

**AN EMPIRICAL ANALYSIS OF THE APPLICABILITY OF BECKER'S MODEL OF
CRIME: A CASE STUDY OF RAPE, TRAFFIC VIOLATIONS AND CORRUPTION IN
INDIA**

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ABSTRACT

The basis of the entire legal system, since time immemorial, is shrouded in the ideals of justice. Crime attracts Punishment. When a wrongdoer or a criminal is punished, the balance of society is restored. Justice prevails and society reverts to the civil course of functioning. This is the major principle that criminal law is based on.

Different jurists have proposed multiple theories of punishment in Jurisprudence. Most societies across the world today follow a punishment model that is a mixture of reformatory theory and deterrent theory. The reformatory model includes rehabilitation and community service. These activities help the wrongdoer in analysing their mistakes and becoming a better person. While, imprisonment, the death penalty and penalties or fines imposed on the wrongdoer deter them from committing the crime again and also deter other members of society from committing such an act. In some cases, the guilty are sentenced to a particular prison time and also asked to pay penalties or fines to the court or compensation to the victim. This is where the economic approach to particular crime factors in.

This paper is divided into three parts. The first part deals with theories of punishments and how specific punishments are decided for specific crimes. The second part discusses the economic perspectives of penalties, fines, and compensations by applying Becker's economic model to certain crimes like rape and traffic violations in India. In furtherance, the third part of this paper analyses the data available on white-collar crimes in India, applying Becker's economic model to corruption data in India in particular, and how monetary deterrents can be used to contain the crimes. As per the analysis, Becker's economic model of crime applies to traffic violations but not rape and white-collar crimes.

Keywords: *Economics of crime, Punishment, Deterrence, White-Collar Crime*

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1. INTRODUCTION

The Indian Penal Code, of 1860 is the substantive legislation that covers the types of punishments offenders are given in India. Section 53 of the Indian Penal Code³ states that the death penalty, life imprisonment, forfeiture of property, rigorous or straightforward imprisonment and fine are types of punishments that can be given for offenders liable under the provisions of the Code. Broadly, the punishments can be grouped as imprisonment, the death penalty and monetary punishment. Based on the intensity of the crime, corresponding punishments can be levied. Monetary fines can be levied along with imprisonment.

The rationale behind levying monetary punishments is twofold. It serves the purpose of preventing the wrongdoer from committing that crime again. Also, it sets an example of the monetary cost a person who is a part of society would incur if the act is committed. It also serves the purpose of compensating and making the punitive damage caused to the victim right.

Much on this subject can be understood by looking at Nobel laureate Gary Becker's Economic Theory of Criminal Behaviour⁴. In this model, Becker states that potential criminals respond to deterrents set by the criminal justice system. One such deterrent is penalties or fines.

This paper shall deal with crimes such as rape and traffic violations in Indian society and the types of punishments imposed. Various theories of punishments and crime will be discussed.

This paper will further deal with the economic prospect of white-collar crimes in India, paying special attention to corruption data in India. The rationale behind imposing monetary punishments and case studies related to the same will be dealt with.

The final part of the paper will focus specifically on data regarding corruption in India and try to answer questions of the nature:

- a. Whether economic and pecuniary punishments reduce white-collar crime effectively or not.
- b. Is it feasible to increase punitive damages given by the perpetrator to ensure a reduction in related crime?

³ Ratanlal Ranchhoddas. (2007). *Ratanlal & Dhirajlal's The Indian Penal Code (Act XLV of 1860)*. New Delhi: Wadhwa & Co.

⁴ Becker, G. S. (1968). Crime and Punishment: An Economic Approach. *Journal of Political Economy*, 76(2), 169–217. <http://www.jstor.org/stable/1830482>

1.1 Objectives

1. To analyse the applicability of Becker's economic model to the case of traffic violation in India specific to Bengaluru
2. To examine the application of Becker's economic model to the cases of rape in India
3. To assess the relevance of Becker's economic model to white-collar crimes in India specific to corruption cases.

1.2 Theoretical Framework:

What should be the primary objective of levying punishments? Should it restore the losses of the victim? Or should the perpetrator be given rehabilitative care to become a better person? Criminal jurisprudence frames four cardinal theories of punishment, namely Retributive Theory, Deterrent Theory, Reformative and Preventive Theory.

McPherson T., in the paper titled *Punishment: Definition and Justification*⁵ quotes the definition of punishment in the form given by H.L.A Hart. According to Hart, 'punishment' must fit 5 criteria, namely:

- i. It must involve pain or other consequences normally considered unpleasant.
- ii. It must be for an offence against legal rules.
- iii. It must be of an actual or supposed offender for his offence.
- iv. It must be intentionally administered by human beings other than the offender.
- v. It must be imposed and administered by an authority constituted
- vi. by a legal system against which the offence is committed.

In the article *Theories of Punishment with Special Reference to Capital Punishment*⁶, a summary of each of the theories is elucidated. Retributive theory is considered to be the oldest form of punishment. It is based on the principle, "an eye for an eye and a tooth for a tooth" where the punishment given to the perpetrator would be equivalent to the grievance or crime caused to the victim. The best example of this theory would be Ameneh Bahrami's case⁷. The incident took

⁵McPherson, T. (1967). Punishment: Definition and Justification. *Analysis*, 28(1), 21–27. [<https://doi.org/10.2307/3327609>]

⁶"THEORIES OF PUNISHMENT WITH SPECIAL REFERENCE TO CAPITAL PUNISHMENT." (2020). *Journal of Emerging Technologies and Innovative Research*, 7(10), 2335. [<https://www.jetir.org/papers/JETIR2010302.pdf>]

⁷ Dehghan, S. K. (2017, November 29). Eye for an eye: Iran blinds acid attacker. *The Guardian*. [<https://www.theguardian.com/world/2015/mar/05/eye-for-an-eye-iran-blinds-man-who-carried-out-acid-attack>]

place in Iran, in 2011, where a man attacked Ameneh Bahrami, by throwing acid on her face and blinding her in the process. He was convicted under Sharia Law that Iran follows and was sentenced to 10 years of prison, and a fine and was also supposed to have his eyes removed as punishment. This highlights the retributive nature of the judgment. The woman was blinded and hence the perpetrator too shall be blinded.

Deterrent Theory, on the other hand, focuses on creating a sense of fear or reluctance amongst members of society from committing a particular crime. A punished criminal is made an example to instil fear in the citizens. Everyone is shown what could happen to them if they ever committed a particular crime. An example of this theory could be the death penalty which creates fear in society. However, many scholars believe that the death penalty does not work as an effective deterrent. For instance, in the Nirbhaya case⁸, the perpetrators were sentenced to death. But yet, rape cases in India have not decreased, despite the death penalty set as a deterrent.

