6.1. Introduction

It was simply a coincidence that the game theory even been used as warfare tool in cold war and later it was used in resolving any conflict and tension of war. Thanks to the blessings of deregulated global liberalizations that the game theory is becoming a common interest for the economist through all over the world. Presently, at this time when the national interest of nations are now being seen through the economical perspective. Currently, every nation is putting their economic interests first and keeping aside their prior relations.

In this age of global liberalizations, every powerful nation has now clearly understood that they would not be able to dominate their rivals through their strong military, tanks, airplane, but only could be possible through by entering in the market of other countries, by capturing the market and destroying their economical establishments, after that they would finally ever succeed in destroying their enemies. In eightieth decade of the 20th century when the economical interest started getting importance over the political and military decision, the game theory became an important issue in between the economist of that time. The economist started thinking deeply over, “how some corporate and business houses would be able to
control the rise and the downfall of the market, how a local economical interest of a country would rise up to a position of effecting the image and stability of a country”? They recognized that they would surely be able to save this global market based world from any war and conflict through the game theory. In recent decade Economics has come out from the schools and entered in the field of social learning, political understanding, information generation and other fields that make the human life easier, due to which there is a rise of happiness in the world and society. From the last twenty years, there has been a surge of interest in modeling both national security and international political economy issues using the game theory as a tool.

Game theory is a method of studying the strategic decision making. More formally, it is "the study of mathematical models of conflict and cooperation between intelligent rational decision-makers." An alternative term suggested "as a more descriptive name for the discipline” is interactive decision theory. The subject first addressed zero-sum games, such that one person's gains exactly equal net losses of the other participant(s).

By use of game theory every opponent would try to maximize its profit and minimize its loss. No other field could be an ideal in the world politics
for its implementation and use of game theory. In each play every player keeps a close watch on its opponent’s possible course of action as a game strategy. But these strategically games move of opponents can clearly be seen in games than in real world. Therefore, some uncertainty remains in the mind of the players which effects the action and reactions of players on the map of world politics and businesses. Today, however, the game theory has been applied to a wide range of class relations, and has developed into an umbrella term for the logical side of science and includes both human and non-humans, like computers.

Gottfried Wilhelm Leibniz 1716 was a German mathematician and philosopher proposed something akin to what much later emerged as game theory but in nineteen century. The first known discussion of game theory occurred in a letter written by James Waldegrave in 1713. The earliest example of a formal game-theoretic analysis is the study of a duopoly by Antoine Cournot in 1838. The mathematician Emile Borel suggested a formal theory of games in 1921, which was furthered by the mathematician John von Neumann in 1928 in a “theory of parlor games.” Game theory was established as a field in its own right after the 1944 publication of the monumental volume Theory of Games and Economic Behavior by von Neumann and the economist Oskar Morgenstern. This book provided an
axiomatic theory of expected utility, which allowed mathematical statisticians and economists to treat decision-making under uncertainty.

In 2005, game theorists Thomas Schelling and Robert Aumann followed Nash, Selten and Harsanyi as Nobel Laureates. Schelling worked on dynamic models, early examples of evolutionary game theory. Aumann contributed more to the equilibrium school, introducing an equilibrium coarsening, correlated equilibrium, and developing an extensive formal analysis of the assumption of common knowledge and of its consequences.

In 2007, Leonid Hurwicz, together with Eric Maskin and Roger Myerson, was awarded the Nobel Prize in Economics "for having laid the foundations of mechanism design theory." Myerson's contributions include the notion of proper equilibrium, and an important graduate text: Game Theory, Analysis of Conflict (Myerson 1997). Hurwicz introduced and formalized the concept of incentive compatibility. It is fact that the game theory is evolved by mathematics but is constrains are developed in field of economics.

From ancient time to present 21st century, India is always an attraction for other world countries for trade and business. These trades and business have made India many times rich and prosperous country in world. But in eighteen century a company came to India for trade but slowly takes full
advantage of that time political condition and become the master of this nation. The declined of trade and the drainage of wealth to Europe made this prosperous country to stand in line of world poorer country in world. After independence the mixed economy of country and hard working Indian people along with industrialists again made India economy to stand in world trade.

