

# **SELF-CONFIDENCE & TASK PERFORMANCE: SELF-EFFICACY & GOAL ORIENTATION IN SUPPLY CHAIN DECISION MAKING**

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## **ABSTRACT**

Decision making is a function of competence. It is also a function of confidence (or self-efficacy) in the decision maker's abilities and traits. The role of self-efficacy and its tendency to change as a result of performance and other learning experiences was first proposed by Albert Bandura through social cognitive theory [1]. He suggested that individuals' levels of self-efficacy can vary across time depending on whether they performed well or not. However, there is little evidence that demonstrate a within-person change in self-efficacy due to performance [2]. Therefore, we propose that self-efficacy will have at least two relationships with performance. First, higher initial self-efficacy will lead to better task performance later. Self-efficacy is also important in the context of goal setting, which will be explained below.

Hypothesis 1: Higher initial (at the start of the performance) self-efficacy scores will lead to higher net profit with the relationship being stronger in the goal condition.

Second, we also propose that within person changes in self-efficacy will be influenced by past performance episodes. For example, an individual with high levels of past performance will increase his or her self-efficacy levels even after controlling for his or her initial self-efficacy levels. Therefore, final performance results will influence the within-individual change in self-efficacy.

Hypothesis 2: Higher final performance will lead to higher final self-efficacy levels, even after accounting for the initial self-efficacy levels at the start of the experiment.

Additionally, we examined whether people with higher self-efficacy will perform even better when specific and difficult goals are set, because they have a reference point (the set goal) that they could use for feedback [3]. It has already been shown over the years that setting specific and difficult goals results in higher task performance than just asking individuals to "do their best" (referred to as the Do Your Best-DYB condition).

Another relevant construct that has been shown to impact task performance is goal orientation [4]. When presented with a goal, and while they are performing a task, individuals could tend to be innovative and find new ways to accomplish the task. This type of orientation to the goal is called Learning Goal Orientation (LGO). We propose that trying out new ways to accomplish a task will positively impact their final self-efficacy levels.

Hypothesis 3: Higher LGO scores will be significantly and positively correlated to final self-efficacy levels.

Subjects (N = 198) participated in a simulated two-stage supply chain similar to ‘The Distribution Game’ developed by Jackson and Muckstadt [5]. Each participant was randomly assigned to a goal (specific and difficult net profit; N = 98) or a do-your-best (DYB; N = 100) condition. First, we measured their self-efficacy, goal orientations and other variables, and the participants were informed of their goal condition. Then, they were provided an opportunity to practice the game for a few minutes to get familiar with the mechanics. They then proceeded to play the game for 200 simulated cycles (days). In each cycle, they had to make inventory ordering decisions at a warehouse and three retailers. The net profit and fill rates were monitored. Participants were reminded of their goal condition halfway through the game (on the 100<sup>th</sup> day). Self-efficacy was again measured after they completed the game (on the 200<sup>th</sup> day).

To test hypothesis 1, we performed a correlation analysis between self-efficacy at the beginning of the game and the net profits (performance) on the 200<sup>th</sup> day. Hypothesis 1 was supported ( $r = .28^{**}$  in the goal condition, n.s. in the DYB condition). To test hypothesis 2, we performed hierarchical regression analyses separately in the goal condition and the DYB condition. In the analyses, the SE score on the 200<sup>th</sup> day was entered as a dependent variable. At step 1, SE at time 1 (start) was added, and in step 2, SE at 200<sup>th</sup> day was added. Hypothesis 2 was supported ( $\Delta R^2 = .15^{**}$  &  $.21^{**}$  for DYB and goal conditions respectively). To test hypothesis 3, we did a correlation analysis between LGO and self-efficacy measured on the 200<sup>th</sup> day. Hypothesis 3 was partially supported ( $r = .24^*$  for the DYB condition, but not for the goal condition).

To conclude, our study investigated within-person changes in self-efficacy. We found that self-efficacy changes according to past performances. These changes in self-efficacy remained significant even after accounting for one’s initial self-efficacy levels (before the performance). This underlines the effect of learning on self-efficacy. Organizations could use this result to justify periodic training to increase self-efficacy in their employees. Self-efficacy was also predicted by initial levels of LGO.

## REFERENCES

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