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Portfolio Planning Methods: Faulty Approach or Faulty Research? A Rejoinder to "Making Better Decisions" by Wensley

J. Scott Armstrong

The Wharton School, University of Pennsylvania, Philadelphia, PA 19104, USA

Roderick J. Brodie

Department of Marketing, University of Auckland, Auckland, New Zealand

ABSTRACT

Wensley (1994) makes three key points. First, it is worthwhile to conduct empirical studies of the value of management techniques. Second, managers probably misuse portfolio methods. Third, the Armstrong and Brodie study is flawed. We agree with all three points.

The need for objective evaluation research

With respect to the first point, we agree to the point of being fanatics. We identify with Martin Arrowsmith, the medical researcher in Sinclair Lewis's 1924 novel *Arrowsmith*. He believed that the medical field should evaluate medicines as well as develop them, and that the evaluation should be done in an objective manner. Martin Arrowsmith was not popular. But scientific progress depends upon objective evaluation studies.

Portfolio matrices have been widely prescribed for the past two decades, yet they have not been tested in a scientific manner. Of course, portfolio planning methods are not alone among management prescriptions in this respect. We believe that a primary function of management science should be to test widely prescribed procedures.

We appreciate Wensley's support for evaluation research. Many people do not share this belief. Our paper was in the review process for a few years. The response by some reviewers was vicious. They said that they were not convinced, could offer no advice about what evidence would convince them, could not see how to improve the study, and recommended that it would not be proper for readers to see this paper: While these reviews led to many improvements and to a more convincing case, they did not alter the basic conclusions of the study.

Misuse of portfolio matrix methods

Wensley suggests that users must be educated on how to properly use portfolio matrices. If we educate people to use portfolio methods and then give them a problem, what constitutes success, using portfolio methods well, poorly, or not at all? We believe the correct answer to be "not at all." This simplifies the educational process.

In the real world, advocates are trying to educate managers to use portfolio matrices as a decision-making aid. This is precisely what we do in our experiment. We believe that people are being misled in the real world, so we provide the same advice in a laboratory experiment. Will they fall for the advice? Many do. The BCG matrix technique passes the market test in our experiment, just as it does in the real world. Of the 296 subjects who were told about the BCG matrix, 173 (58.4%) used it. When it was used as an aid, most decision makers were misled, which is what we expect to happen in the real world. Of the 173 who accepted the advice, 86% selected the less profitable decision. The findings are consistent with those in Capon et al. (1987), which found that those firms using the BCG matrix were less profitable.

A flawed study

On the third point, we agree, but not to the extent that Wensley states the case. Because we have never done a study that was not flawed in some way, we are not surprised that this study has flaws. Nevertheless, we do not see

the flaws as serious. Because these are the first experiments on the value of portfolio methods, the key question is what provides the best evidence, previous unaided opinions or our experimental results? We favor the latter.

Wensley raises the issue of whether our design encouraged a particular response (the so-called “demand-effects” issue). As noted in our paper, this is unlikely because (1) subjects were instructed to maximize profits and they did not do so, and (2) when some subjects were given *both* treatments (BCG and profit maximizing techniques) they made the same decisions as did the subjects who received the BCG treatment only.

Wensley analyzed conditional effects. We had no hypotheses about conditional effects. We hypothesized only a main effect: That is, once a manager decides to use a portfolio matrix as a decision aid, we expected that he would be misled. This would occur whether subjects thought of the matrix on their own or whether they were influenced by the “course” that we had them attend. We can think of a variety of hypotheses, but the directional effect of these hypotheses varies. For example, those who spontaneously think of using a portfolio matrix may be zealots who will use it on anything. Or, spontaneous users may have had more education on portfolio matrices, so they would better understand their limitations.

Wensley suggests that the BCG matrix might have the favorable effect of getting firms to pay more attention to market share. Here again, we believe this to be contrary to basic economics. Armstrong et al. (1993) provide evidence that a focus on market share harms long-term profits.

Wensley suggests that the situation in our study is not complex enough. We disagree. Locke's (1986) research suggests that relatively simple laboratory experiments have high external validity. Added complexity might increase the likelihood of alternative explanations. But, added complexity seems likely to lead to even stronger results than we obtained. To see this, consider what would happen if we made the task so simple that we asked people “Would you like to double your investment or lose half your investment, considering that the former would be earned with a Dog and the latter would be lost with a Star?”

We were puzzled by Wensley's comment that the choice of an advertising decision for the star might have influenced the results. We specifically tested for this issue in our study and reported that when we reversed the advertising and cost-saving descriptions for the two products, we got even stronger results.

Wensley suggests that heuristics have a strong influence on decisions. The results in our study showed only a modest effect. Specifically, the use of the payback period heuristic was weak. What is important, it seems, is having a heuristic that supports people's intuitive reasoning, as it did for the BCG matrix. Here, the results were strong.

Extending evaluation research

Wensley suggests that it is easy to design a study that will show how BCG can improve decision making. Although we do not understand his design, we hope that others will take up the challenge. We do not assert that it is impossible to find evidence favoring portfolio matrices, only that we were unable to design such a study within the limitations of our research budget. It might be, for example, that managers make such poor decisions in some situations so that a portfolio matrix would limit the damage. The research would have to define the conditions under which the portfolio matrices would improve decisions, then design a study within those situations.

Conclusions

Wensley said that he was not surprised at the results. We were not surprised either, because the results were as we predicted. They are consistent with what we would expect from the literature on mental budgeting.

Who should be surprised? The managers and future managers that we surveyed should be surprised to learn that the BCG matrix is likely to produce poorer decisions. Only five percent of our sample of managers thought that it would lead to poorer decisions, while 66% thought that it would improve decisions. And yes, we do allege that a decision that doubles your investment is superior to one that loses half the investment, all other things equal (as they were in our study). The theory is that people typically prefer more money to less.

We find it puzzling that so many firms have used portfolio matrices given that they are contrary to economic theory and they had not been tested. It will be interesting to see how they respond given the negative results from our experiments.

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