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

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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 [1,2] 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.

How can we explain this empirical data?

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. Since the vast majority of companies only consider one alternative, 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; 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, now we have three possible projects to consider. 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 – i.e., 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.

Comment. In the one-alternative case, we can also 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 – which is exactly what was observed.

[1] S. Johnson, "How to make a big decision", *New York Times*, September 1, 2018, p. SR10.

[2] P. C. Nutt, *Why Decisions Fail: Avoiding the Blunders and Traps That Lead to Debacles*, Berrett-Koehler Pub., San Francisco, 2002.