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**International Journal of in Multidisciplinary and  
Academic Research (SSIJMAR)**

**Vol. 4, No. 3, June 2015 (ISSN 2278 – 5973)**

**NEURO - PERSPECTIVE IN MANAGERIAL DECISION - MAKING EFFICACY**

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**Impact Factor = 3.133 (Scientific Journal Impact Factor Value for 2012 by Inno Space Scientific Journal Impact Factor)**

Global Impact Factor (2013)= 0.326 (By GIF)

**Indexing:**



## Abstract

*Managerial efficacy is cognitive capacity necessary to manage judgment, sentiment and procedures. It refers to high-level cognitive skill to manage and direct cognitive ability and behaviours. This study was designed to help understand what effective managers really do. Study examines personage difference in conjecture of psyche and managerial functions to explain variation in severity of efficacy symptoms that account for inconsistency in behaviours symptoms. This model consists of continuum ranging from quantity - oriented manager (observed to display significant activities and performance) to quality - oriented traditional manager (observed to exhibit interface with outsiders, controlling and planning activities and perceived to have quality performance). This descriptive model helps identify needed managerial activities and skills for quantity and quality performance in today's organizations. These findings are discussed in terms of a proposed distinction between aspects of model of mind and related executive control skills.*

**Key Words:** Managerial Efficacy, Cognitive Capacity, Personage Difference and Executive Control Skills.

## Introduction

Conjecture of brain is aptitude to trait mental states; attitude, intents, requirements, pretends, comprehension, etc. to oneself and others furthermore to appreciate that others have beliefs, desires, intentions and perspectives that are dissimilar from one's own. Conjecture of brain is a surmise insofar as the brain is not directly evident. The supposition that others have brain is termed a conjecture as each human can barely perceive subsistence of his / her own brain through introspection. No one has unswerving admittance to brain of another. It is characteristically implicit that others have brains by parallel with one's own. This assumption is based on shared nature of interface, efficacies and perceptive of others sentiment and dealings.

Having conjecture of brain allow one to element judgment, requirements and intention to others, forecast or elucidate actions and hypothesise intentions. As initially distinct, it enables to value that psychological state can be root of, explicate and calculate behaviour of others. Being able to feature mental states and perceptive them as cause of behaviour implies that the brain as an author of representation. If a manager does not have conjecture of brain, it may be a symptom of cognitive or developmental mutilation. Existing deliberations have ancestry in rational debate (Descartes' Second Meditation) that set basis for making allowance for discipline of brain dynamics. Familiar divergent approach in philosophical journalism, to conjecture of brain is conjecture-conjecture and simulation - conjecture. Conjecture-theorist envisions absolute conjecture to rationale about others' brains. Conjecture is developed mechanically and instinctively, though instantiated interactions. It is intimately associated perception and ascription that quality mind, actions, effectiveness, properties, realization and link to corporeal body (brain). Mind - body rapport dilemma is generally seen as key question in philosophy of mind.

Managerial efficacy (cognitive influence and managerial - attention organism) is umbrella term for management (regulation, power) of cognitive processes. Managerial scheme is a theorised cognitive structure that directs cognitive processes. Prefrontal areas of frontal lobe are necessary but not solely sufficient for hauling out this efficacy. Conventionally, managerial efficacy has been synchronised by prefrontal regions of frontal lobes. Nevertheless it is a matter of unending contest. Frontal and non-frontal regions are essential for integral efficacy. Probably, frontal lobes need to play a part in fundamentally the whole efficacy. Managerial system is ideated to be profoundly drawn in handling situations exterior domain of mechanical processes that explain imitation of set behaviours; those that engross scheduling or decision - making, those involve inaccuracy rectification, where response are not well-rehearsed, in principle tricky situations and that necessitate overcoming of tough response.

## **Key Research Questions**

Neuroeconomics provides economists and social scientists with a deeper understanding of how they make their own decisions, and how others decide. Are we hard-wired to be risk-averse or risk-seeking? How is a 'fair decision' evaluated by the brain? Is it possible today to predict the purchasing intentions? Can we modulate economic behaviour affecting the brain? Effective management is a result of persistent efforts in multiple dimensions be it the formulation of strategies or the smooth functioning of day-to-day activities. The complexity in management partially arises due to how organizations juggle between the efforts that focus on long-term objectives and handling daily nitty-gritty. In order to ensure effective functioning of organizations, it becomes extremely important for organizations to invest time and effort in developing managerial competencies. A structured effort in this direction would not only lead to formulating successful organizational strategies but would also ensure proper execution of day to day operations (ASCI; Hyderabad).