Today, India provides a large market for trade and business for the multinational companies (MNCs). Every country of world is eager to make the trade relation with India. The developed countries found a good market within India for their finished products and services. India had large resources for exploitation and purchasing power of India people made India in better position to compete the MNCs. In this paper, we study how these MNCs are using the game theory in strategy to capture the Indian market from Indian companies with analyzing its impact on India companies, market and business. The prime focus of this research paper on FDI for retail sector as one of strategy of game theory used by MNCs against in direct competition and making collaboration with Indian industries. And tried to find optional strategy should the Indian nation evolve to safeguard its companies and people healthy interest against those MNCs coming through FDI in Indian market.
6.2. MNCs implementation and Indian experience of game theory in Indian market.

The game theory predicts that human life is a story of competition and struggle. This would be like the situation of game in which every participant wants its own win and defeat of its opponent. Game theory is a mathematical theory that deals with the general feature of competitive situations. In many practical problems, it’s requires to take decision in a situation where two or more opposite parties having conflicting interests and the courses of action which the opponent takes. A great variety of competitive situations that could be commonly seen in every day life, e.g. in military battles, political campaigns, election, advertising and marketing campaigns etc, every opponent wants to maximize their profit. In all the competitive situations, one may assume that each opponent would be got to act in some rational manner and would attempts to resolve the conflict of interest in own favour.

Same type of game is playing inside the India. Whether it is trends in market, or business competitions, or MNCs companies rivalries, every where the game theory is present in every strategy and situation. In the process the maximization of minimum gain, the Indian economy in shadow of globalization has reached in such a situation, where 1/3 of
reputed Indian companies are in the hands of MNCs claws. In the present world when the information is gaining the place of wealth, then who gains the control over these three economy establishment recourses i.e., political power, technological skill and information would be consider as more superior over other. These three resources are important in economic establishments that help in predictions of fluctuating trends in globalization of capital base market.

The MNCs where using the game theory very cleverly and slowly in proxy way while dealing within India national companies in India. In first phase, when these companies entered in Indian market they negotiates and work on coexistence atmosphere with each other i.e. (Hero-Honda, TVS-Suzuki, Pepsi-CocoCola,). In second phase “profit for you and profit for me” or “win-win” type strategically base model where used for collaboration with Indian national companies. These MNCs also offers the transfer of technology to Indian companies with agreements, only motive behind it to get some relaxation from Indian government. They got large discount in tax and import duties and many other types of discounts from the government agencies. In third phase, in order to convert their minimum profit to maximum profit they measure the strength and depths of Indian companies and create an environment in which it look that the Indian
companies would be always remains in profit in any way. But in fourth phase, they change their strategy and became parasite on Indian companies. In reaching last and final phase, they took complete control over Indian companies and destroyed them. In present scenario the India nation in pressure from international trade organization and is moving towards globalization to open its market where own Indian industries are declining fastly.

By playing the same the game theory with Indian beverage companies are under taken by those Pepsi, Coco-Cola MNCs. There is a broad struggle between the Darwin theory of best for survival and Ghandian theory of survival of last common man, in which the last common man is left far behind in race of globalization. Result shows that their no development by globalization but globalization has increase the no of poor and hunger people in world. Report says that one third of poor people throughout world belong to India. On one side the problem of unemployment is growing day by day on other side one the name of globalization polices are implemented which shows statistics of development is increasing but actual chance of employment is gradually reducing.

Many MNC invested only Rs.50 Carore in India but has earned more than Rs.5000 Carore from Indian market, making profit of 100% or more than
the amount they have invested in India. Many MNCs get discount and tax saving from Indian government on other hand national companies loses its own subsidy from government. The MNCs keeps close watch on the pocket and purchasing power of Indian. Promising of offering world level product and better position of choice to people, they were able to separate the Indian loyalty from their national companies’ products. In such situation the Indian companies are not able the fight with MNCs and find any place in own Indian market for their finished products.