Reformative Theory is the model that is widely followed across the globe today. It focuses on punishment from a positive perspective. It aims at reforming or building the character of the perpetrator. The best example of this theory would be sending culprits to rehabilitation, giving counselling and imprisoning them with vocational training and skill development.

Preventive Theory punishments disable the perpetrator or the accused from committing the same crime, or any other crime again. Life imprisonment is a great example, that prevents the accused from committing the corresponding crime as he or she is restrained or prevented by being imprisoned.

Most of these theories have been put to the test by evolving societies. Each crime is awarded a punishment based on one of the above-elucidated theories based on the nature, intensity and type of crime. It becomes crucial that the design of the punishment is in tandem with the progress and structure of the society to which such penalties are applied. Because, in the end, the main goal of punishments is to revert society to its civil, functional form that existed before the crime was committed.

⁸ *Mukesh v. State (NCT of Delhi) (2017) 6 SCC 1, 2017 SCC Online SC 533.*

2. LITERATURE REVIEW

Not long before, the intersection of economics and crime as interdisciplinary research would have been unimaginable. But today, economic aspects of crime and penalty help in understanding the intent behind offences more easily. Further, it helps in formulating better policies and penalties to reduce crime in society.

Sutherland (1940) in the paper titled *White-Collar Criminality*⁹ attempts to integrate the sociologist and economics point of view of crime. He seeks to compare the white-collar crimes that are socially understood to be committed by higher-class, respectable people to those committed by people of “low socio-economic status”. Sutherland believes that this explanation for crime is correct. Rather than poverty, other social factors contribute towards a person committing a crime. Sutherland has used secondary data from the Federal Trade Commission in 1920 to analyse commercial bribery present in food chain stores among many other examples. He further goes ahead to state that the losses caused by white-collar crimes are as impactful and huge as common burglaries and thefts, even more so. An officer embezzling \$600,000 from a chain grocery store is said to have six times the loss from five hundred burglaries. Sutherland aims to create an argument regarding the seriousness of white-collar crimes and the social implications of the same.

Coase (1960) in the paper titled *The Problem of Social Cost*¹⁰ deals with the social perspective of penalties or fines that are levied on businesses that affect the society’s functioning. Coase uses the example of a factory that emits smoke and causes damage to the neighbours. Most economists in such cases place their probable solutions on the principles of Pigouvian economics and recommend the owner of the factory pay for the losses of the neighbouring properties due to the pollution, or place a tax on the owner to deter him or her from excessively polluting. According to the author, both these courses of action are inappropriate leading to undesirable results. As per the Coase Theorem that was developed in this paper, the parties involved in an economic conflict can always negotiate terms that will do justice to the actual value of the property rights involved, provided the cost of negotiation is less.

McPherson (1967), in the paper titled *Punishment: Definition and Justification*¹¹ further goes on

⁹ Sutherland, E. H. (1940). *White-Collar Criminality*. *American Sociological Review*, 5(1), 1–12. <https://doi.org/10.2307/2083937>

¹⁰ Coase, R. H. (1960). *The Problem of Social Cost*. *The Journal of Law & Economics*, 3, 1–44. <http://www.jstor.org/stable/724810>

¹¹ McPherson, T. (1967). *Punishment: Definition and Justification*. *Analysis*, 28(1), 21–27.

to add that the aforementioned 5 elements charted by Hart fit the retributive theory of punishment rather than the deterrent or reformative theories. According to him, the retributive theory describes punishment while the other theories justify the reasoning and rationale behind the punishment as well¹². This excerpt encapsulates the concept of punishments, penalties and compensations in a very concise manner. In this article, the author has used secondary data from various philosophers and scholars to arrive at definitions and opinions on theories of punishment.

The most groundbreaking work in this field of crime and economics belongs to **Gary S. Becker** who was even awarded the Nobel Prize in 1992 for the same. **Becker (1968)** in his paper titled *Crime and Punishment: An Economic Approach*¹³. In this paper, Becker has broken down the amount incurred by a person to commit a crime. He presents the theory that a person shall commit a crime if the utility or profit incurred by such offence exceeds the utility or profit incurred in doing legally valid work. It is based on the premise that criminals are rational individuals who seek to maximise utility. This is termed as “the Rational Choice Model.” If the “cost of committing a crime” entailing an increase in penalty or an increase in prison time, exceeds the utility obtained by committing the crime, then the rational criminal would choose not to commit the crime. Thus, giving way to penalties as crime deterrents. Data used by Becker in proposing an economic model for crime is primary data on the crimes committed in the U.S. in 1967 (Source: President’s Commission), the money lost by victims in such crimes and the amount of money spent by the government to prevent such crimes.

In the paper written by **Danziger and Wheeler (1975)** titled *The Economics of Crime: Punishment or Income Redistribution*¹⁴, the authors proposed the theory of how income inequality leads to a rise in crime. It is based on the premise that whilst evaluating one's welfare, individuals refer to their relative income with other classes rather than absolute income. When a person finds inconsistency between the income of other groups to his, a conflict arises. This conflict can be a crime. This paper emphasises that not just punishments, but income distribution is a major crime deterrent as well. An economic model is designed by considering 3 FBI indexed crimes, namely,

<https://doi.org/10.2307/3327609>

¹² Ibid.

¹³ Becker, G. S. (1968). Crime and Punishment: An Economic Approach. *Journal of Political Economy*, 76(2), 169–217. <http://www.jstor.org/stable/1830482>

¹⁴ Danziger, S., & Wheeler, D. (1975). THE ECONOMICS OF CRIME: PUNISHMENT OR INCOME REDISTRIBUTION. *Review of Social Economy*, 33(2), 113–131. <http://www.jstor.org/stable/29768770>

burglary, aggravated assault, and robbery. The above crime rates are correlated to different categories like youth, unemployed etc. The primary data encompasses U.S. crime rates and ranges between the years 1949 to 1970.

Donohue (2007), in his paper titled *Economic Models of Crime and Punishment*,¹⁵ gives a critical analysis of Becker's economic model of crime. His secondary data on the number of prisoners in the United States between the years 1933 and 1973 and later 2003 show the increase in incarceration as a mode of penalty. Between 1933 and 1973 there were only 100-120 prisoners per 100,000 members of the population as opposed to the 2 million people imprisoned in the United States in 2003. He also questions whether increasing the "cost" of an illegal offence helps reduce crime rates. To support his statement that "crime is too complex a phenomenon to think that a simple model of "raise the price and you will get less of it" ", he provides the results of Chen and Shapiro's regression analysis model wherein it was discovered that worsening prison conditions made perpetrators more recalcitrant and uncooperative.

