

**AVAILABILITY HEURISTICS AND INSIGHTS FOR CORRUPTION**

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The most influencing insight which economic analysis of law provides is that human actors respond to incentives. This insight has two implications; first, law can be employed as an apparatus to bring in socially desirable behaviour as well as to discourage socially undesirable behaviour. In other words, law can be used as tool by policy makers to subsidize socially desirable behaviour and tax undesirable behaviour<sup>1</sup>. Secondly, law can be used from the perspective of efficiency and distributive concerns i.e. it can be used as a device to encourage or discourage the production of social resources as well as a tool for efficient allocation of such social resources. To exhibit in a coherent manner the repercussions of the incentives on people in a legal system the analysts borrowed from economics the ‘rational choice theory’ which focuses on assumptions relating to how human actors respond to incentives. These assumptions were then applied to the domain of law to understand how law as a tool can be used in incentivising and de-incentivising certain behaviour. Thus, these incentive effects of legal rules were studied and analyzed in designing an efficient legal policy to attain desired social behaviour. The underlying conception of the rational choice theory as pointed out by Richard Posner is that “man is a rational maximizer of his ends”<sup>2</sup> the adherents of ‘utility maximization version’ of rational choice theory take the above conception a bit further as according to them:

“Stripped of its mathematical adornments, the basic requirement of expected utility theory is that decision makers conduct an explicit or implicit cost-benefit analysis of competing options and select the optimal method of achieving their goals (that is, the method that maximizes expected benefits and minimizes expected costs, or maximizes net expected benefits), subject to external constraints.”<sup>3</sup>

Thus, primary assumption of this theory is that an actor makes a decision by carrying out a cost-benefit analysis and making a choice which results in maximization of net expected

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<sup>1</sup> Lehtinen et. al., *Unrealistic Assumptions in Rational Choice Theory*, 37(2) PHILOSOPHY OF THE SOCIAL SCIENCES, 1054 (2007). (hereinafter “LEHTINEN”)

<sup>2</sup> R. A. Posner, *Are We One Self or Multiple Selves?: Implications for Law and Public Policy*, 3(1) LEGAL THEORY, 24 (1997).

<sup>3</sup> LEHTINEN, *supra* note 1, at 1063.

benefits to him. Broadly we can enumerate the assumptions of expected utility version as: an actor is always maximising his utility by making choices which maximise his expected benefits; in doing so carries out cost-benefit analysis; he always has optimal information with him to take such decisions; he is always self-interested etc. The primary objection of the behavioural law economists to these traditional notions of expected utility theory is that even though human actors may intend to act rationally (i.e. maximise their expected utility) in actuality they are not utility maximizers due to limited cognitive capabilities<sup>4</sup>. The expected utility version assumes that human beings are infinitely rational and can process unlimited information; these assumptions are far from reality. In the current discussion we will see that in reality the behaviour of the human actors is not as rational as it is hypothesised as. In real world due to limited cognitive capabilities and inadequacy of information human actors often rely on mental shortcuts to make decisions and these mental shortcuts are not based on any rational criteria rather available information, emotions, and other concerns. The seminal argument of the behavioural law economists<sup>5</sup> is that due to the reliance of human actors on these mental shortcuts rather than on actual statistical evidence the actual human behaviour is different from the hypothesized human behaviour. In the following discussion we will see how the actual human behaviour deviates from the hypothesized behaviour.

### **BOUNDED RATIONALITY**

The idea was made known by Herbert Simon in his famous work<sup>6</sup> way back in 1955. As noted earlier the application of the idea to the field of economics is relatively new when compared with other social sciences. The idea simply points out the actuality that human cognitive capabilities are limited. As Jolls, Sunstein and Thaler have stressed: “We have limited computational skills and seriously flawed memories. People can respond sensibly to those failings; thus it might be said that people sometimes respond rationally to their own cognitive limitations, minimizing the sum of decision costs and error costs. To deal with limited memories we make lists. To deal with limited brain power and time we use mental shortcuts and rules of thumb. But even with these remedies, and in some cases because of

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<sup>4</sup> LEHTINEN, *supra* note 1, at 115-138.

<sup>5</sup> R. B. Korobkin et. al., *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88(4) CAL L REV, 1051-1144 (2000).

