



An Overview Game Theory and Decision Making Theory

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Abstract : This study has been undertaken to investigate the difference between Decision Making Theory and Game Theory. The analytical framework contains. Game theory is the analysis of how decision-makers interact in decision-making to take into account the reactions and choices of the other decision-makers. Akin to the field of game theory, decision theory is concerned with the choices of individual person on the other hand game theory is concerned with interactions of people whose decisions affect each other.

The field of maths and science that applies to social interaction is called game theory.

INTRODUCTION TO GAME THEORY :

“A Game is any interaction between multiple players in which each player's payoff is affected by decisions made by others.”

–“Game Theory is the study of interactive or optimal decision making in the manner that those associated are affected and suffer by their own choices but by the decision of other people”.

Game theory is the analysis of how decision-makers interact in decision-making to take into account the reactions and choices of the other decision-makers. International conflict and other phenomena in international relations occur as a result of decisions made by people. One can probably analyze the decisions made by him using this theory, henceforth Game theory can be said to provide a number of advantages and disadvantages for the analysis of international relations. It requires that a conflict situation or decision process be examined from the point of the ‘Utilities’ and ‘Disadvantages’. It also put forward a setting in which both sides make the rational calculation of their own self-interest.

ILLUSTRATION :

Considering the example of the game of chess, one player's moves continuously influence the other person's strategy. In the same manner, if we analyze situations in which multiple companies are competing against one another just like in a game of chess the actions of one company are influenced by the actions of the other participants for example if a competitor lowers the price the other companies might be forced to do the same. It is assumed that all players are rational.

Game Theory is based on an abstract form of reasoning arising from a combination of mathematics and logic. Gaming offers a way for laboratory testing of real-life situations. Solutions are derived from deductive Reasoning. World relations are the consequence of the various competitions (strategies) going on between various competitors (states) to Stay Ahead. View's one's antagonist as something other than an incompetent entity or omniscient all Powerful. It views rationality to be present with both the players in the game one with more power and the other with less. It results in one of the either two ‘Conflict’ or ‘Cooperation’.

KEY ELEMENTS OF A GAME:

- Players: Who is interacting?
- Strategies: What are their options?
- Payoffs: What are their incentives?
- Information: What do they know?
- Rationality: How do they think?

OBJECTIVE OF GAME THEORY :

The aim of the game theory reads as;

- To formulate principles that could specify what is rational behavior in certain social situations and
- To formulate on the basis of those principles the general characteristics of that behavior

The theory develops mathematical Formulations about choice-making among alternative courses of action when it is impossible to control all the factors which govern the outcome because of the actions of others. The above lesson is immensely revealing when applied to international relations because it can show how a situation may lock two participants into conflict regardless of their individual wishes and even though both may be neither evil nor stupid.

INTRODUCTION TO DECISION MAKING THEORY :

“Decision-making is usually interpreted as a method or series of activities including levels of problem recognition and selection of an alternative among various alternatives consistent with the ranked preferences”.

In other words, Decision-making is a “process which results in the selection from a socially defined, limited number of problematical, alternative projects of one project to bring about the particular future state of affairs envisaged by the decision-makers.”

Akin to the field of game theory, decision theory is concerned with the choices of individual person on the other hand game theory is concerned with interactions of people whose decisions affect each other.

The decision-making approach lays emphasis on the question as to how and why a nation acts in international politics in a particular way not the other. It also lays emphasis on the question as to how rational individuals should behave under risk and uncertainty.

OBJECTIVE OF DECISION MAKING THEORY :

The fundamental purpose or the objective of Decision making theory, reads as follows;

- Firstly, identification of “crucial structures” in the political realm where changes take place, where decisions are made, and where actions are initiated and carried out.
- Secondly, a systematic analysis of the decision-making behavior which leads to action.
- The decision-making approach mainly emphasis on devising a conceptual framework that could help people in the reconstruction of the situation as defined by decision-makers.

MODELS OF DECISION-MAKING THEORY:

•The Rational Policy Model –

The Rational Policy Model lays emphasis as to how individuals should behave in order to maximize some outcome.

Step i) Defining the problem i.e Agreeing on the overall policy objectives

Step ii) Identification of decision criteria

Step iii) Preference selection of Criteria

Step iv) Alternative development

Step v) Evaluation of the Alternative developed

Step vi) Selection of Best Alternative

•The Bureaucratic Political Model-

Making and executing a state’s foreign policy generally involves many different governmental organizations called bureaucracies. They define rules and standard operating procedures to be followed while decisions are to be made or tasks are to be performed.

•History Making Individuals Model –

This model revolves around the dominant thinking that individual leaders are the movers and shakers of history and the main determinants of foreign policy in a state. It views all states as acting similarly because all decision-makers engage in the same cool and clear-headed end-means calculation.

In Nutshell..

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Decision making theory	Game theory
Decision theory is concerned with the choices of individual person.	Game theory is concerned with interactions of people whose decisions affect each other.
This theory studies individual persons decision-making in circumstances in which an his/her choice neither affects nor is affected by others choices.	This theory studies decision-making in circumstances where one persons choice do affect each other.