Many MNCs come from those countries from whom, the India has either taken the loan or by shadow of international law and World Bank, which gives loan to India nation at higher rates. By providing the loan at higher interest rates these authorities put pressure on Indian government to provide easy entry to their national linked MNCs in India to starting business under fewer formalities, taxes. Sometimes the MNCs do not produce any goods or items, but only have proxy name or make loose tie-up or collaboration with some Indian companies. This type companies presently is BATA from USA-Canada, which sells shoes. BATA does not owns any factory or production of shoes only they purchase shoes from Indian local industries at cheap rate (Rs.100/-) and stamped their brand name and price and sell these items at high rate price like 1000% (Rs.
Other type of companies where Unileaver from Holland and England origin does businesses by brand name “Hindustan Unileaver” brand look as Indian type. Thousand of such MNCs from all over world where coming to India by investing only few capitals and to earn profit in 1000% to 10000%. At entry time what ever they had promises for transfer of technology and assured the responsibilities for Indian worker, societies to win the goodwill of Indian mass opinion which they have never act so. In dealing their business they have some hidden agenda of overtaking of Indian large and small Industries. They use all possible actions of game theory for maximizing their own profit and national interest.

The Chinese MNCs are special designed to destroy the Indian small scale industries as well as uprising industries. They market specially those product which made in India by small scale in unorganized sector. They made cheap products which only find market in India. They encourage the Indian biggest house to purchase those low quality product and encourage them to give a new Indian brand name and the sell them in Indian market. This one destroy the small industries and big houses because, Indian firms never launches own product in market and neighbor found any market in international market due to its low quality. Thus Chinese company earns profit from the India and Indian never stands on legs. The China make
electronic, mobile, computers parts, the dumps these parts in India and selfish national companies give brand name and earn profit by large share goes to china and Indian companies pleasure in destroying their small scale industries, after enjoy benefit from government and showing profit return not able to make their own products and impression in international market. Take LG, Hawaii, Samsung, Acer made computer parts, after reaching India the HCL, WIPRO companies give their brand name by which HCL, Wipro get deduction on import tax never made own products. Indian firms where thinking that the making Indian government fool and making some profit with trade with Chinese companies but actually the cutting their own chance to stand on international market.

The worst scenario shows by MNCs pharmacy companies which are responsible for higher pricing, shortage of drag and medicine in India. Those drugs which were banned for experiment on animal and human being at their countries, or cost more by paying the money to the human on whom drug would be got experimented on them where send here in India. They supply those experimental drags to famous Indian public and government hospitals, where the doctors, pharmacist, medical staff and patient where unknown about them. MNCs play the crewel game with
innocent Indian peoples. They charge heavy pricing for those under experimental drugs, and by this; they where earn dual profit by saving their live test cost and profit by selling those experiment sample medicine which they would get wasted in experiment as providing it to their experimental patients at their countries.

The MNC owner does not come under law of India so they where free in illegal R&D work which they introduce new medicine as compare to Indian pharmacy industries. They also tries to make patient of Indian medicinal herbs and ayurvedic medicines, which ever grown on India soil, used by people from thousand years and written sources in Indian vedic texts through illegal evidences and applying pressure of international patient law. They also targeted false propagandas against the ayurvedic pharmacy companies at every stage. They made international pressure for banding the ayurvedic medicine in their influence countries.

Many worlds famous MNCs have now chalked out elaborate plans for India not just because of the low costs it has to offer but due to faster and cheaper time-to-market opportunities, a larger and diverse patient pool and the availability of a sizable number of scientists. It has been estimated that the cost to conduct a trial in India is 50 percent lower than that of a developed market. But it doesn’t mean that they would provide cheap
drug and medicine to Indian and medical services get lowered to Indian. They where only earn large profit through outsourcing and market. They where not supporting in growth and development of Indian pharmacy industries but trying to overtaking or crushing the Indian industries. Recently dozens of Indian pharmacy companies are gets close or purchased by MNCs.

The strategic and defense MNCs only eager in profit making and not willing to transfer of any science and technology to Indian companies. Many times for selling their products they made offer of transfer of technology and R&D projects with Indian companies along with the product. But after selling goods, soon they stop projects in middle or terminate it by showing some international law violation. Through a game plan they make large delay and ever transfer decade backward technology at very high pricing.