Risk management and decision theory is a hopeful matrimony linking two completely significant characters of mind-boggling heredity. Decision presumption is conjecture about decisions. The subject is not amalgamated one. To the converse, there are many diverse ways to conceive about decisions with dissimilar traditions. To theorize about decisions is approximately the same as to theorize about human activities. How to resolve reservations with need for decision, recalling that decision not to act in anticipation of more information is still a decision? Risk psychoanalysis and numerical decision supposition can make available various strategies.

Some key research issues in this context are; what are the constituent processes underlying managerial efficacy task performance? Are different managerial efficacy's uniquely linked to different brain regions? How do changes in brain efficacy contribute to changes in managerial efficacy? Risk and return – are they related? What are managerial efficacy issues? Can risk be managed? Is it possible to identify risk-prone and risk-averse persons? What diagnosed? What How managers do chose risky prospects? Do the managers use any computer-based decision aids when working with risk estimations and/or decision problems? What symptoms of managerial Efficacy Issues Finds it hard to figure out how to get started on a task. Can focus on small details or the overall picture, but not both at the same time? Has trouble figuring out how much time task requires. Does things either quickly and messily or slowly and incompletely. Finds it hard to incorporate feedback into work or an activity. Sticks with a plan, even when it's clear that the plan isn't working. Has trouble paying attention and is easily distracted. Loses a train of thought when interrupted. Needs to be told the directions many times. Has trouble making decisions. Has a tough time switching gears from one activity to another. Doesn't always have the words to explain something in detail. Needs help processing what something feels/sounds/looks like. Isn't able to think about or do more than one thing at a time.

## **Neuro - Perception**

New brain imaging technologies have motivated neuro - managerial studies of the internal order of the mind and its links with the spectrum of human decisions from decision making among fixed gambles to decision making mediated by market and other institutional rules. We are only at the beginning of the enterprise, but its promise suggests a fundamental change in how we think, observe and model decision in all its contexts (Smith; 2002).

How is managerial decision making processes carried out in brain? Do we interpret research findings when neuromanual logical results conflict? Knowing how brain is working explains little about what mind

produces; what we think, what we believe and how we craft decisions. What are the general implications of neuromanagement? Neuromanagement techniques permit to look inside brain while it experiences outcomes and crafts decisions to examine implications. Central argument is that decision - making is at core of managerial functions and future of any organisation lies on vital decisions made. Decision usually involves three steps: recognition of a need, dissatisfaction within oneself (void or need), decision to change (fill void or need) and conscious dedication to implement the decision. However, certain critical issues coupled with factors such as uncertainties, multiple objectives, interactive complexity and anxiety make decision making process difficult. At times when making a decision is complex or interests are at stake, then need for strategic decision - making arises. Management is influenced by multiple-systems approach to decision-making, a perspective strongly rooted in psychology and neuromanagement science. The integration of these disparate methodologies offers exciting potential for construction of models of decision-making (Satpathy: 2012).

Questions that need to be answered (Satpathy: 2012) include; how to choose in tough situations where stakes are high and there are multiple conflicting objectives? How should Managers' plan? How can we deal with risks and uncertainties involved in a decision? How can we create options that are better than the ones originally available? How can we become better decision makers? What resources will be invested in decision - making? What are the potential responses to a particular problem or opportunity? Who will make this decision? Every prospective action has strengths and weaknesses; how should they be evaluated? How will they decide? Which of the things that could happen would happen? The decision has been made. How can we ensure it will be carried out? These are the questions neuromanagement researchers suspect are most crucial for understanding complex human behaviours.

### **Prefrontal Cortex In Managerial Decision**

Solitary of the slightest explored and smallest amount understood regions of cerebral cortex is orbitofrontal cortex, a part of frontal lobe that lies on roof of orbit. Theories of medial prefrontal function emphasize its role in adaptive decision making. Entire prefrontal cortex receives broad range of sensory and limbic inputs which trigger contextually appropriate representation of goal or assignment rules. Experiential literature on medial prefrontal cortex (mPFC) is subjugated by studies of its function in decision making. However, mPFC a key role in memory, as decorated by its discriminating contribution in retrieval of 'remote' memories.

Ventromedial prefrontal cortex (VMF) is considered significant in human decision making. Studies spotlight on decision making under situation of uncertainty, chancy or indecisive decisions. Other defenses of corroboration sponsor that this represent moderately elementary information concerning virtual 'cost-effective' significance of choice, predict a function for decision making even in unreality of indecision. Neural basis of decision making has been an indescribable observation due to sub processes allied with it. Contemporary efforts concerning neuroimaging and neuropsychological studies designate that prefrontal cortex plays vital role. Frontal lobes are involved in tasks ranging from making choices to making multi-attribute decisions that demand unambiguous indication and incorporation of assorted sources of information. In categorizing diverse aspect of decision making, itemization of prefrontal cortex hooked on three prime regions is; Orbitofrontal and ventromedial are germane to deciding based on reward values and add affective information regarding decision attributes and options. Dorsolateral prefrontal cortex is decisive in making decisions that label for reflection of multiple sources of information. (3) Anterior and ventral cingulated cortex emerges principally relevant in cataloging conflicting options and signal outcome-relevant information.

