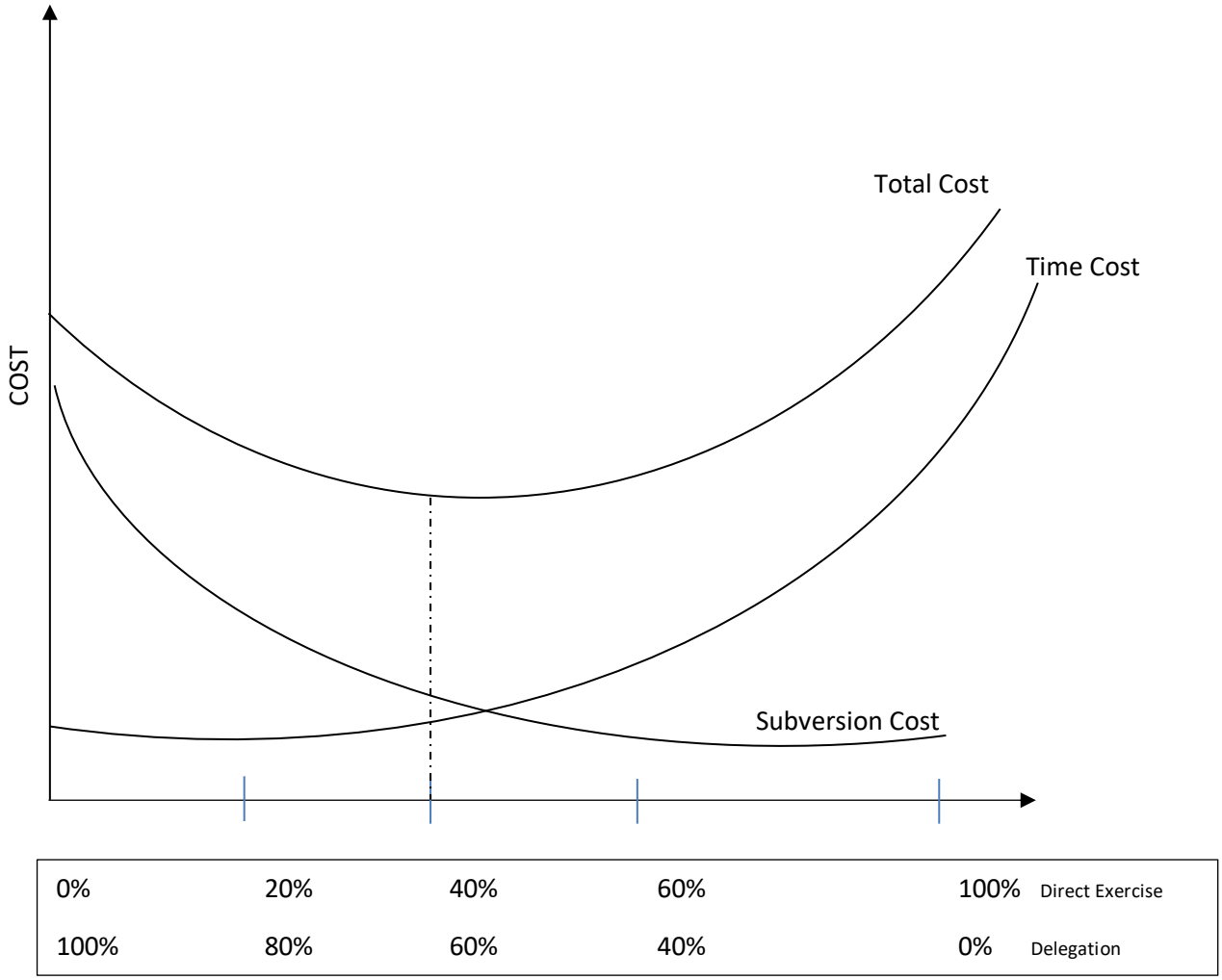


Figure 3

Subsequently another major question that we need to address is that what should be the optimum level of delegation and how strictly we need to define the necessity of ordinance to get efficient outcomes. In the figure 3, horizontal axis represents power directly exercised by Legislature over law-making which increases from 0 percent to 100 percent as we move from left to right and vertical axis shows costs. 0% Delegation means that there are very strict guidelines for the promulgation of ordinance while there is 100% direct legislations by parliament even in cases of necessity. while 0% direct Exercise refers to lack of any check and balance on the number of ordinances promulgated. We take two costs: time cost and subversion cost. Time cost refers to the time spent on negotiation and subversion cost refers to the cost of

