

# Simulations, Games and Experiential Learning Techniques:, Volume 1, 1974

## ADMAG I: AN ADVERTISING MANAGEMENT GAME

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For the next few minutes I would like to relate to you the frustration and successes I have enjoyed in creating and marketing a computer scored elementary advertising management game called ADMAG I.<sup>1</sup> Let me begin with a short description of the learning objectives behind ADMAG I and how the game is played.

### THE PURPOSE OF ADMAG I

Advertising education, during its relatively short history as a formal discipline, has been marked by several important changes in its objectives and direction. The trend has moved from a craftmanship or trade school approach to a more professional and managerial orientation, with game instruction as one of its more recent manifestation.

ADMAG I (Advertising Management Game I), a computerized elementary advertising management game, was developed three years ago to meet the needs of a new generation of advertising students. The primary objective of ADMAG I is to expose game participants to advertising operations in a competitive and realistic environment. Players are taken step-by-step through the basic advertising process and are required to make budget, media, and copy decisions along the way.

ADMAG I differs from many of the business games now on the market in that specific tools and techniques are emphasized in the text rather than placing total emphasis on the game environment. For example, in the budget planning area, game participants are taught to use decision rules such as “minimax,” “maximax,” and “expected payoff” in determining their corporate strategies. In the area of media operations, the use of mathematical models is stressed. And in the copy area, the social-cultural adoption and learning process is introduced.

ADMAGE I was constructed to meet the following specific game requirements:

1. Systems Orientation. The participant playing ADMAG I soon learns the value of studying the firm as an operating system rather than as a series of independent departments. Moreover, the participant begins to see the firm as part of a larger system and soon realizes that various changes in the game environment are caused by the interaction of the marketing strategies of all firms in the industry rather than any one firm.
2. Self-learning Process. Because the emphasis in ADMAG I is on decision-making tools and techniques rather than the game environment, the participant can actually observe the value of several

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<sup>1</sup> ADMAG I was developed by Charles Y. Yang and James D. Culley for use in advertising management classes. Copies of the player and instructor manuals for the game are available at cost from the Bureau of Business and Economic Research, University of Delaware, Newark, Delaware 19711.

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major decision tools and at least one marketing research service (Starch Magazine Readership Service) as he progresses through the game. Moreover, ADMAG I enjoys the benefits shared by other business games in its ability to simulate participant interest in the learning process.

3. Competitive Environment. Individual firm results in ADMAG I are determined by competitive as well as environmental factors.
4. Output Generation. ADMAG I was designed to print out meaningful and realistic game results. Each firm receives data on the market in general, the firms market share, the firms profits, etc. A summary sheet is also printed out listing pertinent data on all firms playing the game for the individual administering the game.
5. Dynamic. ADMAG I contains a feedback mechanism through which game participants may improve their decisions in subsequent periods. However, unlike most computer scored business games, ADMAG I has been designed for only a very limited series of rounds. (Three rounds is the recommended number.)

The structure and content of ADMAG I can best be summarized by Table 1.

### PLAYING ADMAG I

The rules for participating in the game are relatively simple. Players are divided into industries of three teams each, with each team representing a firm in the color television industry. (If time permits, the case on which the game is centered may be revised to fit more closely with the backgrounds and interests of the game participants.)

To assist each team in developing its decision making ability, a series of integrated worksheets are provided in the participant manual. These worksheets have been organized so that each participant can follow through each stage in the decision-making process.

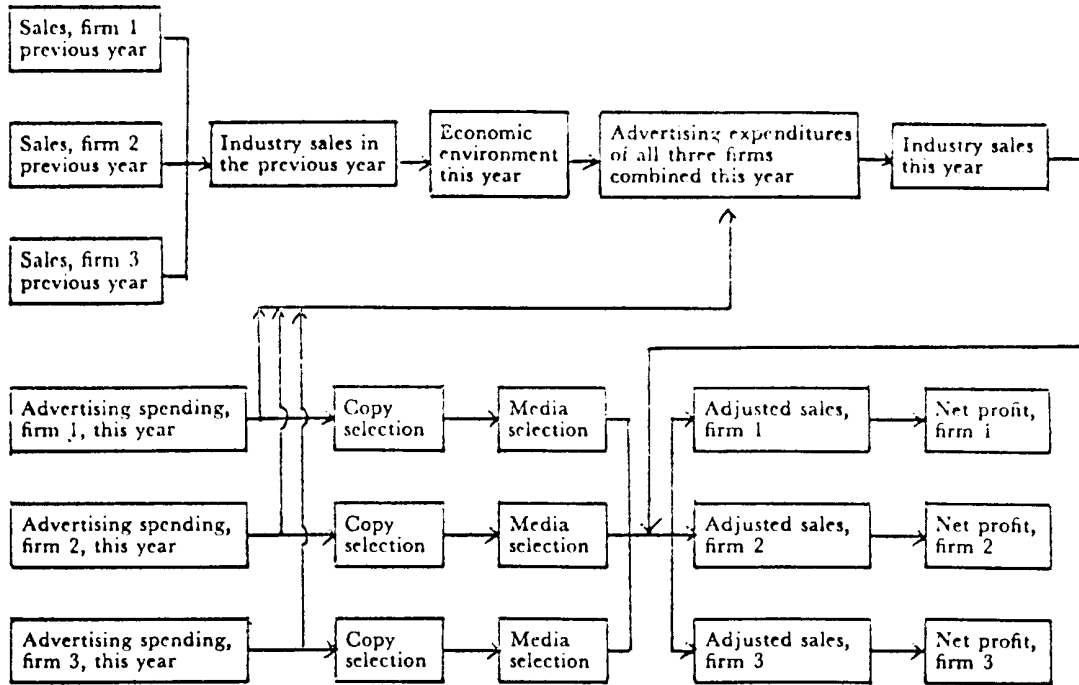
Each team has direct control over three “decision variables”: (1) the amount of advertising expenditures, (2) which advertising copy to use in view of the established copy objectives, and (3) which combination of media (media plan) to use in view of the established media objectives. For two of the decision variables, copy and media, the firm must make a selection from the available alternatives given in the game information or provided by the game instructor. Advertising expenditures, however, may be set at any value. Within these restrictions, the team may choose any strategy it desires.

