GAME THEORY AND ANTI-COMPETITIVE PRACTICES

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Introduction

The preamble of the Competition Act, 2002 aims to prevent practices having an adverse effect on the competition in the market[1]. The competition Commission is under a duty to eliminate such practices and uphold the preamble of the competition act[2].

As read in economics, there are different markets structures which models the different consumer producer behavior. A perfectly competitive market ensures the protection and well being of the consumer as well as attaining a utopian market. As evidences suggests, markets are vulnerable to manipulations and maneuvering by manufacturers and sellers who aim at maximizing their profit while the same being detrimental to the consumer. There are a wide variety of products and services available in the market. Most of which are complex in nature. Consumers have an imperfect knowledge. The supplier often has an entrenched position in the market vis- a vis the buyer, who has either a little or no bargaining power in the market. Thus, the consumers/ buyer is at the mercy of the supplies. Further, the supplier of goods and services desire to maintain their profit at a pre-determined level which motivates them to indulge in various illegal trade practice which are detrimental to the competition and to the interest of the consumers

Consumers require and deserve legal protection against such trade practices that have adverse effect of preventing, distorting, restricting and suppressing competition. Thus, Competition law prohibits such kinds of activities namely anti competitive agreements, abuse of dominance and anti-competitive merger.[3]

Anti Competitive agreement

Anti-Competitive Agreements under the (Competition Act. 2002 are in the nature of Restrictive Trade practice under the extant MRTP' Act, 1969[4]. Firms enter into agreements, which may have the potential of restricting, distorting, suppressing, reducing or lessening competition. A scan of competition laws will demonstrate that there are two types of Anti Competitive Agreement, "Horizontal" and "Vertical" Agreement prevalent in the industry. The Horizontal agreements are those wherein the competitors are in the same line of production while the vertical agreements are those wherein the parties are from different supply chain. Most competitors views Vertical agreements as more leniently than horizontal agreements, as the later has more severe and serious adverse effect on competition.

The legislative intent behind inserting provisions relating to Anti-Competitive

[1] The preamble of the Competition Act, 2002
[2] S. 18 of the Competition Act, 2002
[3] Vinod Dhali, 2007, Key Concepts in Competition Law, in Vinod Dhall (eds). The Competition Law Today, Oxford University Press, new Delhi. P.P. 1 to 35
[4] S 2(0) of the MRTP Act, 1969

Agreement into Competition Act, 2002[5] was to foster competition while promoting and protecting the interest and welfare of the consumers. The Competition Act, 2002 provides for a general prohibition against any agreement in respect of production, supply, distribution, storage, acquisition or control of goods or provisions of services, which causes or is likely to cause an substantial adversarial effect on competition within India by explicitly construing such agreements as anti-competitive in nature ad character.[6] Any Agreement in contravention of the general prohibition is declared by the Act as null and void.[7]

Prisoner's Dilemma

The prisoner's Dilemma is one of the best know strategy known in social science. It helps one understand the balance between cooperation and competition in business, politics, and in social settings.

The game was ideally developed in order to understand human behaviour when provided with different options. In the original game, the police have arrested two suspects and are interrogating them in different rooms. They are provided with two option, Each can either confess, thereby incriminating the other or keep silent. Notwithstanding, what the other suspect does, each can improve their own position by confessing.

If one suspect confesses, the other gets punished. If both keep silent then the avoid punishment altogether. If both confess, they both shall face punishment but of a less degree than anticipated. Thus, confession in either of the case, is the dominant strategy for each. But when both confess, the outcome is worse for both than when both keep silent. The principle pf Prisoner's dilemma was developed by RAND Corporation scientists Merrill Flood and Melvin Dresher and was later formalized by Albert W. Tucker, a Princeton mathematician.

The prisoners' dilemma has applications to economics and business. In order to have a deeper understanding, we shall consider the following example. Consider two firms, say Coca-Cola and Pepsi, both selling similar products in the market. Each must decide on a pricing strategy. Their profit would reach a maximum if they exploit their joint market power where they both charge higher price; However, if one of them sets a competitive low price, they would attract more customer than their competitors. The profit rises for one, and that of the rival falls. If both set low prices, the profit of each is normalized. Thus, the low-price strategy is akin to the prisoner's confession, and the high-price akin to keeping silent.

The prisoner's dilemma runs counter to Adam Smith's idea of invisible hand. When a person in the game pursues his own interest, he does not promote the collective interest of the group. However, the cooperation of the group is not always the interest of the society. When firms colludes, it helps to keep the prices high. However, it is not in the interest of the society as the cost to the consumers by colliding is generally

[5] The provision pertaining to Anti Competitive agreements have come into force with effect from 20th May, 2009

[6] S. 3(1) of the Competition Act, 2002

[7] S. 3(2) of the Competition Act, 2002

more than the increased profit of the firm. Thus, the companies who cheat by colluding often helps the society more than cooperation.

Analysis:

Effects of Prisoner's Dilemma on Anti-Competitive Agreement

"*The detection, prohibition and punishment of cartels is one of the highest priorities of the Commission in the field of competition policy The greatest challenge in the fight against hard core cartels is to penetrate their cloak of secrecy and counter the increasingly sophisticated means at the companies' disposal to conceal collusive behaviour*[8]*.*"

Firms in the market for maximization of profit, acquiring a larger share in the market, to enhance growth and prevent new entry, they resort to illegal means. Thus, the competition and cooperation amongst the firm are not a matter of " price taking" i.e. acquiring the price which is decided by a perfectly competitive market but of " price making" which depends upon the demand strategy.

Strategizing the price for the demand of the commodity is where the game theory analysis is applied. The firms in the market decided on the price and advertisement that a commodity can be sold. The firms collude and maintain trust amongst each other and communicate the same when necessary, thereby creating cartels.