arbitrary decision and erosion of checks and balance due to bypassing the separation of powers doctrine. As the direct exercise of power increases time costs also increases. Conversely, as more and more power is delegated the subversion costs against separation of power increases. Adding the two cost curves we get u-shaped curve of "total cost". We can say conclusively that if there is 100 percent control, time costs will be significantly high this cost becomes even more acute if the decision is to be taken in an emergency situation. Whereas, if direct exercise of power is 0 percent then the subversion cost will be significantly high. Therefore, balanced regulation corresponding to 40 per cent on X-axis will be most efficient as it is also the lowest point on the total cost curve, which corresponds to 60% delegation, i.e. somewhat a medium level of strictness for promulgation of the ordinance. These are hypothetical figures assumed for the purpose of this model to show the need for balance between very strict regulations and no guidelines for the exercise of power. b

Thus, the model seeks to recommend that the present standard of presidential satisfaction be replaced with the rules for the exercise of power, which shall aim to reduce the uncertainty and increase the objectivity in the entire process. Although such rules should not be such that they completely curtail the freedom of government to meet the emergent situations and must allow such room, but also check the misuse of such power.

5. CONCEPTUAL FRAMEWORK: LEGALISTIC ANALYSIS

The precondition existing for promulgation of an ordinance is that either of the two houses of the parliament should not be in session. As discussed earlier, ordinance is simply a tool to remedy a scenario, requiring legislative urgency where parliamentary legislation is not possible, to achieve. A converse understanding this will explain how this may incentivize the Cabinet to prevent the proper functioning in the parliament[44]. It must be recalled here that the power to convene a parliamentary session, decide its duration and decide the time for its prorogation or adjournment sine die, rests with the ruling party itself. The Authors seek to explain this phenomenon where the government intends to prevent the parliament from functioning by way of a game theory model.

	Opposition

[44] Shubhankar Dam, *Presidential Ordinances in India: The Law and Practice of Ordinances*, 37-38 Cambridge University Press, New York (2014).

		Intends to Aid In the Functioning of Parliament	Intends to prevent the parliament from functioning
Government	Intends to Aid In the Functioning Of Parliament	Alternative 1 **Parliament Functions**	Alternative 2 **Parliament Does Not Function [Government Bears The Cost]**
	Intends to prevent the parliament from functioning	Alternative 3 **Parliament Does Not Function** **[No cost upon the Government]**	Alternative 4 **Parliament Does Not Function [No cost upon the Government]**

The Matrix presented above discusses the attitude of two players, that is, the ruling party or the government and the opposition parties towards functioning of the parliament. Each of the player can either intend to aid in the functioning of the parliament or prevent the parliament from functioning well.

It must be remembered that the Parliament will able to function and the legislative business intended by the government can only be completed in a scenario where both the players want the parliament to function properly, this is presented as Alternative 1 in the matrix above in any other scenario, the parliament shall fail to function properly, and the legislative business fails to be completed this is shown in alternative 2, alternative 3 and alternative 4 in the matrix above, but in each case, the costs to the players will be different.

In alternative two where the government intended that Parliament functions properly, while Opposition intended otherwise; The Parliament shall fail to function properly. But this shall impose a higher cost upon the government as Government must have acted with a belief that Parliament shall function, and its legislative business shall be completed. In this scenario, the Government shall bear the cost in the form of time cost for the time lost in the preparation of the parliamentary session, adjournment cost and other costs such as public backlash that shall arise from its failure to meet the expectations and demands of the public is a timely ,manner moreover, the overall functioning of the government is hampered and that in turn in a cost upon the government.

It must be noted that the incentive for the opposition to disrupt the functioning of the parliament can be explained as the opposition, seeks to oppose the moves by the government, so as to maintain its political significance.

