



*Workshop Diversified Education and Academic Leadership | LEAD2*

# **Decision making processes and the role of innovation indicators in the academy**

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# Agenda

## Decision-making processes

- Main concepts
- Certainty vs agreement
- “Garbage can” and the university
- “Muddling through”

## Results from survey

## Conclusions

# Objective

- To understand **how academics make decisions based on their use of innovation indicators**
  
- *Focus:* Three **knowledge-intensive innovation groups** (i.e. access to knowledge under the least possible restrictions):
  - a) Academics
  - b) Business R&D and Innovation
  - c) Policy makers
  
- *Methodologies:*
  - **Literature research**
  - Analysis of **official documents**
  - **12 exploratory interviews with privileged informants** to prepare and calibrate the surveys and the interviews in Germany, Switzerland and Portugal
  - **3 on-line surveys** with 84 answers from **the knowledge-intensive groups** under study
  - **18 semi-structured interviews to policy decision-makers** to increase confidence on answers, to the political and sensitive nature of the interviewees and to avoid any suspicion of misuse of information
  - **9 complementary interviews** to analyse the data collected through surveys, and to gather further empirical information on the outcomes of the policies of some decision-makers
  - **1 case study** on electric mobility policy

# Decision-making processes

## Definitions:

- **Decision-making models:** conceptual frameworks to understand how decision-makers deal with information and come to conclusions (Harren 1979)
- Contributions from **many scientific areas:** economics; management; psychology; health; education; military studies, etc.
- However, the literature does not present any specific model for decision making processes in academic institutions

# Decision-making processes (cont.)

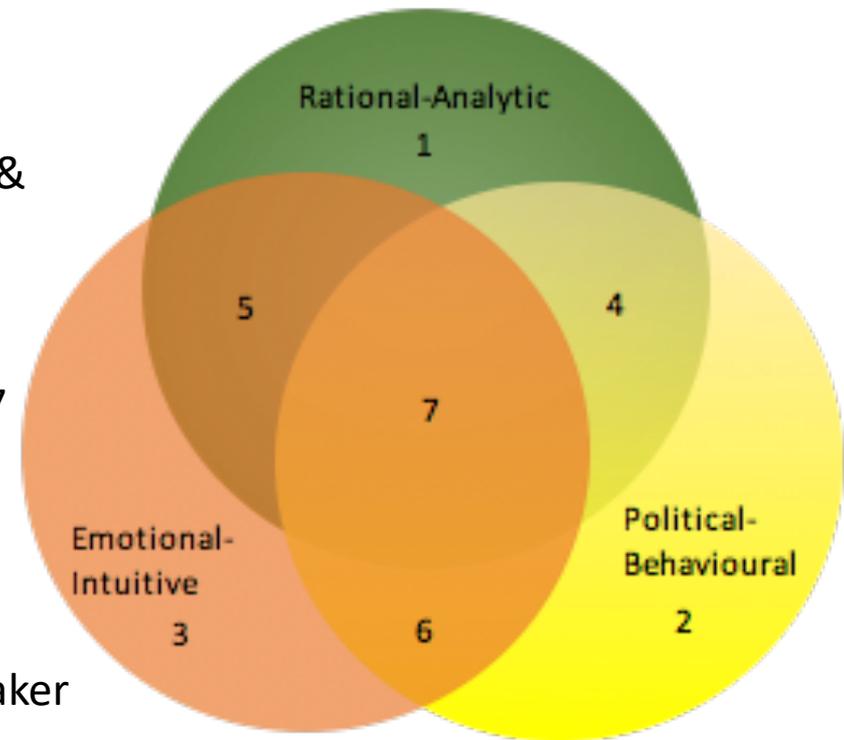
Many decision-making **models** and nomenclatures are possible ([Boavida 2017](#))

Let us start with the use a model for technological innovation ([Boavida 2017](#))

Most decisions occur in **4, 5, 6 and 7** (Jauch & Glueck 1988, Stacey 2011)

