How Often Do Companies Make Right Decisions: Theoretical Explanation of an Empirical Observation

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1. Empirical Observation That Needs Explaining

- How do companies make big decision and how often do they make right decisions?
- Analyzing dozens of cases, P. C. Nutt concluded that:
  - in the vast majority of cases,
  - companies considered only one alternative.
- It turns out that in such cases, the correct decision was made in half of the times.
- (Actually, slightly less than half).
- In other 50% of the cases, the decision led to a failure.
- In several cases, companies considered two different alternatives before making a decision.
- In such cases, the companies were successful 2/3 of the time.

2. Our Explanation

- Usually, a big company has one major competitor.
- Thus, a company's project leads to a success if
  - this project is better than
  - a project implemented by a competing company.
- Let us first consider the case when a company considers only one alternative.
- The vast majority of companies only consider one alternative.
- So, it is reasonable to assume that the competitor also considers only one alternatives.
- One of the two considered alternatives is better.
- In our analysis, we consider both companies.

3. Our Explanation (cont-d)

- So, the situation is symmetric:
  - the probability that the first company's project is better is the same as
  - the probability that the second company's project is better.
- These two probabilities should add up to 1.
- So, each company prevails with probability 50%. Thus, the 50% observation is explained.
- On the other hand, if a company consider two alternatives, then,
  - since a competitor usually considers only one alternative,
  - now we have three possible projects to consider.

4. Our Explanation (cont-d)

- The probability for each of these projects to be the best is the same: $1/3$.
- The first company wins the best of its two projects is the best.
- So, it wins if either its first project is the best or if its second project is the best.
- The probability of this happening is equal to

$$1/3 + 1/3 = 2/3.$$

- This explains the second empirical observation.

5. Comment

- Let us go back to the one-alternative case.
- Let us take into account that sometimes, the competitor considers two alternatives.
- In such cases, the probability for the first company to succeed is $1/3$; so:
  - in most cases, the company succeeds with probability $1/2$, but
  - in some cases, it succeeds with a lower probability $1/3$.
- Thus, overall, the probability of success is slightly lower than $1/2$.
- This is exactly what was observed.

6. References

- S. Johnson, "How to make a big decision", *New York Times*, September 1, 2018, p. SR10.
- P. C. Nutt, *Why Decisions Fail: Avoiding the Blunders and Traps That Lead to Debacles*, Berrett-Koehler Pub., San Francisco, 2002.