

Research  
Based  
Curricula



**Decision Making in  
Business**

Key Stage 5

Business Studies

Resource 1

2019



# Resource One Overview



Topic	Human Decisions: What Can Go Wrong?
A-Level Modules	Understanding management decision making
Objectives	<p>By the end of this resource, you will be able to:</p> <ul style="list-style-type: none"><li>✓ Understand and explain human decisions in business</li><li>✓ Provide extended answers on the weaknesses and strengths of these decision</li></ul>
Instructions	<ol style="list-style-type: none"><li>1. Read the data source</li><li>2. Complete the activities</li><li>3. Explore the further reading</li></ol>
Context	<p>A <b>heuristic technique</b> (Ancient Greek: εὕρισκω, "find" or "discover"), often called just a heuristic, is an approach to problem-solving or self-discovery that employs a practical method, not guaranteed to be optimal, perfect, logical, or rational, but instead sufficient for reaching an immediate goal.</p> <p><b>Bias</b> is disproportionate weight in favour of or against one thing, person, or group compared with another, usually in a way considered to be unfair.</p> <p><b>Accuracy</b> is the quality or state of being correct or precise. In statistics, it is connected with errors from the real value.</p> <p><b>Probability</b> is the quality or state of being probable; the extent to which something is likely to happen or be the case.</p>

# Resource One

## Data Source



### Section A

Based on the first part  
of the PhD thesis

Anna Sgroginis

Human decisions are crucial in all business-related areas. For example, in order to decide how many loaves of bread you need to produce next week, you need to analyse the past data (if any is available) and/or conduct market research of bread consumption in your area and only then you will be able to say anything about the future quantity. All these steps require your attention and knowledge and involve decisions from humans.

In order to understand how a human being makes decisions, we have to explore psychological factors which might profoundly influence them. A considerable amount of literature has been published on the topic. These studies show many biases and heuristics of human mind (Kahneman and Tversky, 2000).

In the decision-making literature, if your forecast is based solely on intuition, then it is likely to be biased and to have a negative impact on accuracy (Kahneman, 2012). The first fundamental studies on this topic described three heuristics that are used to assess probabilities by people. Those heuristics are (from Tversky and Kahneman, 1974):

#### ❑ Representativeness;

This means that people rely on similarity to the specific situation without taking into account its frequency of occurrence.

**Example:** People with a PhD are more likely to subscribe to the Economist than people who ended their education after high school.

#### ❑ Availability;

The situations when a person relies too heavily on the information that quickly comes to mind. In particular, Tversky and Kahneman (1973) wrote, "long-life experience has taught us that instances of large classes are recalled better and faster than instances of less frequent classes" (p. 208).

**Example:** List six instances in which you behaved confidently. Now, evaluate how assertive you are in these situations.

# Resource One

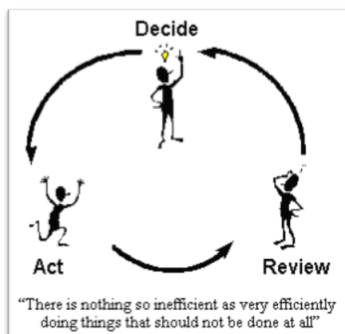
## Data Source



### □ Adjustment and anchoring.

The effect of anchoring can be observed when people tend to perceive an initial number as an anchor and make their adjustments moving upward or downward from this number.

**Examples:** When was the initial release of Minecraft 1.0 on Windows/Mac/Linux? (adjustment heuristic: most probably, you can guess that it happened after 2009 when Window 7 was released). Is the annual mean temperature in England higher or lower than 20C? (anchoring heuristic: your estimate will be affected by the number provided).



Those heuristics and biases have been discussed and extended over last decades, but still, the three original ones have a significant impact on research of judgment and human behaviour.

Another psychological trait has been discussed extensively in the psychological studies is overconfidence of individuals about their abilities or experience (or unrealistic optimism to something). Sometimes this bias referred to as "wishful thinking". If people are sensitive to perceive extremeness of evidence while not questioning its validity, then their judgments will likely be overconfident. Philip Tetlock in his book "Expert Political Judgment: How good is it? How can we know?" showed that the experts performed worse in forecasting of their particular topic than throwing dice. The reason is that the person who acquires more knowledge develops an enhanced illusion of her skill and becomes unrealistically confident.

# Resource One

## Data Source



Other biases have been described in the literature:

- a phenomenon of regression to the mean which means initial susceptibility to exceptional events (people tend to give more attention than needed) which usually leads to the wrong perception of significance.
- the illusion of understanding when individuals have confidence in their interpretation of past events (Taleb, 2008).
- the illusion of control is associated with the belief that one can control or influence the outcomes of chance events.

Overall, we can list several possible reasons for human faults in decision making (usually having emotional and cognitive roots):

- a group opinion (especially if a focus group is involved);
- a role (within an organisation/department group);
- commercial target motivation (especially in marketing departments where special targets are set to achieve);
- personal biases (e.g. personal overconfidence based on experience)

# Resource One Activities



## Activities 1

- 1) Can you list all heuristics and biases which have been mentioned in the text?
- 2) When the main three were proposed?
- 3) How would you contrast 'Representativeness' and 'Availability' heuristics?
- 4) What examples can you find to 'Adjustment' bias?
- 5) How would you evaluate 'Anchoring' bias? Is good or bad? Why?

## 2

What cause of death is more frequent?

- Transport crashes or Diabetes;
- Skin diseases or Alcohol Consumption;
- Drugs (i.e. heroin) or Falls on and from stairs/steps.

What heuristics did you use here?

## 3

Claire S is a student at a leading university in England. Please rank the following nine fields of undergraduate specialisation in the first column (Score 1) in order of the likelihood that Claire S is now a student in each of these fields. Use 1 for the most likely, 9 for the least likely.



Specialization	Score 1	Score 2
Business and administrative subjects		
Creative arts and design		
Computer Science		
Mathematical Sciences		
Biological sciences		
Social studies		
Medicine		
Agriculture and related subjects		
Architecture, building and planning		

# Resource One

## Activities



**Activities** The following is a personality sketch of Claire S written during Claire's senior year in high school by a psychologist, on the basis of psychological tests of uncertain validity:

*Claire S is of high intelligence, although lacking in true creativity. She needs order and clarity, and for neat and tidy systems in which every detail finds its appropriate place. Her writing is rather dull and mechanical, occasionally enlivened by somewhat corny puns and flashes of the imagination of the sci-fi type. She has a strong drive for competence. She seems to have a little feel and little sympathy for other people and does not enjoy interacting with others. Self-centred, she nonetheless has a deep moral sense.*

Now please rank the same courses by how similar the description of Claire S is to the typical student in each of the following fields (Score 2 column). Use 1 for the most likely, 9 for the least likely.

What heuristics did you use in this task? How useful are they?

# Resource One Further Reading



**Explore** Kahneman, D., 2012. Thinking, fast and slow. Penguin, London.

Taleb, N.N., 2007. The black swan: the impact of the highly improbable. November 2008, London: Penguin.

The first chapter of Kahneman (2012)

<https://www.scientificamerican.com/article/kahneman-excerpt-thinking-fast-and-slow/>

[TED Talk by Daniel Kahneman \(2010\)](#)

[Talks at Google, Daniel Kahneman \(2011\)](#)

Cognitive bias cheat sheet:

<https://betterhumans.coach.me/cognitive-bias-cheat-sheet-55a472476b18>





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