The third alternative presented above shows a scenario where the government intends the parliament not to function as it has the convenient mode of legislation by way of ordinances which seeks to reduce the cost of the government in enacting any piece of legislation, at is prevented from bargaining in parliament to get it passed, moreover the time taken in enactment of the ordinance is significantly less than that in the passing of an act. This also depends upon, the attitude of the government towards the parliament, if the prime minister and his cabinet view parliament as a cumbersome institution or has a serious contempt towards it, it is more likely to intend to escape the functioning of the parliament than aid towards it[45].

In the given scenario, the government shall not bear any cost. And be able to get the legislative business done easily. But this seriously affects the parliamentary democracy and spirit of public representation in the parliament, which shall in turn have long term consequences for a well-functioning democracy.

While the last alternative assumes a situation wherein both government and opposition intend to escape the functioning of parliament, Government because it has a convenient mode of legislation by way of ordinances. While opposition to prevent the government, from achieving its legislative aims in the parliament. This alternative also imposes a severe cost upon the parliamentary democracy in the country and affects the quality of democracy negatively.

The authors seek to explain that, given a scenario where the government does not know what the opposition intends, and what attitude the opposition carries towards the functioning of parliament in the next session, shall decide to prevent the functioning of Parliament and thereby rely upon ordinances as a convenient mode of legislation. Bearing significantly less costs as it might be in case it intends to aid in the functioning of the parliament. This is because, in the scenario where the government intends to aid in the functioning of Parliament, while the opposition intended otherwise, the government ends up bearing huge costs. Thus, in a scenario where it is unaware of the intention of the opposition, its dominant strategy shall remain to prevent the functioning of parliament and use ordinances as a convenient mode of legislation.

However, the government can be prevented from acting in such a manner that harms the functioning of democracy in the country by imposing costs upon it to ensure the proper functioning of the parliament, while the opposition can be prevented from disrupting the

[45] Ibid.

functioning of the parliament by having proper rules and regulations for the functioning of the parliament. This scenario is modelled in the second matrix presented below which seeks to explain the change in attitude of the government towards the functioning of the parliament by way of framing the rules and regulations for the functioning of the parliament.

