

OR/MS concepts that everyone should understand

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CLAIM

Some basic concepts from the introductory (business school) MS/OR course have immediate value to everyone, especially those involved in managing organizations....

QUESTION: What do YOU think these concepts are?

AGENDA

- Introduction
- OR topics that (IMHO) add high value to the MBA experience, and to life in general
- Conclusions

CONCEPT 1

How to make a good decision

The MS/OR view of decision situations:

- alternatives
- decision criteria
- conditional outcomes and payoffs
- sequence
- uncertainty
- risk vs return tradeoff
- managing through contingencies

Making good decisions is a fundamental life
(and management) skill

CONCEPT 2

How to tell a good decision from a bad one

- you cannot look at outcomes
- you *must* look at the decision process

Judging decisions and decision maker's performance is a fundamental life (and management) skill

CONCEPT 3

How to cope with an uncertain future

“modelling uncertainty”

- events (simple or complex)
- probabilities (conditional, joint)
- assigning probabilities
- finding probabilities from data

Most decision making (in life and business) takes place into an uncertain future

CONCEPT 4

How to prosper in risky situations

- understanding the “upside”
- analysis of risky situations
- measurement
- management
- countering “the ‘flaw’ of averages”

Recognizing the opportunities risk provides is a way of achieving personal and professional advantage.

CONCEPT 5

Simultaneous decisions

- not all decision situations can be well resolved by making decisions sequentially
- simultaneity means understanding (and profiting from) potentially very complex trade-offs

Without MS/OR, people (including MBAs) would be sequential decision makers

CONCEPT 6

“Revenue management”

- some understanding of RM pricing, and tools such as overbooking, trading-up, replanning is a social winner! (and also helps your personal shopping)
- knowing how to maximize revenues while selling the same quantity of product is a business winner

CONCEPT 7

How to create and sustain a competitive advantage with MS/OR

- there are > 20 private sector examples of firms that have done this (are doing this)

CONCLUSIONS

MS/OR people typically underestimate the impact that we can have

Many basic concepts from MS/OR are “rocket science” to many people

Conveying these concepts can improve many people’s lives and enhance MBAs’ promotion prospects