Behavioral Performance Evaluation

Mohsen Afsharian
Technische Universität Braunschweig, Germany

Heinz Ahn
Technische Universität Braunschweig, Germany

Nadia Vazquez Novoa
Technische Universität Braunschweig, Germany

INTRODUCTION

Performance evaluation, understood as a comprehensive process that includes framework building, performance measurement, and performance data interpretation, has been extensively studied by the management control and business accounting community. In the respective literature, performance evaluation has been recognized as an element of critical importance that provides valuable information for decision facilitating and decision influencing (Sprinkle, & Williamson, 2007). Previous research has especially addressed the combination of different performance indicators, such as financial and non-financial criteria (Ittner, Larcker, & Randall, 2003b).

The additional consideration of non-financial performance criteria offers a series of benefits to the decision maker, but it also poses significant challenges (Luft, 2009). A main kind of challenges results from the limited rationality of the decision makers and the complex nature of the evaluative task, which motivates managers to resort to a heuristic approach (Ding, & Beaulieu, 2011). Research on such behavioral performance evaluation has mostly focused on the application of a balanced scorecard (BSC), providing insights into the current use and interpretation of this instrument by decision makers.

The operations management (OM) literature, on the other side, has mainly concentrated on the development of quantitative models to measure performance. These models allow sophisticated decision making, but they also have been criticized by experts of the behavioral operations field since they ignore human behavior and cognition, thus failing to provide support to real-world decision making (Loch, & Wu, 2005; Bendoly, Donohue, & Schultz, 2006; Gino, & Pisano, 2008). However, despite this criticism and the associated potential of behavioral operations management (BOM) as a productive research field, the number of publications in this area is still limited. A reason for this gap may be the considerable effort related to the acquisition of knowledge from cognitive and social psychology (Bendoly, Croson, Goncalves, & Schultz, 2010).

Based on a short review, the objective of this chapter is to investigate possibilities for a fruitful BOM research on performance evaluation. As an example, a set of research hypotheses for the case of behavioral performance evaluation using Data Envelopment Analysis (DEA) will be proposed.

BACKGROUND

Behavioral Decision Making: Heuristics and Cognitive Biases

Behavioral decision making is a core topic of cognitive psychology. The respective research has identified a series of cognitive limitations affecting the decision making process. Cognitive limitations allude to the bounded processing capacities of the human mind, which may result in suboptimal

decisions. This "bounded rationality" has been first stressed by Simon (1957). Since then, the progress of the cognitive psychology has permitted to extensively explore how people actually decide, establishing the descriptive decision making theory. The key finding is that people usually cope with decisions by intuitively resorting to heuristic rules that reduce the cognitive effort (Shah, & Oppenheimer, 2008). These rules facilitate and may even improve complex decision making, but they can also lead to systematic cognitive biases, which are defined as violations of the axioms of prescriptive decision making theory (Gilovich, & Griffin, 2002).

One important area of research emerging from Simon's concept of bounded rationality deals with heuristic judgment and choice. These are two similar processes of assessing alternatives that primarily differ on their outcome: while judgment implies only the determination of a final value for each alternative, choice implies that the alternative with the best value will be selected. Choice problems require people to solve five tasks: identify all cues, recall and store cue values, assess the weights of each cue, integrate information for all alternatives, and compare all alternatives to select the one with the highest value (Shah, & Oppenheimer, 2008). Several heuristics, understood as "methods for arriving at satisfactory solutions with modest amounts of computation" (Simon, 1990, p. 11), have been proposed to cope with the cognitive load in each of these judgment and choice tasks.

The most famous heuristics are the three rules of thumb identified by Tversky and Kahneman (1974), which permit to diminish the difficulty of recalling and storing cue values: representativeness, availability, and anchoring-and-adjustment. Representativeness stands for the tendency to look for traits that correspond to previous stereotypes when making a judgment. Availability proposes that people decide on the probability of an event by intuitively considering how easily it can be brought to mind. Anchoring-and-adjustment implies that people make estimations by starting from an initial value and adjusting it to yield the final estimate; if previous information is used although it is less suitable or even objectively irrelevant for determining the searched value, the anchoring bias occurs.

Besides these three heuristics corresponding to the heuristics-and-bias program, the fast-and-frugal program has identified some other important rules of thumb. Previous research revealed that people tend to avoid the difficulty of making trade-offs by assigning equal weights to all cues or alternatives (compensatory strategies), or they even decide solely on recognition or using just one cue (non-compensatory strategies; Gigerenzer, & Gaissmaier, 2011).

The knowledge about such heuristics and biases is especially important for the comprehension and improvement of managerial decision making. It therefore has stimulated research from the perspective of particular managerial disciplines. Several new research fields emerged, such as behavioral finance, consumer decision making, as well as behavioral management control and business accounting, which is addressed in the following section with the focus on performance evaluation aspects.

Behavioral Performance Evaluation

Research on behavioral management control and business accounting includes performance evaluation as one of its topics of interest (Sprinkle, & Williamson, 2007; Birnberg, 2011), especially referring to the BSC. This instrument uses a multidimensional structure of key performance indicators without aggregating them to an overall performance measure. Two main effects have been identified: (1) over-reliance on financial measures, i.e., more importance will be assigned to financial than to non-financial criteria when evaluating business performance (Ittner, Larcker, & Meyer, 2003a); (2) common measure bias, i.e., common and general criteria are favored over unique and strategy-linked criteria (Lipe, & Salterio, 2000;

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