Winden and Ash (2012) in their article titled *On the Behavioral Economics of Crime*¹⁶ highlight the 'ecologically rational' criminal whose decisions are influenced by brain sciences. The traditional theory deals with abstract theories based on the rational choice made by humans while the psychological approach provides reasoning for the deviations from the rational choice theory. The article delves into the concept of heuristics by stating examples. For instance, the Availability Heuristic (where people rely on easily accessible information to make decisions) can be used to place conspicuous or gaudy parking tickets that will remind people of the consequences of violating the parking rules. Anchoring Effects (a cognitive bias where people rely too heavily on the first piece of information encountered when making decisions) come into the picture when one party makes a first strong case for a particular sentence that can influence the jury to be biased towards it. Overall, the paper advocates for a re-evaluation of criminal law concepts of responsibility and punishment based on a more nuanced understanding of human decision-making processes influenced by cognitive and emotional factors.

Black (2014), in the article titled *Gary Becker's Imperialistic Blunders about Crime*,¹⁷ highlights

¹⁵ Donohue, J. J. (2007). *Economic Models of Crime and Punishment*. *Social Research*, 74(2), 379–412. <http://www.jstor.org/stable/40971937>

¹⁶ van Winden, F., & Ash, E. (2012). *On the Behavioral Economics of Crime*. *Review of Law and Economics*, 8(1), 181-213. <https://doi.org/10.1515/1555-5879.1591>

¹⁷ Black, W. (2014, June 18). *Gary Becker's Imperialistic Blunders about Crime*. *New Economic Perspectives*. <https://neweconomicperspectives.org/2014/06/gary-beckers-imperialistic-blunders-crime.html>

the setbacks in Becker's economic model of crime. The author criticises Becker's views on crime by drawing attention to how Becker fails to take into account the negative externalities of theft (feeling of violation, violence and destruction, the ethics). Furthermore, the author states how Becker did not collect data regarding the costs of white-collar crimes in his groundbreaking paper, despite developing a model that requires the incidence of the type of crime and the cost of each type of crime. The cost estimates for white-collar crimes fail as Becker focuses on costs driven by police forces while in reality bodies like the FBI (Federal Bureau of Investigation) or CBI (Central Bureau of Investigation) investigate elite white-collar crimes and not the police. According to the author, the model almost favours the option of the wealthy buying their way out of prison as Becker favours fines over imprisonment for punishment.

The chapter titled *Sentencing Respectable Offenders* published in the *Oxford Handbook of White-Collar Crime* by **Levi (2016)**¹⁸ examines the sentencing procedure for white-collar crimes, emphasising both private citizens and large organisations. Levi talks about several sentencing topics, including trends in fraud sentences, fines, and data on white-collar criminal sentencing in the US federal system. The sentencing of rogue traders, the US Sentencing Guidelines, and penalties by regulatory organisations and professional associations are all covered in this chapter. **McAdams and Ulen (2017)** in the paper titled *Behavioral Criminal Law and Economics*¹⁹ have presented a Behavioural Economics view of Becker's rational choice theory. Becker's model of crime propounds the classical economics view that criminals are rational human beings who make a cost-benefit analysis of the committing or non-committal of a crime. Other proponents in society like victims, judges, prosecutors, police, etc. are also considered rational beings who make informed decisions. This paper substantiates that the aforementioned actors are subject to behavioural biases that may not fit the rational choice theory and hence, the aspect of behavioural economics needs to be included while applying Becker's theory to crimes. The article concludes that behavioural assumptions have a significant impact on the economic analysis of criminal law. Although behavioural assertions are still being empirically tested, the best-known data at this time calls for certain revisions to the positive description and normative suggestions that economics

¹⁸ Levi M (2016) Sentencing Respectable Offenders. In: Cullen F, Benson M, van Slyke S (eds) Oxford Handbook of White-Collar Crime. Oxford: Oxford University Press, pp. 582–602.

¹⁹ McAdams, R. H., & Ulen, T. S. (2017). Behavioral criminal law and economics. In Edward Elgar Publishing Limited eBooks. <https://doi.org/10.4337/9781781950210.00021>.

makes for criminal law.

Jain et al. (2017), in the paper titled *Case Study on White Collar Crimes*,²⁰ have discussed the various types of white-collar crimes. The causes and data concerning such crimes in India have also been discussed in the paper. Examples that include stock manipulation, adulteration of food and unfair labour practices have been cited by the authors. The methodology involves secondary data's qualitative analysis derived from sources like KPMG India's Fraud Survey of 2012.

The paper *When stealing, go for millions? Quantitative analysis of white-collar crime sentencing in Poland*²¹ by **Czarnocki, Janulek, and Olejnik (2019)** offers a distinctive viewpoint on Poland's sentencing practices for white-collar crimes. Investigating the connection between the duration of custodial terms and the degree of fraud, the study finds a non-linear dependency that might encourage people to perpetrate larger-scale scams. Additionally, the study reveals a bias against women in sentencing, as women are given shorter prison terms, especially when their judges are female.

Andenaes's (2019) paper titled *The General Preventive Effects of Punishment*²² offers a comprehensive analysis of the interplay between legal sanctions and societal behaviour. The paper explores the differences between general and particular prevention, highlighting the complex ways that punishment affects both individuals and communities.

Utilising perspectives from eminent experts in the field of criminal law philosophy, the article emphasises the progressive development of punitive measures and their function in moulding legal standards and disincentives. It draws attention to the contributions made by authors such as Feuerbach, Beccaria, and Bentham in clarifying the psychological pressure that punishment entails and how it affects citizens' adherence to the law.

Tiwari and Kumar (2020) in the journal article titled '*Theories Of Punishment With Special Reference To Capital Punishment*'²³ have given a panoramic view of the concept of punishments along with the various theories and an opinionated stance on capital punishment. The article

²⁰ Jain, H., Agarwal, C., Sharma, H., Joshi, A., & Surana, J. (2017). Case Study On White Collar Crime. *International Journal of Engineering Development and Research*, 5(2).

²¹ Czarnocki, K., Janulek, D., & Olejnik, L. (2019). When stealing, go for millions? Quantitative analysis of white-collar crime sentencing in Poland. MPRA Paper. <https://ideas.repec.org/p/pramprapa/92340.html>

²² Andenaes J (1966) The general preventative effects of punishment. *University of Pennsylvania Law Review* 114(7): 949–983.

²³ Tiwari, R. Dr Kumar, R. (2020). THEORIES OF PUNISHMENT WITH SPECIAL REFERENCE TO CAPITAL PUNISHMENT. *Journal of Emerging Technologies and Innovative Research*, 7(10), 2334–2338. <https://www.jetir.org/papers/JETIR2010302.pdf>

reinstates the idea behind the punishment, being, restoring the normal functioning of society the way it used to be before the crime was committed. Retributive, Deterrent, Preventive, and Reformatory theories are discussed in depth in the article.