## **Managerial Decision Making**

How do managers make choices? The dominant paradigm in empirical and theory work in economics is to assume that manager choices are made by fully rational decision-makers. These models often assume managers seek to maximize the present value of current and future earnings, solve a dynamic optimization problem, and play a Bayesian Nash Equilibrium. An increasing amount of research, however, has documented that these (and other) standard assumptions are often violated. In their place, several formal models of alternative assumptions have been developed and tested (SSRN abstract; 2011559). Decision-making is regarded as the cognitive scheme resulting in selection of belief or course of action in the middle of a number of substitute potential. Every decision-making process produces a final choice that may or may not prompt action. Decision-making is the study of identifying and choosing alternatives based on the values and preferences of the decision maker. Decision-making is one of the central activities of management and is a huge part of any process of implementation.

Organizations of today are in great need of improving their skills when it comes to decision making, and especially the designing of decisions. By the designing of decisions is meant the preparatory stages of decision making (Nutt; 1984). It is argued that the design of decisions is a process that in many ways is shaped by factors such as identities, values, and influences. The task of the decision maker tends to be reduced to a choice between ready-made alternatives. To be able to understand how these factors impact organizational decisions, the focus must be set on the management level. It is the management that shoulders the chief responsibility for designing collective actions, such as decisions. Our propositions indicate that the following measures must be taken in order to improve the quality of organizational decisions (Selart; 2014):

1. Uniqueness of individuals occupied in decision making, affects value of decisions and should be taken into explanation in plan of decisions.
2. Decision maker or designer of decisions is supposed to fit into place members to craft a collective mental picture.
3. Getting members to articulate and carve up general values should perk up decision making process.

Decision-making can also be regarded as a problem-solving activity terminated by a solution deemed to be satisfactory. It is, therefore, a reasoning or emotional process which can be rational or irrational and can be based on explicit assumptions or tacit assumptions. Rational choice theory encompasses the notion that people try to maximize benefits while minimizing costs.

Human performance with regard to decisions has been the subject of active research from several perspectives:

- Psychological: exploratory individual decisions in framework of a set of needs, preferences and values the individual has or seeks.
- Cognitive: decision-making process regarded as a continuous process integrated in communication with the environment.
- Normative: the analysis of individual decisions concerned with the logic of decision-making and rationality and the invariant choice it leads to.

### **Problem analysis**

- Analyze performance, what should the results be against what they actually are.
- Problems are merely deviations from performance standards.
- Problem must be precisely identified and described.

- Problems are caused by a change from a distinctive feature.
- Something can always be used to distinguish between what has and hasn't been affected by a cause.
- Causes to problems can be deduced from relevant changes found in analyzing the problem.
- Most likely cause to a problem is the one that exactly explains all the facts.

### **Decision-making**

- Objectives must first be established.
- Objectives must be classified and placed in order of importance.
- Alternative actions must be developed.
- The alternative must be evaluated against all the objectives.
- The alternative that is able to achieve all the objectives is the tentative decision.
- The tentative decision is evaluated for more possible consequences.
- The decisive actions are taken, and additional actions are taken to prevent any adverse consequences from becoming problems and starting both systems (problem analysis and decision-making) all over again.
- There are steps that are generally followed that result in a decision model that can be used to determine an optimal production plan.
- In a situation featuring conflict, role-playing may be helpful for predicting decisions to be made by involved parties.

### **Conclusion**

Applying behavioral biases to managers is an important and growing area of study. It is recommended there are several particularly promising areas for future work, which we summarize below: Theory and lab research on the impact of fairness on a broader range of managerial decisions, including welfare analysis. Theory and lab research on preferences, particularly in coordination games. Research on the effect of preferences on managerial behavior using data from the field in order to understand the broader applicability of the laboratory-generated results. Research on how alternative utility functions, aside from preferences, might affect managerial behavior. Examples include self control, context effects, inattention, and reference dependence. Research that applies the computational and equilibrium selection advantages of alternative solution concepts such as cognitive hierarchy to help solve coordination games, in theory and in structural empirical work. Field work that examines the conditions under which we observe bounded rationality by managers in games, including disclosure games, entry games, technology adoption games, and others. Theory and lab work on the biological basis of economic behavior, which can in turn help discipline existing theory and inspire new models. Field work on the role of overconfidence in manager decisions and firm performance. Theory and (especially) field work on the consequences of mixing rational and non-rational firms. While there has been substantial progress recently, there is much more work to be done to understand when and how behavioral biases apply to managerial decision-making (SSRN Abstract; 2011559).