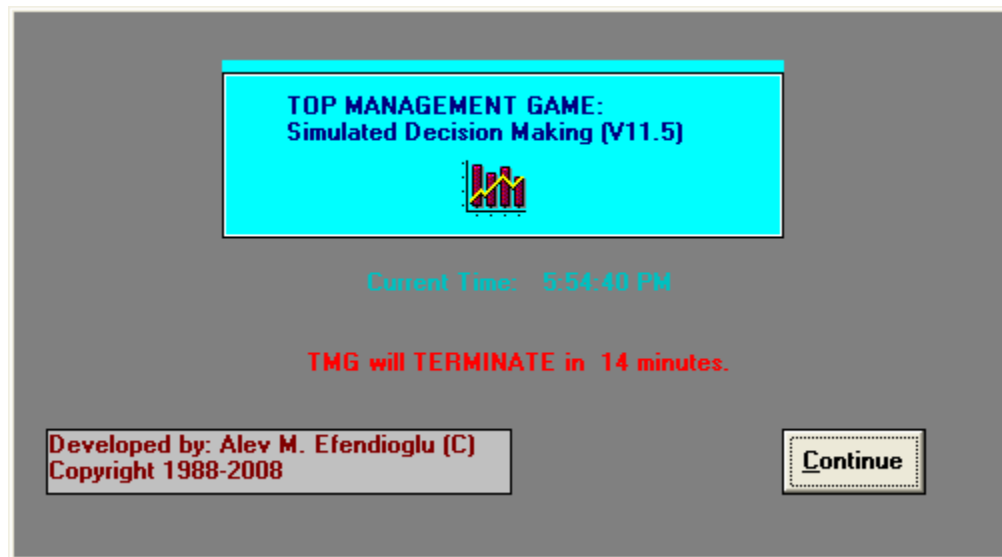


**TOP MANAGEMENT GAME: SIMULATED DECISION-MAKING®
ADMINISTRATOR'S MANUAL**



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TOP MANAGEMENT GAME: SIMULATED DECISION-MAKING

INTRODUCTION

Top Management Game (*TMG*)® is a management simulation designed to operate as a consumer product industry with oligopolistic characteristics. The companies in this industry manufacture (two products) and buy (one product), and sell three types of products. Various marketing, production, and financial functional decisions are built into the simulation and the participants are expected to use and deal with these concepts as they compete with other companies in the same industry. The participants assume the perspective of the Top Level Manager of the organization and make strategic and operating decisions. As the top management of their companies, the participants make decisions that determine the competitive direction of their firm and operationalize these decisions. Almost instantaneously, they see the results of their decisions and the impact they have on the firm's performance.

The primary objective of the TMG is to build management skills through practice. This is accomplished by requiring each participant to assume the perspective of a top-level decision-maker. They are expected to conduct analyses and make decisions that illustrate how all functional areas (e.g. marketing, production, finance, etc.) of the organization are dependent on each other. Furthermore, these functional decisions must be integrated into one consistent and coordinated direction for the firm. The importance of making coordinated strategic decisions and working effectively as a team is reflected in the financial performance of the firm.

Business Topics Covered and Skills Developed

FEATURE

Topics Covered: Marketing, Production, Finance, Decision Making

EXPECTED OUTCOME

Help students understand the interrelationships among different functional areas in a competitive setting.

Emphasis: Building strategic management skills through practice.

Help students develop management decision skills from a top management perspective.

Emphasis: Goal setting and implementation in an organizational setting.

Help students develop goal-setting skills and experience the implications and the end results of these goals through implementation.

Emphasis: Practice using the Decision Support Systems (DSS) that are available to the strategic decision-maker.

Help students become familiar and use the Decision Support Systems (DSS) such as spreadsheets, forecasting models, cash flow analysis, etc. A special decision tool is provided for the students that will take away the focus from computational efforts and put it on the strategic decision process.