In the paper titled *Punishing White-Collar Crime in Canada: Issues with the Economic Model of Crime and Punishment*²⁴, **Haas (2021)** has given a detailed perspective on how Becker's model is very aptly suitable for white-collar crimes. She further provides an in-depth economic analysis of white-collar crimes in Canada. Secondary data on the amount of money spent on correctional services in Canada in the years 2017 to 2018 was compared with the money spent on prisoners on probation. The annual cost of keeping an inmate incarcerated was \$121,339 for males and \$212,005 for females. While, the cost of keeping an offender in the community, such as on probation, is only \$32,327 per year. She states that while the economic model favours fines as suitable deterrents when compared to incarceration because fines act as social revenue while money must be spent on correctional services from the state's coffers, it is crucial to understand that "the offender must be able to pay the fine". Thus, since white-collar crimes are committed by the affluent, penalties for such crimes seem to be feasible. But, since affluent people do not lack money, it becomes easy for them to pay the fine and wash their hands. As a result, she states that incarceration coupled with a monetary penalty would work as a perfect deterrent for white-collar criminals.

White-collar crimes in the Indian landscape have been analysed theoretically in the article titled *White Collar Crimes in India: An Analytical Study*²⁵ by **Sharma and Singh (2022)**. The article aims to deduce the gravity of white-collar crimes in India about specific Indian Penal Code provisions that criminalise bribery, forgery, counterfeiting, adulteration and corruption. They also discuss why white-collar criminals are not considered, feared or have a stigma attached to them like traditional criminals of theft, burglary etc. With not much awareness about the subject, fewer and infrequent arrests and limited media coverage, white-collar crimes are not subject to significant stigma.

Sahoo (2022) in the paper titled '*Study Relating to White Collar Crimes in Indian Corporate Sector: Critical Analysis*'²⁶ has shed light on corporate white-collar crimes in India. This paper

²⁴ Haas, M. (2021, October 2). Punishing White-Collar Crime in Canada: Issues With the Economic Model of Crime and Punishment. *Alberta Law Review*. <https://albertalawreview.com/index.php/ALR/article/view/2669>

²⁵ Sharma, J., & Singh, M. (2022). White Collar Crime In India: An Analytical Study.

²⁶ Sahoo, D. (2022). Study relating to White Collar Crimes in Indian Corporate Sector: Critical Analysis. Central

aims to raise awareness regarding crimes of a certain theme. The paper is based on the premise that the current legislation adds to the creation of a free economy in India but is not sufficient to handle or curb white-collar crimes in India. Doctrinal research methodology referring to various case studies has been used in this paper by the author.

Makkar and Kuar (2022) in the paper titled '*White Collar Crimes In India: A Set Back For Progressive Nation Building*'²⁷ have discussed the impact of white-collar crimes on the Indian Economy. The paper aims to analyse the root causes of the growth of white-collar crimes in India and the role of the government in it. Further on, this paper produces an in-depth view of the evolution of including "white-collar crimes" in various legislations. The discussions and reports of various law commissions in India have been analysed and the history of such crimes has been discussed. The Secondary qualitative data research methodology has been used by the authors.

Chevalier (2022) in the article titled '*Gold: when the Price Goes Up, More Gets Stolen in break-ins-new research*'²⁸ deals with how the value of a stolen good influences the behaviour of criminals. The author gives the example of how stealing more phones increases the availability of phones in the market causing a dip in the prices of phones thus making it a less valuable commodity to steal. The article focuses on the commodity of gold and how its prices affect burglary in England and Wales. As per the Crime Survey for England and Wales (CSEW), jewellery burglaries increase with the increase in gold price. A study conducted by the author proves that criminals are rational as per Becker's model as burglaries increased remarkably in South-Asian neighbourhoods when gold prices increased, as South-Asian houses are culturally known for storing more gold jewellery.

Sharma (2024) in his article titled '*Laws Have Changed After Nirbhaya Rape Case, Have These Amendments Deterred Crimes Against Women*'²⁹ provides a view into the legal framework of India related to criminal law amendments, 10 years after the Nirbhaya rape case that caused huge outrage across the world. The article explores the Criminal Law Amendment (2013) that was enforced after the incident and included stringent provisions concerning rape. The definition of rape was

European Management Journal, 30(4).

²⁷ Makkar, H., & Kuar, A. (2022). WHITE COLLAR CRIMES IN INDIA: A SET BACK FOR PROGRESSIVE NATION BUILDING. *Journal of Positive School Psychology*, 6(4), 3549 – 3553.

²⁸ Chevalier, A. (n.d.-b). Gold: when the price goes up, more gets stolen in break-ins – new research. The Conversation. <https://theconversation.com/gold-when-the-price-goes-up-more-gets-stolen-in-break-ins-new-research-137935>

²⁹ Madhur Sharma, & Madhur Sharma. (2024, February 7). Laws have changed after the Nirbhaya rape case, Have these amendments deterred crimes against women? *Outlook India*. <https://www.outlookindia.com/national/how-laws-changed-after-nirbhaya-rape-case-have-amendments-deterred-crimes-against-women-news-245368>

widened and the punishment of rape was increased. The amendment was seen to be more populist than reformist. The article delves into the opinions of various academicians, woman rights activists and criminologists. As per most of their opinions, improper enforcement of punishments and patriarchal notions about such crimes are key issues as to why crimes against women are still widespread.

Thus, there has been an increase in the study of the nature, dynamics and types of white-collar crimes across the globe ever since Sutherland's ground-breaking analysis of the same. The perceived bridge between regular crimes and white-collar crimes seems to have reduced with the advent of technology and globalisation. However, not much data regarding this crime theme is available as it is a relatively new field of study that has gained momentum in the past decade.

2.1 Research Gap

Although many studies have examined the applicability of Becker's economic model on specific crimes, there is a lack of literature in the area concerning the applicability of Becker's model to crimes like rape in India, traffic violations specific to Bengaluru and white-collar crimes, corruption in India, precisely. The paper applies Becker's economic model of crime to the aforementioned crimes for the years 2011-2023 (for traffic violations in Bengaluru); 2003 to 2021 (for rape cases in India) and 2011 to 2022 (for corruption in India).

This paper will attempt to apply Becker's economic model to rape, traffic violations and corruption crimes in India. The major question, of whether the incentives to crime and deterrents to crime as enumerated in the economic model will work effectively and be rightfully applicable to various crimes like rape, traffic violations and corruption, will be answered.

