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Blockchain vs Leniency Plus: Incentivizing Betrayal in the Trust Machine

Harshit Goyal (Supreme Court of India) · Friday, April 19th, 2024

Indian competition law recently enacted a 'leniency plus' regime, which incentivizes the cartelists to disclose information about their other cartels that were hitherto unknown to the Competition Commission of India (CCI). While this is a welcome change for tracing more cartels, this piece argues that it still falls short of tackling the near future challenges posed by blockchain and smart contracts.

What is the leniency plus regime?

The concept of the leniency plus regime can be better understood through an example. Suppose a company is involved in two cartels, say Cartel 1 and Cartel 2. Of these, the CCI has prosecuted the company for its involvement in the Cartel 1, but has still not detected the Cartel 2. In the conventional leniency regime, the company can take benefit of reduction of penalty if it volunteers vital information about the Cartel 1. However, in the leniency plus regime, the company can get an added reduction in penalty for its involvement in Cartel 1 if it discloses the undetected Cartel 2.

In that sense, leniency plus provides an additional layer of incentive for cooperating with the competition regulator and helping it discover more cartels than it would have otherwise detected. Since detection of new cartels is difficult for the regulator, this regime plays an instrumental role in regulating the fair competition in the market. On account of this, various jurisdictions, including the USA, the UK, Singapore, Brazil, Poland, etc. have implemented this regime along with the conventional leniency option.

As its global adoption continues to rise, it becomes crucial to assess its efficacy in the context of modern technologies.

Challenges posed by blockchain

Stated simply, blockchain is a new kind of distributed web platform, that does not have any central server and provides permanent and transparent record of transactions. An essential corollary of this technology is the feature of smart contracts, which are self-propelled contracts deployed on blockchain. Once the pre-requisite condition for these contracts is triggered, these contracts are

self-executing—such as a flight insurance contract that automatically releases funds to travelers if their flight is delayed.

It is being increasingly recognized by the academics as well as the regulators that the duo of blockchain and smart contracts has the potential to become the modern weapons in the hands of cartelists. The smart contracts can automate the information sharing between different firms or can levy automatic monetary damages in case any cartel member differs from the agreed prices or quantity for their goods. Similarly, since blockchain provides a transparent and immutable record of transactions, it can enable more transparency between the cartelists to ensure that there are no secret discounts or offers in deviation from their agreement.

In addition to providing modern ways to cartelize, the blockchain and smart contracts also offer more strength to such cartels by enabling more trust between the members.

This can be understood better in context through the theory of stag-hunt game. The theory originates from a story of prominent philosopher Rousseau, who lays down a scenario in which two people are out for a hunt. For hunting a big animal such as a stag, they have to coordinate with each other and have to hold the planned positions. But it so happens that the location has many small hares as well, that they can hunt individually but for which they will have to leave the post to chase the same. Therefore, while both are capable of achieving something independently, they can maximize the hunt by coordinating.

In form of matrix, this situation can be presented in the following way:

		Hunter 2	
		Hold position	Breach trust
Hunter 1	Hold position	(4,4)	(0,2)
	Breach trust	(2,0)	(2,2)

Table 1: Showing relative benefits in maintaining and breaking trust

Hence, the effectiveness of the hunt depends on the perception that the hunters have of each other. In case they trust each other to hold the position, the gains will be maximized. However, in case they have mistrust, each will try to maximize their individual gains by chasing the hare instead. Hence, depending on the level of trust between the hunters, there are two possible points of equilibrium, either where they both hunt for stag or where they both chase the hare.

Similar situation like stag-hunt exists in cartels. As was discussed before, various jurisdictions provide a leniency in penalty in case a member informs the regulator about the collusion. Hence, similar to the stag-hunt game, both parties of the cartel can earn the maximum if they maintain the trust and do not inform the authorities. Apart from being saved from the punishment, they would also be able to earn extra profits through the cartel. However, in case they distrust each other, they know that they stand to lose more since the other party can inform the authorities. Therefore, in such a scenario, both will strive towards attaining benefit of leniency regime and would betray each other.

In terms of matrix, this can be presented as:

Company 2

		Maintain cartel	Breach trust
Company 1	Maintain cartel	(2,2)	(-3,-1)
	Breach trust	(-1,-3)	(-1,-1)

Table 2: Showing relative benefits in maintaining and breaking trust (in terms of loss suffered by informing authorities)

However, the nature of trust differs in blockchain. It is a known principle that degree of observability regarding position of fellow cartelists is directly proportional to the strength of the cartel. Since blockchain provides a real time transparent mechanism of the transactions, the partner-cartelists can see others fulfilling the conditions in each transaction and will maintain the cartel. In terms of the analogy above, if the hunters would be able to see other holding their positions for hunting the stag, none will have the incentive to breach the trust and go for a smaller hunt of hare. Hence, the chance of invoking the leniency regime is less because of the inherent public nature of blockchain.