DECISION CATAGORIES: PRODUCTION DECISIONS

- ◆ New Capacity Ordered

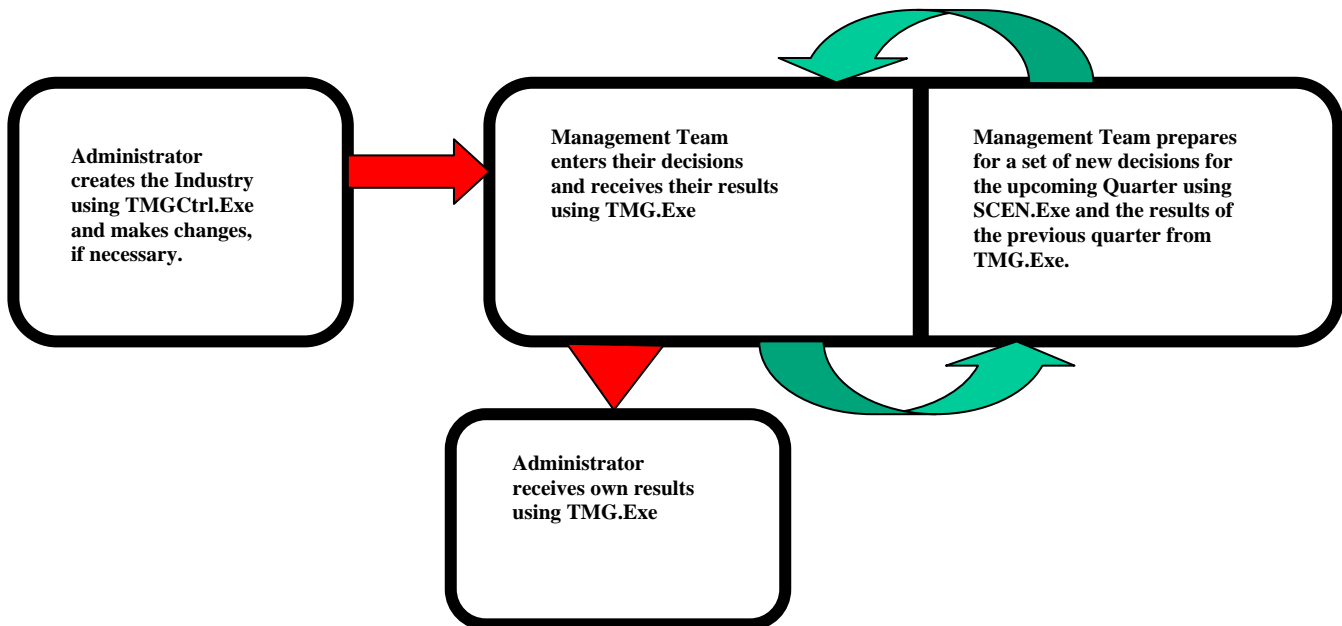
- ◆ Product A Ordered
- ◆ Product B Ordered
- ◆ Product C Ordered
- ◆ Existing Capacity Sold
- ◆ Production Lines Closed
- ◆ Research and Development (Product Quality)

- ◆ Price for Product A
- ◆ Price for Product B
- ◆ Price for Product C
- ◆ Advertising for Product A
- ◆ Advertising for Product C
- ◆ Sales Commission
- ◆ Sales Force
- ◆ Retail Outlets
- ◆ Fee for Consultants (Market Research)

MARKETING DECISIONS

- ◆ Loan Requested (Revolving Credit Line)
- ◆ % of Product C Paid in Cash (Trade Credit)
- ◆ Dividends Paid
- ◆ 3-Month Investment
- ◆ Issue/Recall Stock

FINANCIAL DECISIONS



The Simulation at a glance

Description of the Component Programs

There are three computer programs available for use by the game administrator. These programs are all menu-driven (i.e. choosing the options from a menu) with associated sub-menus. However, the user must be aware that the slightest mistake in data entry (e.g. an unnecessary comma or space etc.) will prompt an error message to which the user must respond. If any error messages are displayed and the user cannot respond to them, then the best thing to do is to start from the beginning. But if the problem persists, contact the publisher or the program author for technical support:

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The following sections briefly introduce each of the programs. There is a more detailed discussion of the programs in the later sections of this book.

Control Program (TMGCTRL.EXE ®)

This program will give the game administrator the ability to start the industries and to access any of the files that are used by the simulation program (TMG.EXE) and make any changes. Since the user has complete access to any file and can make any changes, it is imperative that the game administrator be very careful in allowing access to this program. To increase the disk security, you should activate this program immediately and enter your own personal SECURITY CODE. Once the personal security code is entered, the TMGCTRL.EXE program cannot be activated without first entering the correct security code. This way, even if somebody gains access to the disk, they will not be able to use the Control Program on that disk.

To use the program,

1. click on the Start Button on Windows® Task Bar;
2. at the Open Dialog Box, enter **A:|*TMGCTRL.EXE***;
3. click on the OK Button.

When the program starts, you will be asked for your security code. After entering the correct security code you will be given access to the main menu. If you are using the program for the first time, you can enter any code you choose. To use the program on subsequent instances you will need to enter this code to gain access to the main menu of the program. Once the program is activated, you will be guided through the program via menus and submenus. The default (recommended) answers to the questions in the program are provided for your convenience. If you accept these answers all you have to do is to press the ENTER Key. Otherwise, you can change it by pressing the appropriate key. Both upper case and lower case answers are acceptable.

TMG Program (TMG.EXE ®)

This is the main simulation program, which is used collectively by all the teams. It will accept team decisions, process them and provide the results to the team members. In other words, this program regulates the industry as a whole. You will use this program for only two purposes: one, to enter or change the quarterly company decisions, and two, to process these decisions and receive the results.

The quarterly operating decisions can be entered by the game administrator or by one of the team members. These different administrative modes are explained in the following sections. If the teams are going to enter their own decisions, the team members should have finalized their decisions before activating the program. If the game administrator is going to enter all the decisions (security or technical reasons might make this option a necessity), then, the teams will turn in their decision disks or forms (see administrative options section below) to the game administrator for processing.