2.2 Research Hypothesis

Theoretically, Becker's model should be perfectly applicable to low-intensity crimes that usually have economic damages rather than societal damages; and that are civil but not of a criminal nature. This paper will use crime numbers as the data set to analyse if the numbers follow the pattern as suggested by Becker, in relation to deterrents put forth by the state.

2.2.1 First Hypothesis

H₀-Becker's model applies to traffic violations in Bengaluru as the number of cases registered or the commission of the offence decreases with the increase in punishment for the offence.

H₁-Becker's model does not apply to traffic violations in Bengaluru as the number of cases registered or the commission of the offence increases with the increase in punishment for the offence.

2.2.2 Second Hypothesis

H₀-Becker's model applies to the crime of rape in India as the number of cases registered or the commission of the offence decreases with the increase in punishment for the offence.

H₁-Becker's model does not apply to the crime of rape in India as the number of cases registered or the commission of the offence increases with the increase in punishment for the offence.

2.2.3 Third Hypothesis

H₀-Becker's model applies to the crime of corruption in India as the number of cases registered or the commission of the offence decreases with the increase in punishment for the offence.

H₁-Becker's model does not apply to the crime of corruption in India as the number of cases registered or the commission of the offence increases with the increase in punishment for the offence.

3. METHODOLOGY

This paper uses the secondary data qualitative analysis methodology to assess the data on crimes such as rape, traffic violations and corruption, penalties and punishments used as deterrents from various journals, articles, websites and reports of surveys conducted by associations.

The data collected for traffic violations in Bengaluru spans the years 2011 to 2023 while the data for rape in India is collected for the years 2003 to 2021 and the data for corruption in India spans the years 2011 to 2022.

The source of data collected originates from websites such as NCRB (National Crime Records Bureau) and OpenCity which consists of an Urban Portal database for crimes in cities. The data for traffic violations has been restricted to the city of Bengaluru for ease of research, collection of data and analysis.

The paper contains various bar graphs to analyse the figures or data regarding specific crimes

through a visual tool of analysis.

4. DATA ANALYSIS AND DISCUSSION

4.1 Becker's economic model

The breakthrough in the interdisciplinary field of law and economics has been Gary Becker's economic model of crime. In his paper, Becker views crime as an "industry". People involved in this industry want to maximise their profits. He also views the performance of illegal activities, like selling narcotics, as a source of income. Becker has presented these data to establish that crime has emerged as an important trend. It is crucial to note that there will be a sizable amount of expenditure on the part of the society and state to contain these crimes by investing in prisons, correctional facilities, police etc.

Becker further states that criminals commit crimes when the benefit of committing that crime exceeds the benefits of committing legal activities³⁰. Thus, this model operates on the premise that criminals are rational individuals who analyse the marginal utility and cost before committing a crime and proceed to do so only if there exists profit.

Hence, by applying this model, policymakers need to increase the cost of committing a crime by including harder punishments or penalties that instil apprehension in a wrongdoer's mind before committing a crime.

4.2 Application of Becker's Model to Traffic Violations in Bangalore

As the long title of the legislation suggests, the Motor Vehicles Act of 1988³¹ aims "to consolidate and amend the law relating to motor vehicles". The legislation has gone through many amendments. For our study, consider the 2019 amendment, the Motor Vehicles (Amendment) Act of 2019³². The 2019 amendment is known to have increased the penalties and prescribed more stringent punishments for traffic violations as compared to the previous amendments. The following data substantiates Becker's model based on the number of cases booked under the Motor

³⁰ Haas, M. (2021, October 2). Punishing White-Collar Crime in Canada: Issues With the Economic Model of Crime and Punishment. *Alberta Law Review*. <https://albertalawreview.com/index.php/ALR/article/view/2669> Pg. 204.

³¹ Motor Vehicles Act, 1988, No. 59 of 1988, Acts of Parliament, 1988 (India).

³² Motor Vehicles (Amendment) Act, 2019, No. 32 of 2019, Acts of Parliament, 2019 (India).

Vehicles Act before and after the 2019 amendment in Bengaluru, a city in India.

Considering the data provided on the Open City Urban Data Portal³³ website the number of Motor Vehicles Act cases in 2017 was 68,94,931; in 2018 was 51,00,540 while after the Amendment in 2019, the number of cases booked under the Motor Vehicles Act was 39,79,303. Further, the number of cases keeps decreasing in the subsequent years, with the figure being 20,98,952 cases in 2020 (COVID-19 could have been a contributing factor) and 14,95,031 cases in 2021.

The fines collected however increased with the decrease in the number of violations. This was due to a hike in the penalty amounts. The fines collected in 2017 were Rs.89,40,16,575; in 2018 for offences under the Motor Vehicles Act were Rs. 69,69,76,700. Post amendment, the fines collected in 2019 were Rs. 82,19,39,150; in 2020 were Rs. 94,46,13,890 and in 2021 were Rs. 1,30,23,28,500.

This example strengthens Becker's model. With increased penalties and fines for a slew of offences, apprehension was created in the public. This marked a downward trend in traffic rule violations post the enforcement of the stringent amendment.

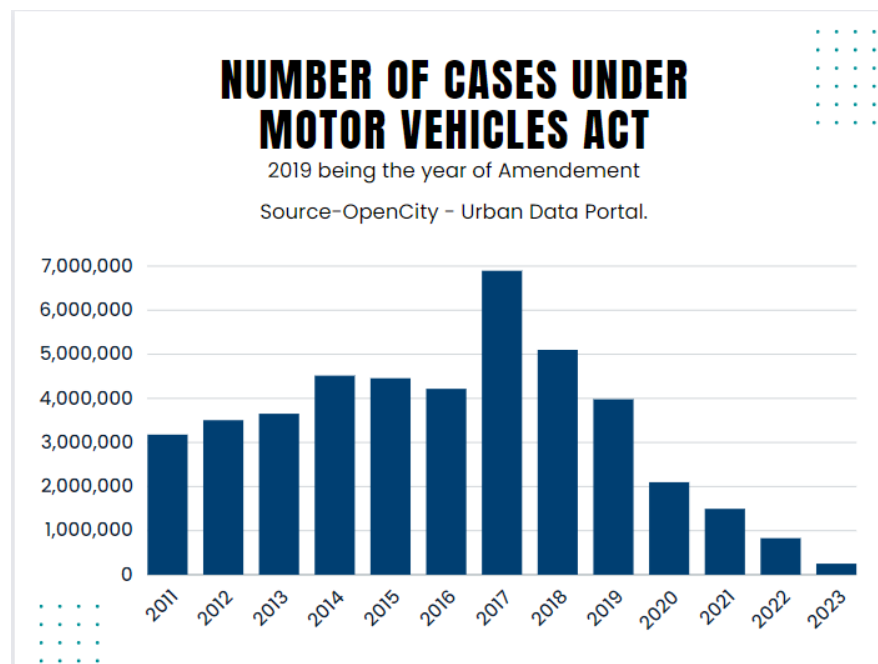


Fig 4.2.1 The comparison of traffic violation cases in Bengaluru from 2011 to 2023

Source: OpenCity - Urban Data Portal. (n.d.).