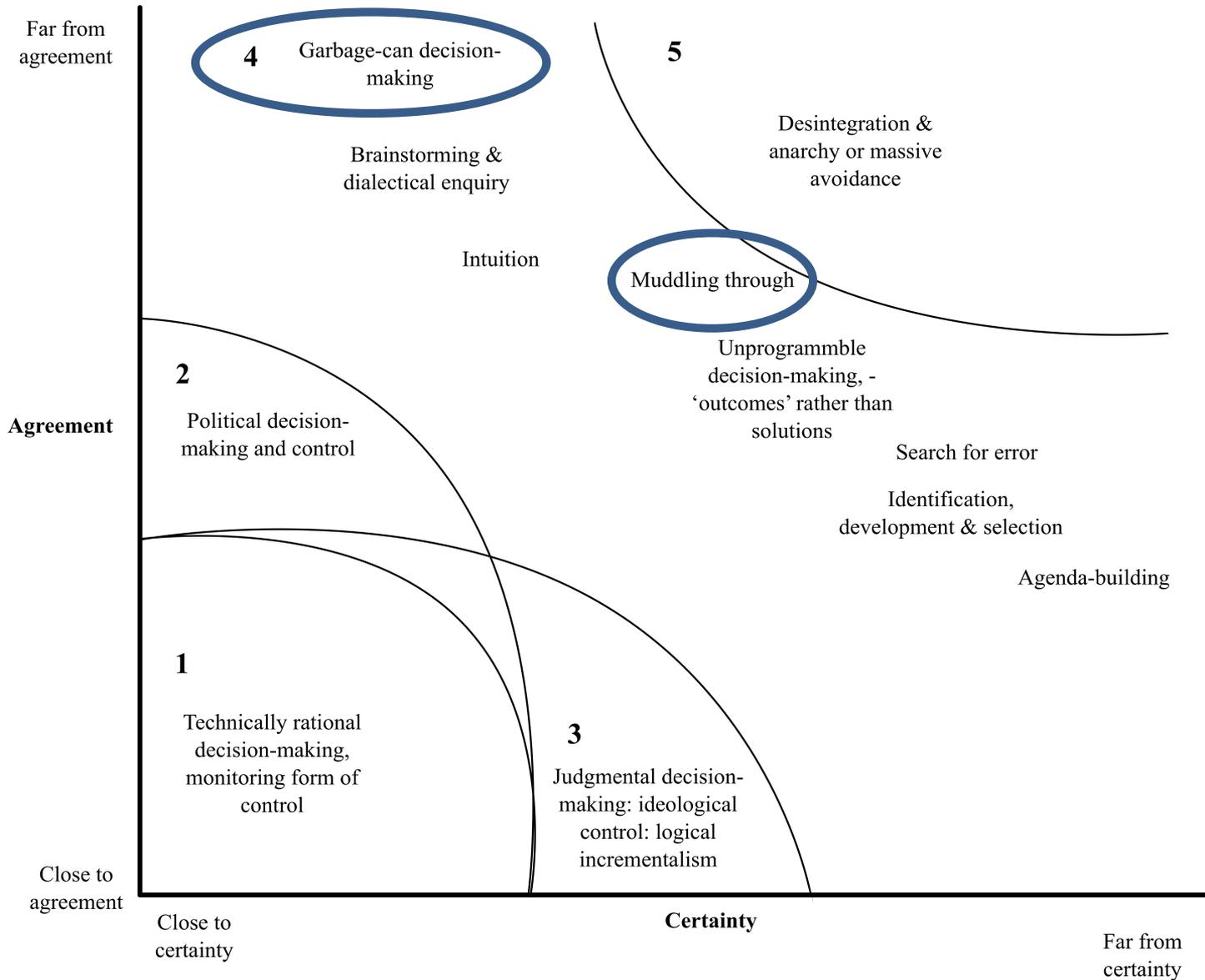
Little research on dimensions 1, 3, 5, 6 and 7 (Linn, Man & Bossink 2013)

Importance of each dimension varies with several factors (e.g. **context** and decision-maker **characteristics** such as level of education) (Meijer, Hekkert & Koppenjan 2007)



Source: [Boavida 2017](#) (Adaptation of the strategic management model of Jauch & Glueck (1988))