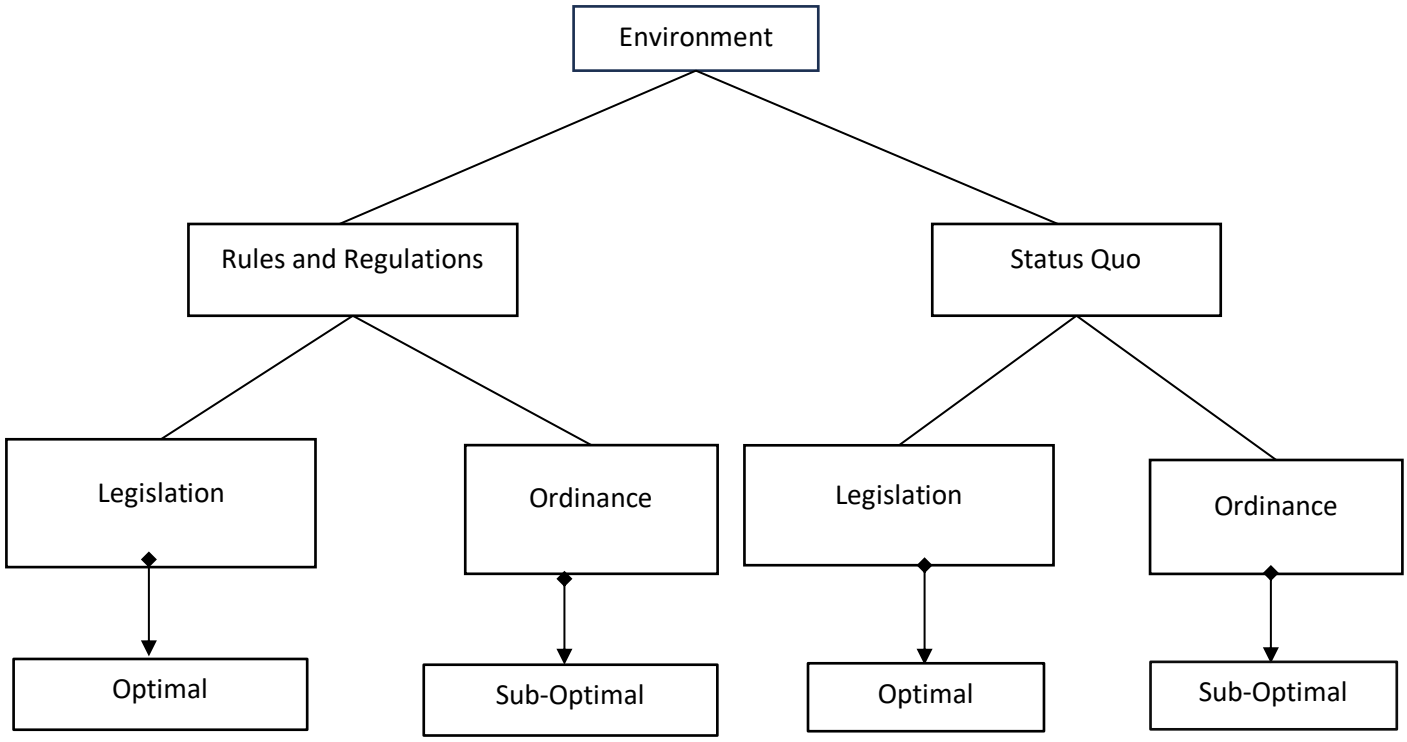


Figure 4

We here take two scenarios, the status quo and its alternative where proper parliamentary regulations exists and the voice of opposition is properly channelised. In both these environments, two tools of law-making exist, ie. either by an act of parliament or by way of passing an ordinance. Under the status quo, the cost for a government to pass an act in parliament is very high as the voice of opposition is not properly channelised therefore, there is a high bargaining cost, which also entails high time cost, and if the bargain turns into a dispute-like situation, then the government has to face adjournment costs. The government will, under such a situation, face all these costs along with increased public backlash, leading to sub-optimal outcomes even if they somehow manage to pass the act. Thus, in the status quo, passing an ordinance remains the dominant strategy for the government.

However, a proper code of conduct for the members creates a detterance that amongst the representatives so that members of opposition do not disrupt the functioning of parliament as conceptualised in the first matrix, then cost for passing an Act will reduce and cost for promulgating an ordinance will rise because ordinances have low representative gradient which

may cause dissatisfaction in public, people who will continue to be suspicious about the viability of law and motives of the government will naturally will not be able to accept it thus giving sub-optimal outcomes. Therefore, the dominant strategy for government will be making law through parliamentary procedure and not resort to ordinance making power for meeting its day-to-day business requirements.

6. DATA ANALYSIS AND FINDING

Methodology

The data analysis was conducted based on the secondary data collected by using information from Statistical Handbook 2019 which is available on the website of the Ministry of Parliamentary Affairs[46]. Additionally, data from 1952 - 2023 was also sourced from the RTI filed (LOKSS/R/T/23/00287). The test of the ordinances was also sourced from the Website of Legislative Department[47]. On the gathered data analysis was done using the Microsoft excel Software.

Results and Findings

Year	Total Number of Ordinances Passed
2009	9
2010	3
2011	3
2012	1
2013	11
2014	9
2015	9
2016	14
2017	7
2018	9
2019	16
2020	14

[46] Ministry of Parliamentary Affairs, https://mpa.gov.in/sites/default/files/Statistical%20Handbook_Updated_0.pdf .
[47] Legislative Department, https://legislative.gov.in/legislative-references/.

Year	No. of Ordinances containing Reasons for Promulgation	No. of Ordinances Not containing Reasons for Promulgation
2009	4	5
2010	0	3
2011	0	3
2012	0	1
2013	4	7
2014	2	7
2015	0	9
2016	6	8
2017	5	2
2018	4	5
2019	7	9
2020	8	6
2021	5	5
2022	0	0
2023	1	0

Table 2

2021	10
2022	0
2023	1

Table 1

Source: Statistical Handbook 2019, Ministry of Parliamentary Affairs, https://mpa.gov.in/sites/default/files/Statistical%20Handbook_Updated_0.pdf .