³³ *Urban Data Portal* (no date) *OpenCity*. Available at: [https://data.opencity.in/dataset/bengaluru-traffic-violations-data/resource/btp---cases-and-fines-collected-under-various-acts-\(2011-2023\)](https://data.opencity.in/dataset/bengaluru-traffic-violations-data/resource/btp---cases-and-fines-collected-under-various-acts-(2011-2023))

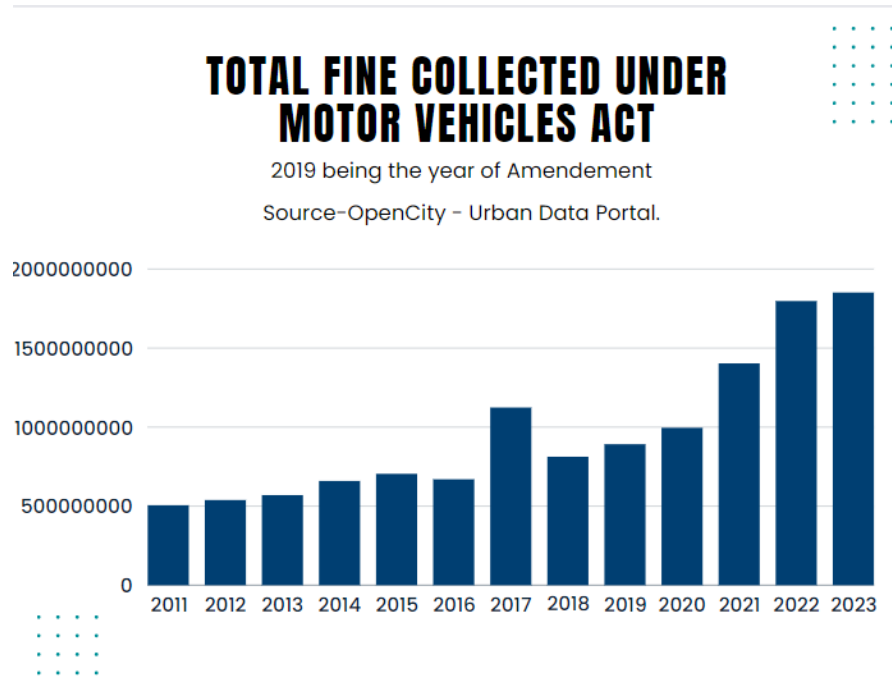


Fig 4.2.2 The comparison of fines collected as a result of traffic violations under the Motor Vehicles Act from 2011 to 2023
 Source: OpenCity - Urban Data Portal. (n.d.).

By the above data analysis, H_0 of the First Hypothesis stands true while H_1 is rejected as the number of traffic violations decreased with the increase in punishment, thus satisfying Becker’s economic model of crimes.

4.3 Application of Becker’s Model to Rape Cases in India

As per the example taken above, Becker’s model seems perfectly applicable to crimes that can have penalties as a deterrent. But is the model applicable to severe offences like rape?

December 2012 was a dark month for India. The whole nation was enraged at the rape of Nirbhaya³⁴. Protests and riots asking for quick justice broke out across the country. It was not the first rape case that India had seen. But people from all backgrounds united to express their grief, anger, and dissatisfaction about the safety of women in India.

³⁴ Mukesh & Anr v. State (NCT of Delhi) & Ors (2017) 6 SCC 1.

After numerous protests, a committee headed by Late Justice J.S Verma, Gopal Subramaniam, and Ex-Justice Leila Seth was set up to reframe rape laws and give suggestions to the legislature regarding the same. As a result of the report submitted by the Committee, the Criminal Law (Amendment) Act, 2013 came into force.

The 2013 Amendment widened the definition of rape to not just include penetrative rape. Even acts of inserting foreign objects other than the penis and acts of oral sexual intercourse were added to the traditional definition of rape.

The 2013 amendment also included provisions to hold trials concerning rape on a day-to-day basis for the quick disposal of cases. Provisions regarding Voyeurism, stalking, and acid attacks which were not in the 1983 amendment were added. Punishment for gang rape was increased to 20 years from 10 years and a provision was included that made it mandatory for government and private hospitals to provide free medical treatment in case of rape and acid attacks. Thus, the 2013 amendment increased the penalty for rape.

Despite such a deterrent, rape cases have only increased with the year. Considering the data from NCRB (National Crime Records Bureau)³⁵, the number of rape cases that took place in 2011 was 24,206 while in 2012 it was 24,923. Post the 2013 Amendment and increase in the punishment, the number of registered rape cases was 33,707 in 2013; 36,735 in 2014; 34,651 in 2015 and 38,947 in 2016. As highlighted by the trend, crime was not deterred by increasing the punishment. Thus, Becker's model fails to hold for serious offences or crimes. In the case of traffic violations, the rational utilitarian theory of a criminal holds good. But in the case of serious offences like rape and murder, the criminal is not always seeking economic benefit or utility, rather there are many other social, mental and physical motives or factors that contribute towards the commission of that crime.

³⁵ *Nationalcrimerecordsbureau* (no date) *Home*. Available at: <https://ncrb.gov.in/>.

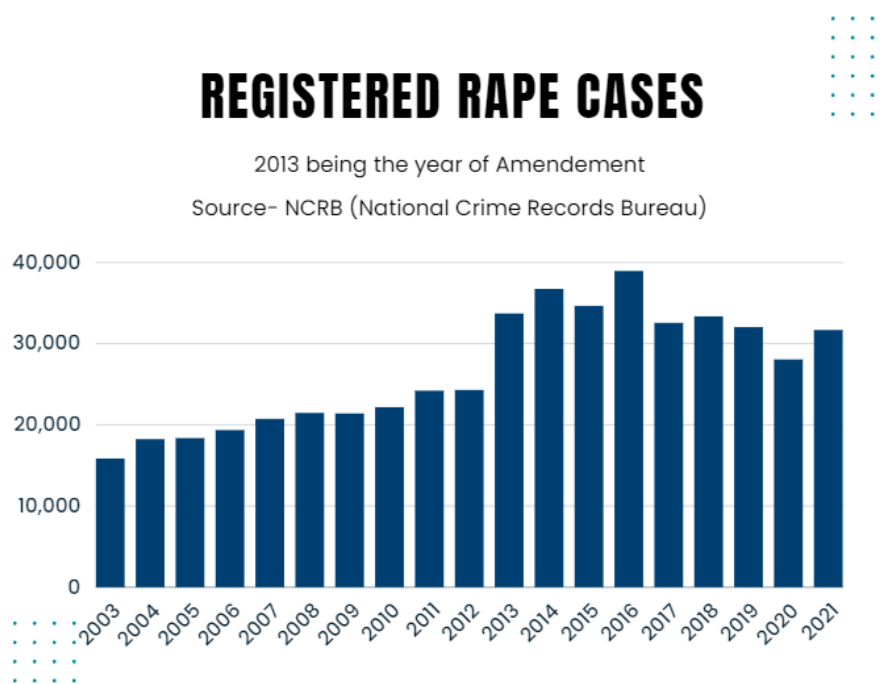


Fig 4.3.1 The number of registered rape cases in India from 2003 to 2021

Source: NCRB (National Crime Records Bureau)