6.3. Game strategy position of MNCs when share 51% FDI in Indian retail sector.

If MNCs in retail obtain 51% partnership then they would become free handed and obtain a monopoly to decide the price of the given commodity in Indian market. In such situation there would be a free business opportunity for them and at once the prices would be raised and the small
Indian retailer finds a little chance to come back; the MNCs like (P&G, Wal-mart, KFCs, etc.) would drop prices to drive him out. The previous experiences show that if a small retailer tries to enter the open market, he would be forced out, and this would run as a credible threat, thus no small retailer would be able to enter as long as this threat exists which surely exists because it is the MNC business strategy.

Here we observe the sequence of the game in Indian retail market. MNCs observes market trend and decides whether the entrant has already entered the market or not and could charge a low price if the entrant has entered and a high price if he hasn’t entered; since the entrant surly knows that MNCs would charge a low price, that why he won’t enter in competition. But consider a sequential game in which MNCs moves first, deciding whether to charge low or high prices and then the entrants decide whether to enter or not. MNCs, knowing that entrants could enter if it charges high prices, that why it would surly decide to charge a low price against the entrants. Our given version would be finding more plausible if there exists even one entrant that could open after MNCs does.

A retail market game where the two parties are constantly looking at each other and deciding their strategies that’s becomes a simultaneous game. So
we would observe here what possible situation could be arising in this type of game scenario.

Table 1:-

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<th>Incumbent</th>
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Strategy in between Entrant and Incumbent.

Suppose Wal-Mart is the incumbent of one of MNCs in retail in Indian market and we are the entrant and we’re competing over the sale of apples. If Wal-Mart tries to keep the price of apples high and we undermine them, we would gain a profit of 1 and they get -1 because their apples are unsold. On the other hand, if we stay out, we get 0 and they get a profit of 1. If they charge a ‘low’ price and we try to compete with them, we would find ourselves unable to match their price and end up selling
our apples at a loss (-1) while they make (near) 0 profits. If MNCs would charge a low price and we would decide to stay out, still they make zero profits and we have no loss and profit but we would been thrown out of market.

This game has set things up exactly as scenario specified: if we try to compete with Wal-Mart when it charges low prices, we would incur a loss. If we enter, Wal-Mart’s best response is to charge low prices. But {High, Not Enter} isn’t an equilibrium outcome, because if we stay out, Wal-Mart would charge high prices. If Wal-Mart charges high prices, we want to enter. If we enter, Wal-Mart will charge low prices. If Wal-Mart charges low prices, we would be stay out from the screen and this cycle continues.

There is no pure equilibrium. This formalizes what Wal-Mart enjoy years of uninterrupted super-normal profits if it has to engage in a price war with every individual that would be comes along? We could find a mixed-strategy Nash Equilibrium where Wal-Mart charges high rates on one day and low rates on another day and the entrant decides to enter or not with 50% probability. In such a scenario, customers would face high prices every 4th day. But it’s one thing to play a mixed-strategy against one opponent imagine if trying to play it against thousands of potential entrants.
When Indian competitor is thrown out of market no strategy of Indian would work on MNCs. The MNCs would have free to decide the rate and price and all benefit goes to them and their nation. Over all nothing is gain by Indian people and businessmen.

6.4. Conclusions.

India, although a late entrant, has started taking theoretical techniques like game theory seriously while framing policies or analyzing practical problems. It is in favour of Indian that the Indian companies, government, economics and research scientist are taking interest in application of game theory in various fields of economics, politics and war. By using the game theory we able to understand the MNCs companies game plain and could save our valuable Indian Industries from going in hands of MNCs or overtaken by MNCs. Decision for allowing MNCs in FDI in Indian retail sector would be better judge on the game theory by Indians which could be beneficial to understand the nature of MNCs business model. The game theory could be helpful to Indian by understanding the present global economic market and better analysis the world politics in resolving the conflicts. Correct application and implementing the game theory the India should achieve the status of developed nation as global partner in world trade and resolve any war like situations.
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