Source: Author's Analysis based on data available at https://legislative.gov.in/legislative-references/

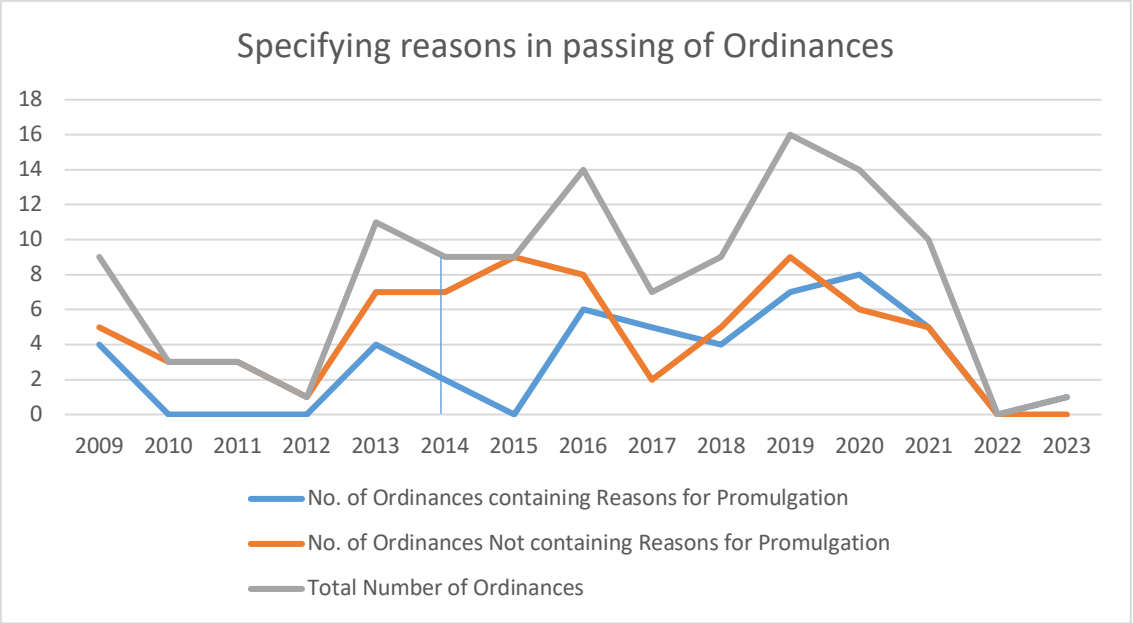


Chart 1

Firstly, a simple trend analysis on a number of ordinances promulgated between 2009 to 2023 was done. A closer look at Chart 1 shows that the trend of ordinances have remained broadly similar, before 2014 in the tenure of the UPA government and after 2014 in the tenure of the NDA government, however, the ordinances during the NDA government were comparatively more than those in the UPA government. Both phases have witnessed occasional drop in a number of cases, like in 2022 and 2012. Highest number of ordinances were promulgated in 2013 for UPA and in 2019 for NDA. This shows that Krishna Kumar's highest number of ordinances by NDA, which is 16, is significantly higher than the highest number of ordinances under UPA, which is 11 (Pre-Krishna Kumar Period). In fact, in the given years, witnessing ordinances in double digits occurred just after Krishna Kumar's judgement.

Therefore, the Krishna-Kumar Judgement has played a limited role in reducing the total number of ordinances being promulgated by the executive.

Further, for making generalised comments, the data of each ordinance were divided into two categories: (i) No. of Ordinances containing reasons for Promulgation, and (ii) No. of ordinances not containing reasons for promulgation.

This categorisation was made on the basis of what the text of the ordinances mentions. The primary of purpose for such categorisation was to assess the concentration of ordinances in categories where the government acknowledges the existence of emergency situations necessitating immediate legislation. The above chart makes it clear that ordinances not mentioning the existence of any emergency situation have mostly been higher than the ones containing reason.

This clearly shows that despite the deterrence created by Krishna Kumar's Judgement the number of ordinances has been on the rise. However, the specification of emergency situation in the promulgations have also increased. The impact of Krishna Kumar Judgement is clearly visible as until 2017, the number of ordinances containing the reason for promulgation has always been less than the number of ordinances not containing any such reason,

The above data analysis shows that contrary to the theoretical propositions conceptualised above the increase in the costs of promulgation has still not materialized in actual practice. Although a positive impact of Krishan Kumar's judgment is witnessed, the number of ordinances containing the reasons for promulgation has risen, which signifies a step towards reducing the number of ordinances being promulgated to serve perverted political ends. Nonetheless, the ordinance-making power is prone to misuse by in the given political environment.