<sup>6</sup> H. A. Simon, *A Behavioral Model of Rational Choice*, 69(1) THE QUARTERLY JOURNAL OF ECONOMICS, (1955).

these remedies, human behaviour differs in systematic ways from that predicted by the standard economic model of unbounded rationality. Even when the use of mental shortcuts is rational, it can produce predictable mistakes. The departures from the standard model can be divided into two categories: judgment and decision-making. Actual judgments show systematic departures from models of unbiased forecasts, and actual decisions often violate the axioms of expected utility theory.”<sup>7</sup> Thus, due to limited or bounded cognitive abilities human actors rely on certain rules of thumb or mental shortcuts, and while the use of such rule of thumb may be rational in the context of economising on thinking time the forecasts which will emerge from such reliance will be different from the standard rational choice model. One way of saying it could be that it is presumed that under ideal situations i.e. assuming every human being to be rational we can expect utility-maximization from every such human being, but due to cost and processing limitations in obtaining information as well as the limited cognitive abilities utility-maximization is a physical impossibility. It is the unconscious use of heuristics in the processes of judgment and decision-making that leads to bounded rationality in decision-making. Daniel Kahneman and Amos Tversky<sup>8</sup> ratiocinate that the use of rules of thumb or heuristics leads us to misguided and fallacious conclusions. One of such heuristics is “availability heuristic”. By use of “availability heuristic” individuals try to calculate the probability of an event by recalling other instances of that type in near memory, for example, the probability of a car accident will depend upon whether they have recently seen a car accident or not. Thus, rather than relying on the actual statistical evidence of a given phenomenon the actors rely on the evidence or occurrence of that phenomenon in their near memory. This is a clear deviation from the expected rational behaviour as a rational actor is supposed to rely on the actual statistical probability of an event before making a judgment about the probability of occurrence or non-occurrence of that event. Moreover these rational human beings are also required to update from time to time this statistical probability (base rate) to predict that particular event more accurately. Thus, what “availability heuristic” suggests is that an individual will rarely, due to his limited cognitive abilities, act as a rational human being as in calculating the probability of the occurrence or non-occurrence of an event he will rely on the information about that particular event in his near memory rather than on the actual statistical probability.

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<sup>7</sup> C. Jolls et. al., *A Behavioral Approach to Law and Economics*, 50(5) STAN L REV, 1477 (1998).

<sup>8</sup> A. Tversky et. al., *Judgment Under Uncertainty: Heuristics and Biases* in D. KAHNEMAN ET. AL. (eds.), JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (Cambridge University Press 1982).

## CORRUPTION

We will now explore what behavioural approach has to offer in context of corruption. Moving to the possible contribution of the issue at hand to the area of research i.e. corruption, I would like to refer that there has been sufficient literature which has concerned itself with appraising the possible deterrents of corruption such as strict laws or penalties.<sup>9</sup> Though this policy prescription (that strict laws or penalties deter corruption) has been disputed time and again but some recent research has suggested that stiffer laws and penalties result in less corruption, e.g. as Garoupa and Klerman<sup>10</sup> state: “A central conclusion of the literature is that corruption is usually socially undesirable, because it dilutes deterrence. As a consequence, it is usually optimal to expend resources to detect and penalize corruption.” What these scholars have argued, which they acknowledge as the central conclusion of their literature, is that corruption is not socially desirable due to the fact that it dilutes the deterrent effect of the legal machinery as in a corrupt regime it is easier to bypass or undermine the laws. Thus, they suggest that it is usually more favourable to spend resources to detect and penalize corruption. Also Friehe in his paper concludes: “In our model, potential offenders tend to reduce the violation probability in response to an increase in the magnitude of the penalty.”<sup>11</sup> Thus, he states that his model demonstrates when there is an increase in the magnitude of the penalty there are fewer violations by the potential offenders. This literature belongs to the traditional law and economics domain and suggests that in presence of stricter laws against corruption a rational agent would tend to be less corrupt. We will now explore how these prescriptions in the light of the behavioural specifications.

Consider a situation where corruption laws are strict but the procedural laws are inefficient and often result in acquittal of the corrupt agents when prosecuted. In such a situation where acquittal rate in corruption cases is high and conviction rate very low, it can very well be the

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<sup>9</sup> T. Besley et. al., *Taxes and Bribery: The Role of Wage Incentives*, 103(416) ECONOMIC JOURNAL, (1993); D. Mookherjee et. al., *Corruptible Law Enforcers: How Should They Be Compensated?*, 105(428) ECONOMIC JOURNAL, (1995); D. Acemoglu et. al., *Property Rights, Corruption and the Allocation of Talent: A General Equilibrium Approach*, 108(450) ECONOMIC JOURNAL, (1998).