Moreover, because of the feature of smart contracts, the entire matrix might change. As was discussed before, smart contracts can be used by cartelists to enforce terms of cartelization. The cartelists can put in a clause that makes the deviation from the conditions of cartel more expensive than the possible benefit of leniency. Moreover, the cartel may require the partners to stake money in advance, which the smart contract can re-transfer as the conditions of cartels are met. In this manner, the smart contracts will increase the cost of betrayal and will leave no option but to maintain the trust.

With such rearrangement in incentives, the revised matrix would be:

	Company 2		
		Maintain cartel	Breach trust
Company 1	Maintain cartel	(2,2)	(-3,-5)
	Breach trust	(-5,-3)	(-5,-5)

Table 3: Showing relative benefits in maintaining and breaking trust after deployment of smart contract (in terms of loss suffered by informing authorities)

Since the rational cartelists would be moving towards minimizing the losses, they would settle on maintaining the trust because in all situations, breaching trust would bring higher losses than maintaining the trust. Accordingly, maintaining trust would be the point of final equilibrium for all the parties. On account of this, no party will be using the leniency regime and would rather stick to maintaining the cartel.

Leniency plus and blockchain

As analyzed above, the very nature of blockchain and smart contracts makes leniency regime ineffective against them. Since the member of a cartel on blockchain has no incentive to use this regime, it can be effective only if some person outside of cartel is given leniency to disclose the said cartel. Since such person would not have the same benefit and costs matrix (because there would be no smart contract enforcing such cartel on them), such person is likely to bring such

cartel before the CCI.

However, the leniency plus regime enforced in India does not allow leniency to such person. Regulation 5 of Competition Commission of India (Lesser Penalty) Regulations, 2024 states:

"*In terms of sub-section (4) of section 46 of the Act and subject to the conditions laid down in regulations 3 and 4, an applicant, who had earlier made a full, true and vital disclosure in respect of alleged contravention of provisions of section 3 of the Act under regulation 6 (first cartel),* **makes a full, true and vital disclosure in respect of existence of another cartel (second cartel)** <u>**in which it is alleged to have violated section 3 of the Act**</u>*, which enables the Commission to form a prima facie opinion regarding the existence of newly disclosed cartel under sub-section (1) of section 26 of the Act, may be granted an additional reduction in monetary penalty up to or equal to thirty per cent of the penalty imposed with regard to the first cartel besides obtaining benefit of reduction in penalty up to or equal to one hundred percent in respect of newly disclosed cartel in terms of sub-section (1) of section 46 of the Act.*"

Hence, the new regime enforced by India grants leniency to the cartel member only if it was a partner in the additional cartel as well. As was analyzed before, this might not be very effective on blockchain since a member of cartel would not have the same incentives for betrayal.

Instead of prescribing such condition necessarily, we could probably think of a new 'leniency plus plus' regime, in which leniency is granted to a cartel member also for disclosing true and vital information about an additional cartel simpliciter, without requiring it to be a member of that cartel. In terms of the example that we began with, the company that is being prosecuted for Cartel 1 would be given the incentive to disclose another Cartel 2, without mandating its necessary participation in this additional cartel. This will be aligned to the purpose of leniency plus regime, which is to gain information about cartels that the CCI did not hitherto know about. At the same time, it will also ensure that the competition law is prepared to deal with the upcoming novel challenges that will be posed by blockchain.

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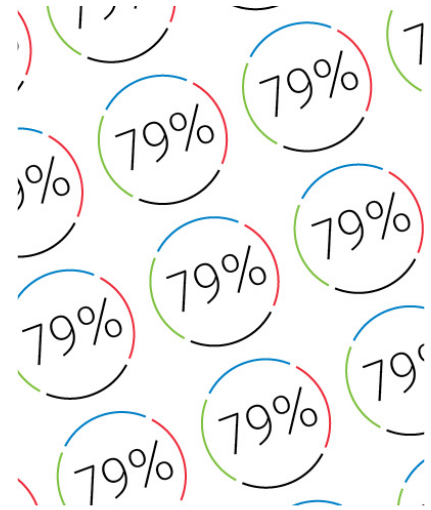Learn how **Kluwer Competition Law** can support you.

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