By the above data analysis, H_0 of the Second Hypothesis stands rejected while H_1 stands true as the number of rape cases increased with the increase in punishment, thus not following Becker's economic model of crimes.

4.4 White Collar Crimes in India

Sutherland defines white-collar crime as offences committed by respectable businessmen or professional men³⁶. The definition of white-collar crimes operates on the premise that it is committed by people who belong to the affluent part of society in positions of power. Bank frauds, bribery, forgery, stock market manipulations, tax evasion, counterfeiting etc. all fall under the category of white-collar crimes in India.

White-collar crimes as a field or subset of crimes have emerged recently in the past few decades. The reasons why such crimes have now gained momentum are plenty.

a. Most of the offenders do not consider this to be a typical crime as it does not involve the typical

³⁶ Supra note 9.

definitions of violence or damage to society.

b. There is a lack of awareness amongst members of the society as well as policymakers regarding such crimes thus leading to faulty legislation with loopholes.

c. The growth in technology supplies white-collar criminals with umpteen resources. The digitisation of every aspect of life has made the globe a smaller place. Thus, such crimes can be targeted at any person residing in any part of the world.

As far as India is concerned, many legislations deal with white-collar crimes.

a. The Indian Penal Code: Various provisions of the Indian Penal Code have addressed issues like bribery, forgery, embezzlement etc. For example; Section 28 of the Indian Penal Code defines counterfeiting as “A person is said to "counterfeit" who causes one thing to resemble another thing, intending using that resemblance to practise deception, or knowing it to be likely that deception will thereby be practised.” The penalty for the same has been prescribed in Section 489A. The punishment is imprisonment for life or imprisonment extending for 10 years or a fine.

b. Prevention of Money Laundering Act of 2002: Section 3 of the Act defines money laundering as “Whosoever directly or indirectly attempts to indulge or knowingly assists or knowingly is a party or is involved in any process or activity connected with the proceeds of crime including its concealment, possession, acquisition or use and projecting or claiming it as untainted property shall be guilty of the offence of money-laundering.” and the prescribed punishment for it “shall not be less than three years but may extend to seven years and shall also be liable to a fine”

c. Income Tax Act of 1961: Section 276C of the Income Tax Act prescribes punishment for any person who tries to evade tax as:

(i) in a case where the amount sought to be evaded exceeds one hundred thousand rupees, with rigorous imprisonment for a term which shall not be less than six months but which may extend to seven years and with fine;

(ii) in any other case, with rigorous imprisonment for a term which shall not be less than three months but which may extend to three years and with a fine.

There are many more legislations regarding white-collar crimes in India. But for now, the focus is on the above laws and trying to analyse whether Becker’s economic model works for the data

regarding money laundering, counterfeiting and tax evasion in India.

4.5 Applicability of Becker's Model to White Collar Crimes:

By the aforementioned data analysis, it is safe to say that Becker's model applies to crimes or violations that have an economics or cost-benefit analysis as undertones. However, the model does not justify crimes that have high emotional, social and mental implications.

Contrastingly, white-collar crimes are perpetuated by offenders who are well-educated and who plan their crimes in much more sophistication and detail. Thus, the "rational criminals who compare the utility of a crime to the utility of not committing a crime" can be well-qualified white-collar criminals, as they have all the resources, knowledge and skills to analyse the profits or economics behind a crime. Thus, white-collar crimes fit more appropriately into Becker's economic model.³⁷

The economic model of crime calculates the cost of commission of a crime (C) as the product of the probability of apprehension (p) and the actual punishment, which can be either a fine (f) or imprisonment that can be calculated by multiplying the amount earned by the convict if he or she were free (c) and the period of imprisonment (t). Thus, the following equations can be obtained:

$$C=p*f \quad \text{or} \quad C=p*c*t$$

Thus, if white-collar crimes need to be contained, one of the ways that could be employed is to increase the fine or penalty to be paid (f). Since white-collar crimes are perpetuated by people who belong to the affluent part of society, it is easy for them to pay fines and penalties as a form of punishment. This reduces the apprehension towards punishment, thus reducing the cost of the commission of the crime, making it easier to commit the crime.

But, most of these perpetrators value freedom and their status in society which will be affected if they are imprisoned. Hence, the best way to increase the cost of committing a white-collar crime is to increase the probability of apprehension (p) by increasing provisions related to incarceration or imprisonment.

4.6 Applying Becker's Model to Corruption Data in India

³⁷ Haas, M. (2021, October 2). Punishing White-Collar Crime in Canada: Issues With the Economic Model of Crime and Punishment. *Alberta Law Review*. <https://albertalawreview.com/index.php/ALR/article/view/2669> 204

Considering the data on corruption in India, which is an offence under the Prevention of Corruption Act of 1988³⁸, the amendment of 2018³⁹ was crucial in strengthening the punishment for offences involving corruption. The Act majorly covers offences and misconduct of the nature of bribery, corruption etc. perpetuated by public servants. The Amendment of 2018 increased the punishment for such offences from a minimum imprisonment term of six months to three years and a maximum of five years to seven years with or without a fine under Section 7.

If we apply the above amendment in the laws to the model substantiated by Becker, the cost of commission of corruption has increased (C) as the probability of apprehension (p) was increased by tightening the penalty provisions of the Act. Thus, as per Becker's model, white-collar criminals who are considered to be "rational" would prepare a cost-benefit analysis to realise that the cost of commission of corruption is more than not resorting to corrupt means. However, in the data analysis of corruption cases, as recorded by the NCRB (National Crime Records Bureau), we see that the crime of corruption increasing despite tightening penalty provisions.