<sup>10</sup> N. Garoupa et. al., *Corruption and the Optimal Use of Non-Monetary Sanctions*, 24(2) INTL REV LAW & ECON, 220 (2004).

<sup>11</sup> T. Friehe, *Correlated Payoffs in the Inspection Game: Some Theory and an Application to Corruption*, 137(1) PUBLIC CHOICE, 142 (2008).

case that a rational agent (who turns out to be not that rational due to his limited cognitive capabilities) relies on a rule of thumb like say “availability heuristic” and finds out that in his near memory no one or a very less number of people were convicted on the charge of corruption. He may imply from this that his probability of being caught and getting convicted is very low which might give him the incentive to be corrupt. Thus, if the strict laws regime is not being complemented by a strict procedural regime (where those who are rightly being caught are getting convicted also) then the aforesaid predictions about the effects of strict laws regime will not be correct as due to the reliance of the wrong-doers on “availability heuristic” to judge the probability of being caught and getting convicted. What is being argued here is that the prescription of the economic analysis of law in regard to the corruption (i.e. strict penal laws will have the optimal deterrent effect) does not hold good when we assume that it is being supported by an inefficient procedural law regime which results in acquittal of the corrupt agents when prosecuted. In other words we can have a strict penal law regime against corruption which may help in detecting the corrupt agents but if we do not have a strict procedural law regime which ensures that those wrong doers are convicted also then we may have results which will vary from the prescriptions of the law and economics models considering the effect of “availability heuristic”.

A question now can be raised that what kind of impact “availability heuristic” can have on the traditional law and economics policy prescriptions for deterring the corruption? We know that traditional rational choice model prophesizes that potential wrong-doers commit crime only if the benefits from the crime exceed the expected costs of committing crime.<sup>12</sup> Therefore if the policy makers intend to deter the crime they can raise these expected costs which can occur from committing the crime above the expected benefits from crime. About the costs expected costs of crime Cooter and Ulen have stated: “expected costs of crime are determined by multiplying the (monetized) severity of punishment by likelihood that the criminal will be arrested and convicted.”<sup>13</sup> Thus, if the policy makers know that such wrong-doers are biased by “availability heuristics” then they can achieve a more efficient model of deterrence by attaining a mechanism to manipulate the bias of wrongdoers in such a way that they overestimate the likelihood of their being caught and convicted. Let us discuss the situation

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<sup>12</sup> S. Shavell, *Criminal Law and the Optimal Use of Non-monetary Sanctions as a Deterrent*, 85(6) COLUM L REV, (1985).

<sup>13</sup> R. COOTER ET. AL., LAW AND ECONOMICS 447 (Addison, Wesley Longman 2000).

referred earlier where in a regime the conviction rate in corruption cases is very low while the acquittal rate is very high. In such a situation the wrong-doer will be biased by availability heuristics when he'll notice that his chances of getting convicted are very less and his expected costs of committing the crime i.e. say taking the bribe would be very less as compared to the benefits associated with committing the crime and therefore the wrong-does will be incentivised to commit the crime. Thus, such regimes are not only inefficient as they fail to achieve the optimal rate of conviction due to procedural law and other context specific constraints, but they incentivise the wrong doers to be corrupt. In such a situation we can think of two things, first, to correct the procedural and other context specific flaws or errors so as to reach an optimal level of conviction rate (such a possibility has been discussed at length earlier). Secondly, the policy makers can think of certain mechanisms by which they can manipulate the "availability heuristic" in their favour and dis-incentivise the wrong-doers from being corrupt. One of such mechanism can be relevant to the situation where due to myriad constraints in policy reform the first step mentioned above cannot be taken and in this situation the wrong-doers have incentive to be corrupt, then in such a case the policy makers can resort to a strategy where they can go for "highly publicizing" those few cases in which the wrong-doers were actually convicted. The policy makers can cleverly design a proper campaign to spotlight and propagandize the few corruption cases, which resulted in conviction of the offender, in a way such that the potential offenders over-estimate the probability of their being caught and getting convicted. The propaganda can be configured in a manner such that it conveys a picture of a tougher stance of the government organs towards corruption which is in sharp contrast to its earlier attitude. Such mechanisms can help the policy makers to divert the earlier "availability heuristic" bias in their favour to dis-incentivise the corrupt behaviour. One possible example of such a design could be putting posters, which contain newspaper cuttings of headlines along with photographs showing corrupt officials who were convicted for corruption, in public offices, bus stops, railway stations, banks, places of public resort etc. The idea should be to make these so visible that they don't escape the attention of the citizens, with the probable effect of manipulating the "availability heuristics" of the human actors to achieve desirable behaviour.