# Decision-making processes (cont.)



# Decision-making processes (cont.)

## “Garbage can”

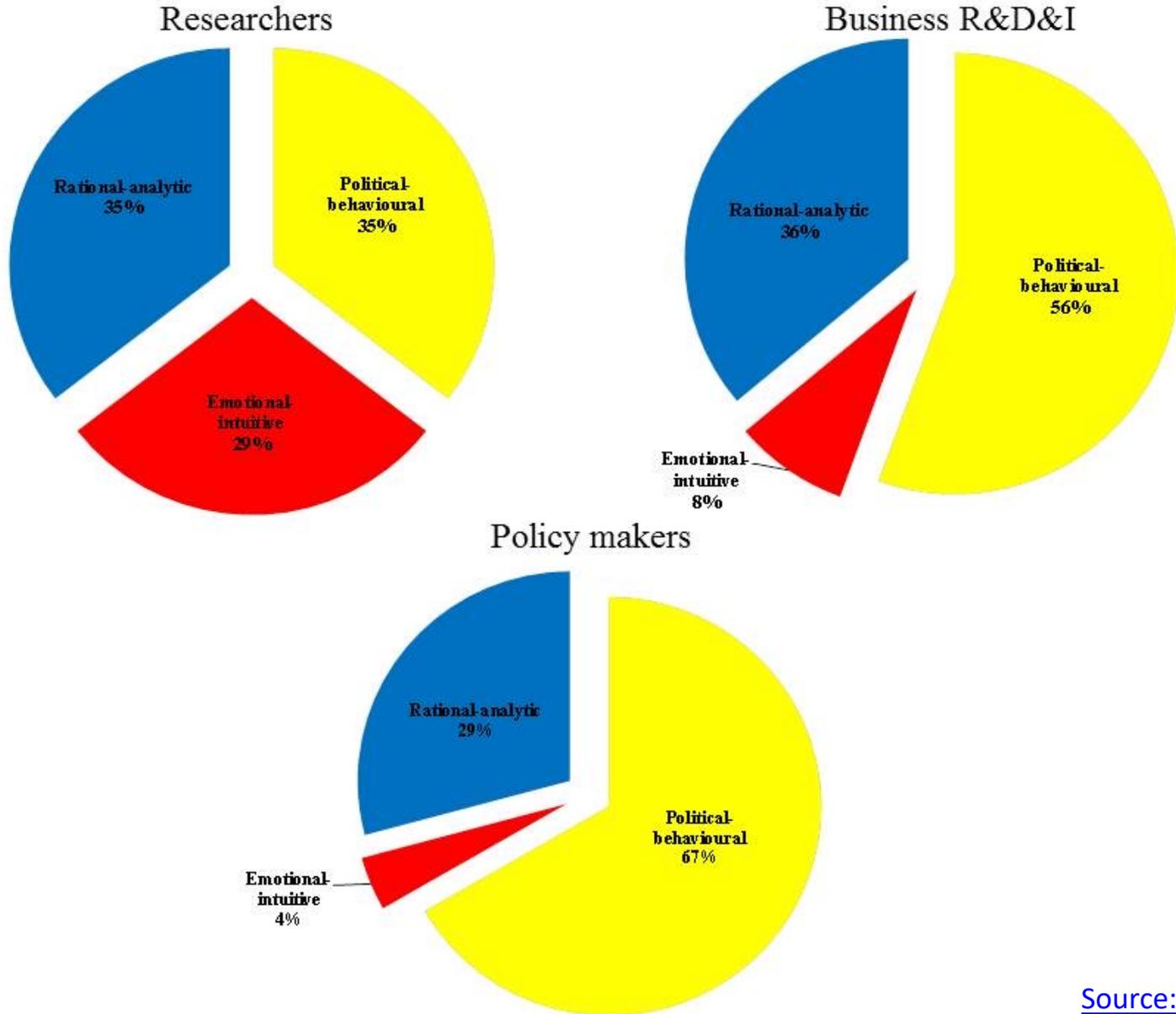
- It suggests that an organization is seen as a collection of solutions looking for appropriate problems in the garbage (Cray et al. 1991).
- It suggests that **(chaotic) human organizations tend to produce many discarded “solutions”** due to an absence of appropriate problems.
- Main idea: **the substance of the problem is irrelevant except for the stakes that can be attached to it by various interests.**
- **Problems may eventually appear for which a search in the garbage can might provide fitting solutions. (Cray et al. 1991).**
- The idea was developed in reference to explanations/ interpretations of behaviours in decision situations that appear to **contradict classical theory of rational decision** (Cohen, March, and Olsen 1972).
- The garbage can idea was **influenced by extreme cases of uncertainty in decision environments (i.e. higher education institutions)** that would trigger responses, which, from a distance, appear “irrational”.

# Decision-making processes (cont.)

## “Muddling through”

- a method highlighting a long-standing division in **public administration** approaches Lindblom (1959).
- “Muddling through” comes from the British expression in “muddling through somehow”.
- The expression means the **act of facing a complex bureaucratic decision process and “getting the job done”**.
- At the time, the dominant approach to public administration followed **the belief that scientific analysis could solve the political problems faced by public administrators**, putting strong faith in **rationalism** through various forms of rational or technical analysis.
- A rational approach is often not possible, and frequently despised **political manoeuvring characteristic of administrative decision-making might not be as bad as it appears to many** (Lindblom 1959)

# Results of the survey



# Conclusions

A decision **usually involves more than one approach** (rational, emotional or political)

Many academic decisions operate under **Uncertainty** and **Disagreement** (Zone 4), where '**Garbage can**' and **even 'Muddling through'** are models often observable

However, results about use of indicators by academics point to **higher use of indicators and rational methods** (indicators, studies, etc) than the other groups

Thus, the application of indicators **can lead to the transformation of the academy**

# Conclusions (cont.)

Long process of **rise of quantification and rationality** (indicators, composite indicators, measuring, etc) in modern societies.

**Universities** are among those institutions that can be more affected by 'cultural change' triggered by the exposition to indicators

- [Times Higher Education](#)
- [Shanghai Ranking](#)
- [QS World University Rankings](#)
- [Round University Ranking \(RUR\)](#)
- ...

But **there are many problems arising from simple quantification...** (inflation of specific attributions of Universities and disregard of others, loss of quality and scientific traditions, loss of epistemic communities, mercantilism, etc)

# Bibliography

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☐ Thank you

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