Taking into consideration the data on the number of corruption cases registered by NCRB⁴⁰, the number of cases registered by NCRB under the Prevention of Corruption Act in 2016 was 38,947 and in 2017 was 32,559. Post the 2018 Amendment, there was no significant drop in the number of cases. There were 33,356 cases recorded in 2018. 32,032 in 2019; 28,046 in 2020 and 31,677 in 2021 were the case statistics of the subsequent years. Although an infinitesimally small drop was observed, this drop cannot be equated to the reduction in crime numbers that was so significant and apparent as in the traffic-violation case study⁴¹.

³⁸ Prevention of Corruption Act, 1988, No. 49 of 1988, Acts of Parliament, 1988 (India).

³⁹ Prevention of Corruption (Amendment) Act, No. 16 of 2018, Acts of Parliament 2018 (India).

⁴⁰ *Nationalcrimerecordsbureau* (no date) *Home*. Available at: <https://ncrb.gov.in/>.

⁴¹ Section 4.2 of this paper.

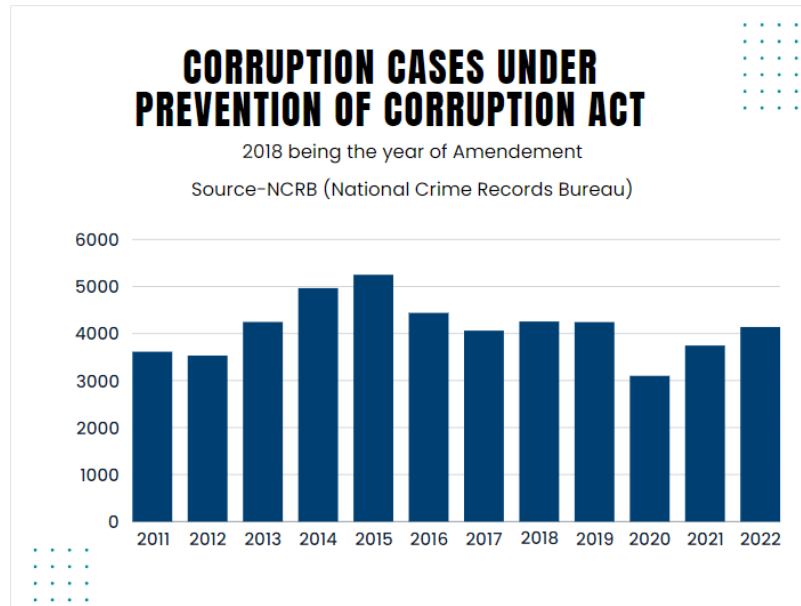


Fig 4.6.1 The Number of registered corruption cases under the Prevention of Corruption Act, 1988

Source: NCRB (National Crime Records Bureau)

Why did Becker's model not apply to corruption despite it being a type of crime where criminals are considered affluent and perfectly fit the rational criminal theory?

The possible reasons as to why Becker's model does not apply is that:

1. While curating the Economic Model of Crime, Becker considered the data of various crimes in the United States of America but omitted the data of many white-collar crimes thus reducing the figure of net damages to society.
2. In his paper, Becker himself states that the effectiveness of punishment differs from crime to crime as the time between commission and detection of an offence varies. It can be inferred that the detection of crimes like traffic violations or rape is evident due to its perceptive impact on the society. At the same time, white-collar crimes take more time and more specialised resources to detect.
3. Sutherland⁴² in his paper defined white-collar criminals as individuals committing crimes often belonging to a higher class in society and deemed to be respectable people. This traditional

⁴² Supra note 9.

definition of white-collar criminals has been widely criticized as speaking from a contemporary perspective, a commission of a crime is not strictly restricted to a particular class anymore. Herbert Edelhertz defined white-collar crimes as “(an) illegal act or series of acts committed by nonphysical means and by traditional notions of deceit, deception, manipulation, concealment or guile to obtain money or properties, to avoid the payment or loss of money or property, or to obtain a business or personal advantage.”⁴³ This definition seems to be more practical and applicable to the present scenario as the crime is not restricted to a particular economic class but rather to the offence. Thus, the inference that educated white-collar criminals are rational individuals whose crimes Becker’s model can be perfectly applied as they perform a cost-benefit analysis before committing a crime and thus, by increasing apprehension of getting caught, they can be deterred is dismantled.

4. As mentioned in Michelle De Haas’s paper⁴⁴, the view that white-collar criminals amass a huge wealth and hence it becomes easy for them to pay off the penalty and wash their hands. Furthermore, it becomes easy for such criminals to spot loopholes in the justice system, use bribery and find a way out of the punishment that is designed.

By the above data analysis, H_0 of the Third Hypothesis is rejected while H_1 stands true as the number of corruption cases increased with the increase in punishment, thus not complying with Becker’s economic model of crimes.

5. CONCLUSION

It is impossible to completely remove the element of crime from society. Immaterial to the level of evolution that mankind will go through, crime is constant. Every person in the society is affected either directly or indirectly by a crime. Thus, it becomes important to understand the implications of crime. This paper has attempted to analyze the economic implications behind crimes backed by data.

By the analysis of the application of Becker’s model to various crimes in the above chapters, it is evident that the economic model of crime can be applied to reduce petty crimes like traffic violations, but serious crimes like rape do not follow the model consistently. Surprisingly, the

⁴³ Fischer, R. J., Halibozek, E. P., & Walters, D. C. (2019). Selected security threats of the 21st century. In Elsevier eBooks (pp. 487–505). <https://doi.org/10.1016/b978-0-12-805310-2.00019-6>

⁴⁴ Supra note 24.

model also does not apply to white-collar crimes like corruption.

The reason for the inapplicability of the model to heinous crimes could be the involvement of emotional or societal motivations rather than economic motivations behind committing serious offenses. For example, increasing traffic fines is enough motivation to restrict people from breaking traffic rules as no one would want to pay exorbitant fines over following the rules. But revenge, vengeance, acts of passion, or any other intent could be enough motivation to commit murder.

The economic model does not work for white-collar criminals who are well-educated and well-qualified and are better equipped to perform a cost-benefit analysis. The fact remains true that if penalties were increased for white-collar criminals who are affluent it would be easy for them to pay off the penalty and get away with the crime. The initial hypothesis set by the paper did not stand true for corruption data, the reasons for such anomaly have been substantiated in Section 4.6 of the paper.

With the advent of Behavioural Economics as a field, a few theories propagated by Becker's economic model can be questioned. The model reduces crime as a "business transaction" with profits and losses. Criminals are considered to be "rational" as they weigh the utility of the crime. This model thus is based entirely on the principle of classical economics that considers consumers to be rational people who make rational choices. But in reality, human emotions come into play and affect the course of choice-making, as per Behavioural Economics. If this principle of Behavioural Economics were to be applied to Becker's Economic Model, then the model would probably not be consistently applicable to all crimes. It makes one wonder if crime should be viewed as a business transaction or as an emotional response.