The quantitative relationships underlying the exercise are as follows:

1. Industry sales increase when:
  - a. Over a period of time, there is a gradual increase in demand for the industry’s product which continues regardless of what the firms do.

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## The Content And Structure of ADMAG-



(A) <i>Decision Areas</i>	<i>(Budget)</i>	<i>(Copy)</i>	<i>(Media)</i>
(B) <i>Information Available for the Game</i>	1. Annual sales growth rate 2. Advertising elasticity 3. Sales-profit relationship	1. Copy objectives 2. Five proposed advertisements	1. Media objectives 2. Response functions 3. Five proposed media schedules 4. Reach and frequency for each schedule
(C) <i>Recommended Decision Method</i>	Maximum expected payoff method	Objective (task) method	Response value optimization method
(D) <i>Game Elements</i>	Company's sales and profits are affected by company advertising spending relative to other companies in the industry	An increase in sales for a good copy selection and a decrease for a poor selection relative to the selection of the other companies as determined by the reward-penalty function	An increase in sales for a good selection and a loss for a poor selection in proportion to the company, share of the effective exposures to the prospective customers
(D) <i>Game Inputs (for each firm)</i>	Company's advertising spending for the coming year	Copy selection	Media selection
(E) <i>Game Outputs (/o, each firm)</i>	Main outputs: sales, gross profit, net profit, and market share Supplementary outputs: 1. comments on advertising spending 2. comments on copy selection in terms of Starch ratings 3. comments on media selection in terms of the response value.		

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- b. Total industry advertising expenditures increase.
2. The individual company's share of the market increases when:
- a. The advertising expenditures by the firm, relative to the average expenditures of the other firms, increases.
3. The individual company's sales increase when:
- a. The company has a higher share of market brought about by a good advertising budgetary strategy.
  - b. The copy plan selected by the firm is more consistent with the firm's overall objectives than the copy plans selected by either or both of the other firms.
  - c. The media plan selected by the firm has a higher response value relative to the media plans selected by the competing companies.
4. The individual company's profits increase when:
- a. Sales increase faster than advertising.
  - b. The company is rewarded for good selections in advertising copy and media schedule.

The source program for ADMAG I is written in Fortran Extended and is thus easily adapted to many computers for which Fortran compilers are available. The program uses card input and print and card output, but the program can be easily adapted to eliminate the card output if proper punch facilities are not available.

The cost of running the game depends on such factors as the size of the computer used, the priority of the computer runs, and the total of runs made, but the total cost should be relatively low. For example, one complete run of the game with thirty teams playing in ten separate industries only takes eleven seconds of central processing time on the CDC 6500 at Michigan State. This amounts to a cost of less than \$2.00 per run on the Michigan State system. Each additional industry requires a little more than one second of central processing time.

### ADMAG I - THREE YEARS LATER

"That's fine," you say. "The game sounds interesting. But ADMAG I has been on the market for three years now. What happened?"

In the last three years, ADMAG I has changed a little and Dr. Charles Yang, my co-author, and I have changed alot. When the game was written, Dr. Yang was in the Department of Advertising at the University of Illinois and I was a doctoral student at Michigan State. Dr. Yang is now Managing Director of Hakuhodo Inc., the second largest advertising agency in Japan. I'm now an Assistant Professor of Business at the University of Delaware. And ADMAG I, well ADMAG I is selling well in Japan but not in the U.S. Why?

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The answer is evident if we examine the market for the game. ADMAG I in Japan is marketed through seminars sponsored by the Japanese Management Association. The seminar participants playing the game are highly motivated, skilled practitioners in the advertising profession.

Three years ago when the game was virtually complete, we couldn't get a major U.S. publisher to handle it. "The market is too small," they said. "Advertising departments are rarely in the business schools. Moreover, they aren't used to using the computer in the classroom."

As a result of the publishers comments, Dr. Yang and I had the game printed for use in our classes and for sale at cost to any faculty interested in experimenting with the tool.

After three years experience with both graduate and undergraduate students using the game, I am ready to admit the publishers were right. The majority of undergraduate students are not prepared for even the simple decision-making tools suggested in ADMAG I. On the graduate level, however, the game appears to be successful. Faculty at the University of Florida, Florida State University, the University of Michigan, the University of Illinois, and Michigan State University have used ADMAG I in their graduate advertising sequences with reported success.

I have enjoyed putting ADMAG I together with Dr. Yang and would probably do it all over again if given the chance again. But like all things in life, my interests in ADMAG I are beginning to wane. I believe the principles underlying ADMAG I are sound, and I believe there is a market for the game as it is. Now it's up to people like you to take our experiences and use them in developing your own games. If you would like copies of our player's manual, instructor's manual, or computer program, please write the Bureau of Business and Economic Research, University of Delaware, Newark, Delaware 19711.

Thank you.