However, As proposed in the conceptual framework above the misuse of ordinance-making power is sought to be reduced by. Having proper rules and regulations for the functioning of parliament. This is tested by way of the data analysis presented below, which analyses the relationship between the number of sittings of both houses of the parliament, and the number of ordinances promulgated. This is done by way of regression analysis, the results for which are presented below.

Number of Ordinances Passed as Dependent Variable		
		Total Sittings as Independent Variable
Independent Variables	Constant (a)	17.45346428 5.044862
	Total Sittings (b1)	-0.042393128 (0.**034417493) **** [-2.15856]
Statistic / Test	Adjusted R square	0.05036334
	Model Specification Test (F-test)	4.659368465** (0.034417)
Note: *** represents significance at 99% confidence level, ** represents significance at 95% confidence level, *represents significance at a 90% confidence level.		

Table 3

The following hypothesis is tested using the model:

H_0 - The model is nonlinear in its estimated parameters

H_1- The model is linear in its estimated parameters

Independent variable was taken to be Number of Sittings and the regression test was run against the Number of Ordinances. The result of ANOVA test provides the estimated value of F statistics of all the variables and the associated p-value demonstrates that the null hypothesis (H0) is rejected at 95% confidence level. Hence the model of all variables taken above is correctly specified. It is also suggested that the selected independent variable is significant and meaningful in explaining variations in the dependent variable. Moreover, the R square model of the variables show that the explanatory/ independent variable ,that is, Number of Sittings explains 64% variations in Number of ordinances. This suggests that selected model has better explanatory power.

The following equation can be derived from the summary of the model in the table:

Number of Ordinance = 17.4 – 0.042 (Number of Sittings)

The equation explains the contribution made by a set of independent variables on the dependent variable.

If one assumes that other variables remain constant then if the Number of Sittings increases by one unit it will lead to a decrease in the Number of Ordinances by 0.0423 units. The T-test is applied to test whether the estimated coefficient of b, that is, the Number of Sittings, is statistically significant or not. The estimated value of t statistics and its associated significance value (0.034) indicates that at the 95% confidence level estimated coefficient of b is statistically significant. Additionally, one can find that there exists an inverse relation between Number of Sittings and Number of Ordinances.

note

The above findings of the regression analysis support what has been hypothesized through conceptual framework that the number of ordinances that will be passed by any government is impacted by how well the parliament functions and how easily a government can pass an enactment. Thereby, ordinance has proved to be a convenient mode of legislation and is impacted by how well the parliament functions.

7. CONCLUSION

The data available for the promulgation of the ordinances clearly shows that the number of ordinances that have been enacted post the judgement in the *Krishna Kumar Case*[48] is in no sense less than the ordinances that have been enacted during the years preceding the judgment. This is so despite the negative impact of the Krishna Kumar judgement on the utility that the executive ought to derive from the enactment of the ordinances. The authors seek to address this anomaly through the microeconomic models and present solutions through the lens of law and economics. This paper conceptualises the solution to the problem of the misuse and the abuse of ordinance-making power by proposing the formulation of the rules that shall seek to add objective grounds to test if the ordinance-making power has been used in a proper manner or it has been used with the mala fide intentions and ill-will on the part of the executive. The level of the delegation to the executive, that is, the scope of the decision-making with the, executive, has been analysed by proposing the total cost curve, which seeks to propose the optimum level of stringency in the rules so as to allow the scope for the legislature to meet the emergency situations as well. This is sought to be achieved by framing of such rules for the exercise of the ordinance-making power by the president and the governor, in such a way as to have the objective grounds for the test of the need for the ordinance-making power and also at

[48] Krishan Kumar Singh v. Union of India, (2017) 3 SCC 1.

the same time have the scope and lee-way to the legislature to decide, if the matter needs the enactment of the ordinance to meet the emergency that has arisen.