Cartels are one of the most universally recognized detrimental anti competitive agreement. They do not provide for any economical or social benefit but provide a reason to the society and the consumers for the loss suffered.

A cartel agreement may have prisoner's dilemma. All the members of the cartel would be in a better situation provided they do not derail from the fixed price and production of commodities. However, it would be advantageous for each member to cheat by reducing their price or increasing the production of quantities, thereby increasing their profit margin. Thus, they end up cheating to gain an advantage over the other firms.

By the increase in cartel and the utilization of the informing wrongly, there is a dire need for regulating and controlling of the competition. For enabling such control, prisoner's dilemma can be further stretched and employed to achieve the desired result.

Market Structure

There are different kinds of market in an economy. It ranges from monopoly market where there are only one seller and many buyer to oligopolistic market where there are only a few seller or single seller. In economics, to understand these structure, we analyse the behaviours of the consumers and the sellers with respect to the different/ changes in the price of the commodity, the nature of the commodity.

[8] Press Release, "Comissiion adopts new lienancy policy for companies which give information on cartels", IP/02/247, 13 February, 2002

In a monopoly firm, there is a single seller who determines the price of the commodity on his own basis. Thus in the absence of any competition been the only seller, he dominates the market and the consumers are bound to purchase the commodity for the said price. Thus, the application of Nash Equilibrium shall fail in the said market as they need to collude or obtain information to avoid price war is absent in this structure.

As far as a perfectly competitive market is concerned, there are same number of buyers and seller. In such a market, the competition does not exist as the buyers can purchase the same goods for the same price from different seller. Thus the applicability of Nash Equilibrium fails in this structure as well. However, an illegal mode of competition can exist in this structure through public revelation of private information.

As there are many players in the market, it is quite difficult to earn a competitive edge in the market by making use of the prisoner's dilemma. If a firm increases its price, it might lose its customers and if it decreases its price, it might result in a huge loss to the firm. Thus, even the illegal use of the information would not help the firm.

The Prisoner's Dilemma works efficiently in an Oligopoly market. In such a market, there are a few number of seller selling closely differentiated or homogenous products to the buyers. In such a structure, there is a natural tendency of the fir to trust and collude amongst them. In such structure, the behaviour of one firm affects the behaviour of the other firms. Thus, by colluding amongst themselves, the firm can avoid any behaviours that may be detrimental to its interest. Thus, the firms form a cartel. The reason for the formation of the cartel is to ensure that the commodity is sold at the price fixed by the firms. This allows the firms to coordinate the polices and strategize their output to ensure a higher profit margin.

When an individual firm decides to work together and colludes with other firm thereby limiting competition, the outcome of the collusion would be the same as the one arrived in a monopoly market. However, this structure provides for a competitive edge in prisoner's dilemma i.e. they are aware and possess the information of their competitive firm. Thus, based on the assumption that the competitive firm may use the same pricing, the firm can align their price and structure their profit maximization accordingly.

<u>REGULATE AND CONTROL ANTI-COMPETITIVE AGREEMENT THROUGH PRISONER'S DILEMMA</u>

The need to regulate and control the increasing anti- competitive practises prevalent in the market. For such control, there are two different ways the prisoners' dilemma can be employed.

1. Either by taking advantage of the information obtained from other firms or cheating/ betraying the cartels

2. By providing incentive or minimizing the risk of paying exorbitant fines

Game theory is based on the nature of uncertainty i.e what the outcome would be based on different decision that a person/ various firm might undertake. However, it is quite hard to regulate and control such wrongful practises. Though prisoner's dilemma ensures for the regulating wrongful activities, due to stringent policies and penal provision, the firms operating in anti-competitive agreement would fail to cooperate.

In order to control such behaviour and to undertake measures against the firm, the root cause of the illegal practise is required to be determined. Further, legal measures are requires to be implemented in order to prevent future undertaking of such criminal activities .

The regulator can determine and control such activities by employing two borad traditions. Firstly, wherein he has all the sufficient information and is also bestowed with sufficient powers to criminalize the actives for Public interest. Secondly, where the regulator has insufficient information regarding the activities and requires information to be obtained through the firms. Thus, the regulator by employing prisoner's dilemma can collect the requisite information by providing the option of cooperation or competition to the firms. By cooperating the firm reduces its risk of losing or being penalised and thus the regulator ensures control over Anti-Competitive Agreement.

In US, formation of Cartels is a criminal as well as a civil offence while in India such Isa civil/ economic offence. By applying prisoner's dilemma, it is not possible to determine the nature of the offence but provides scope for analysing the circumstances and penalty that one might face when found guilty. For instances, here are two firms, Firm R and Firm S which aare dealing in anti-competitive agreement. The firms may not provide any information by being silent thereby preventing any penalty that can be imposed on them. Or one of the Firm may confess and the other is penalised. Or if both confess, then they shall be penalised but the amount of penalty shall be less in this case. However, such option may be successful if it provides any incentive to the cartels members to betray the cartels. Thus, though such programs are available implantation of such is quite unrealistic in todays' world.

Conclusion

The implementation of economic reforms in 1991 brought about an economic reform in the Indian market which opened a floodgate for foreign investors. Due to the increase in competition in the Domestic market, there has been a few complains to the Competition Commission of India regarding cartelization, abuse of dominance etc to develop a law to eradicate and combat such issues. Though, a little progress has been made in the said field, using the concept of game, the competition commission can help eradicate the anti competitive agreement prevalent in the market. The prisoner's Dilemma has enabled one to understand the behavior of suspects and to provides a means herein the CCI to obtain information against cartels as well as ensuring that fair competition exist in the market.

References

STATUE

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