**INDIAN SITUATION**

We talked about regimes where conviction rates in corruption cases are low. There is a belief (shared formerly by the author as well) that conviction rate in corruption cases in India is extremely low. But when the data (provided by National Crime Records Bureau<sup>14</sup>) on the aforesaid rate was assayed something really interesting surfaced.

Table 1

<b>State</b>	<b>Years</b>	<b>Persons in whose case trial completed</b>	<b>Persons convicted</b>	<b>Conviction rate</b>
Andhra Pradesh	2001-2012	2170	1140	53.5%
Assam	2002-2012	34	26	76.47%
Bihar	2001-2012	102	74	72.54%
Chhattisgarh	2002-2012	394	170	43.14%
Gujarat	2002-2012	2847	891	31.2%
Haryana	2001-2012	2895	658	22.7%
Himachal Pradesh	2001-2012	1153	185	16.04%
Jammu and Kashmir	2001-2012	798	79	9.89%
Jharkhand	2002-2012	14	12	85.7%
Karnataka	2001-2012	2499	505	20.2%
Kerala	2001-2012	1142	569	49.82%
Madhya Pradesh	2001-2012	2008	868	43.2%
Maharashtra	2001-2012	6439	1594	24.75%
Odisha	2001-2012	1823	595	32.63%
Punjab	2001-2012	3540	1242	35.08%

<sup>14</sup> NCRB, [www.ncrb.in](http://www.ncrb.in) (last visited May 4, 2020).

Rajasthan	2001-2012	3620	944	26.07%
Sikkim	2001-2012	65	39	60%
Tamil Nadu	2001-2012	1172	428	36.51%
Uttar Pradesh	2001-2012	182	27	14.8%
Uttarakhand	2001-2012	19	7	36.84%
West Bengal	2001-2012	29	1	3.57%
Delhi	2001-2012	1006	519	51.59%
Puducherry	2001-2012	34	10	29.41%
Chandigarh	2001-2012	71	28	39.43%
Total		34056	10591	31.09%

Usually the figures used to manifest the conviction rate in corruption cases in India are those related to cases handled by CBI which are very low when compared with the data for States, for instance if we calculate the conviction rate based on the figures presented in Lok Sabha<sup>15</sup> for years 2012, 2013 and 2014 the conviction rate would be around 1.7%. General understanding is that conviction rate in corruption cases is extremely low which may not be entirely true when compared with the conviction rate of other crimes in India. In fact it is more than or close to 50% in seven states (Table 1) which is not a low figure in Indian context. Also, if National Average is calculated from above figures it comes around 31.09% (Table 1) which is not ridiculously low as in case of CBI. In other words if I am told that out of every 3 persons nearly one person is getting convicted in corruption case then it may not sound as such a low figure. One can counter argue that the number of persons getting convicted is low when compared with the number of persons getting arrested. But these figures should not be confused with the disposal rate of corruption cases which is low not just for corruption cases but for other crimes as well. If we go by the media reporting of the conviction rate in corruption cases we come across top stories like these: ‘CBI conviction rate stands at a lowly 4%, reveals study’<sup>16</sup>; ‘0%: Mumbai’s Anti-Corruption Bureau’s conviction

<sup>15</sup> LOK SABHA QUESTION RESULT, <http://164.100.47.192/Loksabha/Questions/QResult15.aspx?qref=14133&lsno=16> (last visited May 4, 2020).

<sup>16</sup> S. K. Baruah, *CBI conviction rate stands at a lowly 4%, reveals study*, HINDUSTAN TIMES (Nov. 3, 2012), <http://www.hindustantimes.com/delhi-news/cbi-conviction-rate-stands-at-a-lowly-4-reveals-study/story-wfZ2GgFUuGIeH4M9SAwIjM.html>



rate in 2016'<sup>17</sup>; 'Convictions in corruption cases probed by CBI has declined since 2014: Government'<sup>18</sup>. But recently there was a top story which said: 'In 70% of the cases, CBI secures conviction of the tainted officials'<sup>19</sup>. Most of the media reporting of conviction rate in corruption cases is concerned with cases taken up by the CBI. This overlooks the plethora of cases handled by the Anti-Corruption Bureaus of the respective states. This hints at the possibility of a gap in conviction rate in the consciousness of the society and the actual statistical evidence. This becomes important with regard to the discussion on behavioural dimension of corruption which argues the possible repercussions of a gap between perception and actual statistical evidence in relation to conviction in corruption cases.