The data analysis further revealed that the ordinances enacted post the *Krishna Kumar Judgement,* have increasingly been specifying the reason for the enactment, albeit what needs to be looked at that the reasons have not always been such as would '*necessitate the promulgation of the ordinance'* this is further sought to be addressed by the authors following a legalistic analysis of the ordinance making power, which reveals that the number of ordinances enacted have been found to be inversely proportional to the total sittings in the Lok Sabha and the Rajya Sabha. This is further addressed by the authors by proposing the game theory models which explain how the present legal framework, incentivises the legislature or the government to enact ordinances rather than passing the acts in the parliament. the authors propose that this behaviour on part of the legislature shall change with the framing of proper rules and regulations so as to regulate the proceedings in the parliament and ensure proper functioning of the parliament. This is backed by a game theory model explaining how the enactment of rules, regulating the business in parliament will lead to change in the attitude of legislature and lead to reduction in the number of ordinances being promulgated.

Summarily, the authors through this paper make two recommendations to reduce the misuse of the ordinance making power, one, to by way of semantic analysis, which reveals that there must exist proper rules coupled with equilibrium level of delegation to executive to regulate the circumstances in which ordinance may be promulgated.

The other, being by way of legalistic analysis, which reveals that there must exist proper rules to regulate the function of the parliament, which shall incentivise the legislature to enact acts rather than promulgating the ordinances, as opposed to the present framework, which incentivises the promulgation of ordinances, rather than passing the acts.

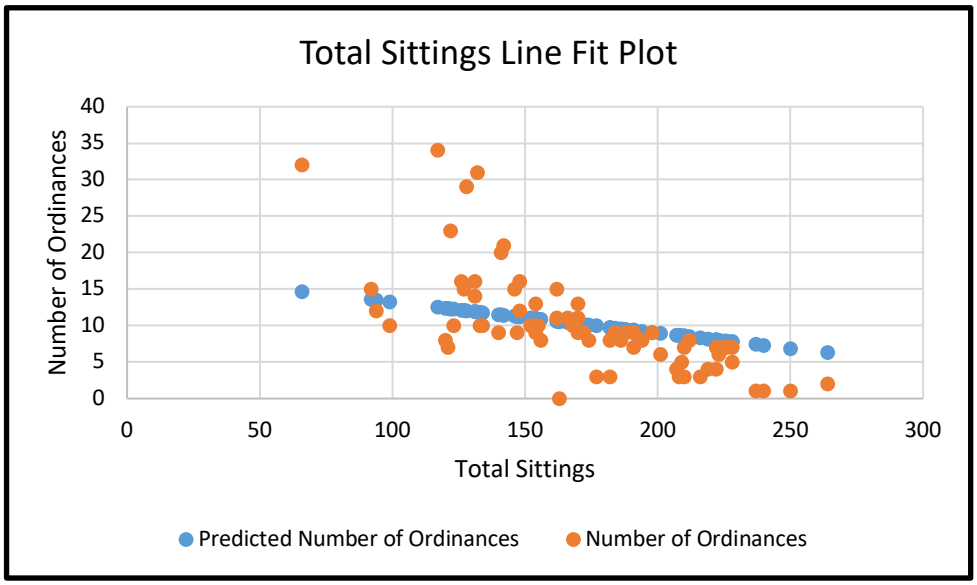
8. ANNEXURE-I

Regression Analysis between the Total Number of Sittings and the Number of Ordinances Passed in a Year

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.253231495
R Square	0.06412619
Adjusted R Square	0.05036334
Standard Error	6.885911075
Observations	70

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	220.9275	220.9275	4.659368465	0.034417
Residual	68	3224.272	47.41577		
Total	69	3445.2			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
Intercept	17.45346428	3.459651	5.044862	3.60388E-06	10.54984	24.35709	10.54984	24.35709
Total Sittings	-0.042393128	0.01964	-2.15856	**0.034417493**	-0.08158	-0.0032	-0.08158	-0.0032


Total Sittings Line Fit Plot
Number of Ordinances
40
35
30
25
20
15
10
5
0
0
50
100
150
200
250
300
Total Sittings
Predicted Number of Ordinances
Number of Ordinances