Evaluating Corporate Management Training: DuPont Profitability Analysis

M. Roucan-Kane
Assistant Professor
Sam Houston State University

L. A. Wolfskill
Assistant Professor
Sam Houston State University

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Introduction/Need for Research

Improving the delivery and effectiveness of educational programs is extremely important to those who fund, implement, administers or attend programs (Nielsen, 2011) and therefore make testing the effectiveness of a program critical. Several reasons that justify the evaluation of a training program have been identified, including,

- "Justify the investment of time and effort, as well as the dedication of public and private funds.
- Earn and build professional, organizational, and political credibility and support.
- Satisfy the requirements of political bodies and funding agencies.
- Yield tangible results that serve as a basis for scholarly publications, as well as awards and recognition.
- Determine to what degree participants achieve intended results." (Diem, 2003, para. 1)

The DuPont Profitability model is a well-known method for using information from common financial statements to analyze a business' health. Gunderson, Detre, and Boehlje (2005a) illustrated the DuPont model applied to an agribusiness company. Gardner, McGowan, and Moeller (2011) used the DuPont model on the Coca-Cola Corporation. Barnard and Boehlje (2004) provided an illustration of the DuPont model with a fictitious farm. The DuPont model assesses the financial performance of the company by using numbers from the balance sheet and income statement. The DuPont model also indicates which factors have the most influence on the company's financial results.

Program Background

The Center for Food and Agricultural Business (CAB) at Purdue University has developed a two-day program for John Deere territory managers. John Deere territory managers are employees of Deere and Company that work with independent (non-employee) John Deere dealers to help them improve their financial performance. The CAB program is an advanced financial management class designed to teach the linkages among financial ratios to territory managers using the DuPont model. Managers apply the concepts throughout the training program through a case study of a John Deere dealer. At the beginning of the program, the participants review financial statements (balance sheet, income statement, statement of stockholder's equity, and statement of cash flows) and the links between them. The instructors then discuss the five key financial performance areas that are of particular concern to a corporation's Chief Financial Officer: profitability, capital structure and debt service, size and growth, risk and financial documentation, and creating shareholder value. A discussion of financial analysis and benchmarking is then proposed through a presentation of key financial ratios and benchmarks. The final presentation in the series provides information on financial diagnostics and relates the topics presented earlier by introducing the DuPont model and the cash

conversion cycle. This instructional program has been given to ten classes composed of about 22 John Deere territory managers each between 2004 and 2009.

Methodology

The data used in this research is based on pre-tests and post-tests conducted between 2005 and 2009 over seven programs. Melvin, Boehlje, Dobbins, and Gray (2004) used the same pre-test and post-test procedure and the same set of questions to test the effectiveness of a software-based training program with graduate students and farm producers.

Each participant was given a pre-test at the beginning of the program and a post-test at the end of the program. Both tests had the same ten questions, presented in a different order on each test. These ten questions can be organized in three areas of learning: calculation based, conceptual based, and application based, with each area relating specifically to the concepts, strategies, terminology, and calculations of the DuPont model.

Results and Findings

Overall test scores increased slightly for the participants after attending the program. The average score for the pre-test was 5.67 out of 10 with a score of 6.57 out of 10 for the post-test. Self-assessment of financial knowledge also increased from 2.76 to 3.56 on average (on a 5-point Likert-type scale). For each class of questions – calculation, conceptual, and application – the scores increased on average. However, less than half of the respondents increased their scores for the calculation and conceptual based questions. In contrast, nearly three quarters (71%) increased their scores for the application questions. This latter result is extremely positive news, given that the most important aspect of the program is being able to apply and give recommendations to dealers. One may have expected that more respondents would have increased their scores in the conceptual questions. However, participants already performed quite well on those conceptual questions in the pre-test, as the average score of 2.48 out of 3.00 served to limit the opportunities for improvement.

Conclusions

Testing and reporting the efficiency and effectiveness of training programs is and will continue to be a critical part of managing a successful workshop. A pretest and posttest methodology was used to show the effect of a program focused on the learning and application of the DuPont financial model. This program was given to John Deere territory managers who work with independent John Deere dealers to help them improve their financial performance. Understanding concepts and applications can aid territory managers in realizing what is happening in the dealerships under their care, allowing them to better lead and mentor the managers within their district.

The results show that the program leads to an increase in the managers' self-perceived assessment of their financial knowledge. In addition, managers increased their understanding of the financial concepts embodied in the model, even though their ability to actually calculate the measures may not have been significantly enhanced. However, such calculations can easily be programmed into a spreadsheet or stand-alone program.

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