The traditional law and economics approach focuses on the role of either the size of the sanction or the probability of detection when it talks about deterrence of crime in society. The Behavioural law and economics scholarship has rather argued that more than the size of the sanction or the probability of detection what really matters for deterrence is the 'belief' regarding the size of the sanction or the probability of the sanction. Our beliefs regarding the aforesaid are not shaped by resorting to a reading of the penal statute or actual statistical data with respect to the same. Empirical studies done by Robinson and Darley have shown that human actors have very little or inadequate information vis-à-vis the probability of detection or size of the sanction and what really shapes the beliefs with respect to the aforesaid are the news stories which they read or anecdotes in their near memory.<sup>20</sup> What we are faced with in the current situation is the fact that even though the conviction rate in corruption cases in India is not that low it is projected to be so in the media reports due to aforementioned reasons. This creates a situation where such low projection may have some effect on shaping the beliefs of individuals with respect to such conviction rate and consequently upon decision-making by corrupt actors. One policy prescription suggested by Behavioural Law scholarship is that "to be effective, enforcement activity ought to be salient and vivid such

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<sup>17</sup> J. P. Naidu, *0%: Mumbai's Anti-Corruption Bureau's conviction rate in 2016*, HINDUSTAN TIMES (May 23, 2016) <http://www.hindustantimes.com/mumbai/0-mumbai-anti-corruption-bureau-s-conviction-rate-in-2016/story-fAVLotaMRQwCvD81cK3I6J.html>.

<sup>18</sup> *Conviction rate in corruption cases probed by CBI has declined since 2014: Government*, DAILY NEWS AND ANALYSIS (Mar. 9, 2016) <http://www.dnaindia.com/india/report-convictions-in-corruption-cases-probed-by-cbi-has-declined-since-2014-government-2187326>.

<sup>19</sup> H. Dhawan, *In 70% of the cases, CBI secures conviction of the tainted officials*, TIMES OF INDIA, (Sep. 18, 2016) <http://timesofindia.indiatimes.com/india/In-70-of-cases-CBI-secures-conviction-of-tainted-officials/articleshow/54385604.cms>.

<sup>20</sup> P. H. Robinson & J Darley, *Does Criminal Law Deter? A Behavioral Science Investigation*, 24(2) OJLS, 173-205 (2004).

that it will be registered in the minds of potential criminals”.<sup>21</sup> Thus, one of the tasks which can be undertaken by the policy makers can be to bridge this gap between the media projected conviction rate and the actual rate so that it leaves little room for the interplay of availability heuristics in a manner such that corrupt actors do not underestimate the costs associated with the corrupt activity. Also, whenever the enforcement activity achieves success with respect to conviction of corrupt agents then the same needs to be made more salient and vivid so that it is registered in the minds of the potential corrupt actors. This can be achieved by highlighting the cases of conviction in corruption matters by giving them more prominence and space in news reports so that availability heuristics influences not only potential offenders but also the public opinion.

## CONCLUSION

The insights provided by the behavioural law and economics scholarship and the data on conviction rate in corruption cases in India provides a unique opportunity for the policy makers to direct their endeavours in making use of the aforesaid in their research and experimental spheres. We have seen that due to limited or bounded cognitive abilities human actors rely on certain rules of thumb or mental shortcuts, and while the use of such rule of thumb may be rational in the context of economising on thinking time the forecasts which will emerge from such reliance will be different from the standard rational choice model. The studies in behavioural law and economics literature have shown how the hypothesized behaviour modeled by rationality assumption is different from actual behaviour of the human actors. We have seen how this insight is significant for the decision making by corrupt actors and also that it pushes back the narrative of ‘strict laws for more deterrence’ in regimes where procedural laws are inefficient.

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<sup>21</sup> A. Harel, *Behavioral Analysis of Criminal Law: A Survey* in E. ZAMIR & D. TEICHMAN (eds.) OXFORD HANDBOOK OF BEHAVIORAL ECONOMICS AND THE LAW (Oxford University Press 2014).