The second purpose of this program is to provide the team members with the results of their quarterly operating decisions. These results will be available and can be printed out any time after the quarterly decisions are processed. Once the subsequent decisions are processed, the results of the previous quarter will be replaced. However, as each quarter is processed, a text file containing all the teams' results, for that quarter, is automatically created and can be printed at any time by the administrator. There are no limits to the number of copies that can be printed, therefore, each team member can have his/her printed results. Depending on the administrative option chosen (see next section for discussion of available options), the results can individually be printed by the students or printed and distributed by the game administrator. Irrespective of the method used, *the teams will need the previous quarter's results to be able to make effective operating decisions for the current quarter.*

To use the program,

1. click on the Start Button on Windows® Task Bar;
2. at the Open Dialog Box, enter A:\TMG.EXE ®;
3. click on the OK Button.

OR

1. log on to your network;
2. click on the Programs Icon (if that is where the program was installed by the network administrator)
3. click on the TMG icon.

When the program starts, you will be asked for the industry number, company number, and a security code. Access to the program will be granted based on the accuracy of these entries. The subsequent menu will be depended upon the company code entered.

Different menus are available to team members (students) and the administrator. The administrator's menu includes student menu items and additional options. (Please see the following sections for a more detailed discussion.) Once the program is activated, you will be guided through the program via menus and sub-menus. The default (recommended) answers to the questions in the program are provided for your convenience. If you accept these answers all you have to do is to press the ENTER Key. Otherwise, you can change it by pressing the appropriate key. Both upper case and lower case answers are acceptable.

Scenario Program (SCEN.EXE ®)

This program is designed to simulate the TMG Program and it should be a major decision tool (in addition to monitoring market conditions, developing trends and forecasts, planning, development and implementation of strategies). It accompanies the text and will be used by the students.

Scenario program is designed to help the managers (participants) test their decisions and their assumptions about the competition. This support tool enables the decision-maker to develop "what if" situations and test many different assumptions before the actual operating decisions are made. Since this program is a model of TMG, it is as such a decision support tool (DSS) for the manager (student). This is a unique feature of TMG and it greatly enhances its teaching capabilities. TMG book and the accompanying computer programs are designed to teach the students skills that will help them make strategic and operating decisions. A very detailed discussion of this program, including its characteristics and uses are explained and discussed in the Top Management Game: Simulated Decision-Making © book. The simulation participants should be encouraged to use this program before they meet with their team members to finalize the quarterly operating decisions.

ALTERNATIVE ADMINISTRATIVE METHODS

After the industry is set and the company assignments are made, the Top Management Game can be administered in two different ways. One of the methods requires a greater degree of involvement from the administrator, as compared to the other. Based on the characteristics of your computer system, you can decide in the way you will administer the simulation.

Administering Simulation with Minimal Involvement from the Administrator

Using this method requires that the participants be given direct access to the TMG.EXE program. The individual management teams are required to enter their decisions and retrieve their results. This administrative option can only be utilized if the program is made available to all the users through a networked system; or a stand-alone personal computer with a hard disk that is in a secure location. This administrative option requires minimum time commitment from the administrator. However, these methods require additional system security measures so that the users cannot accidentally or deliberately delete any of the files created and used by the simulation. If you are using the simulation in a networked environment, you need to arrange with the network administrator. Please discuss the following with your network administrator.

1. The simulation files should be copied on to the network (all the simulation files should be on the same disk and in the same folder).
2. Appropriate permissions have to be set for the users (the program needs to read from and write to the network drive and folder).
3. Program icon has to be established for accessing the program (TMG.EXE).

Under this administrative option, you will set up the companies (teams) and the industry (a group of companies), establish the decision deadlines, and assigns the company (team) security codes. After the industry is created (see the following sections on how to create an industry), you will copy all the industry files onto the networked drive or the hard disk of the stand-alone personal computer. Once this is accom-

plished the administrative duties are confined to printing out the quarterly results for personal use and making changes (if necessary) in the database or other aspects of the game as desired by the administrator. The users will directly access the simulation to enter their quarterly decisions and receive the results of these decisions. The administrator is not required to enter the team decisions or provide the results.

Administering the Simulation with Significant Involvement from the Administrator

Under this administrative option, the quarterly decisions are entered (either using disk or a decision form) and processed by the administrator, and the results are printed and distributed by the administrator. There is no direct access of the industry files by the teams (users) and only a stand-alone personal computer (with hard and a floppy disk) connected to a printer is required to administer the simulation.

Using a Disk to Enter Decisions

- 1) Create the industry and make the necessary company assignments.
 - A) Use the TMGCTRL.EXE program to establish the industry.
 - B) Make sure that you have selected the "Team Codes Option" when establishing the industry.
 - C) Have each Management Team select and turn in a Company Security Code.
 - D) Use the TMGCTRL.EXE program to apply these team codes to the industry.
- 2) Collect a formatted, blank disk from each team to create the decision disks.
- 3) Copy TMGDEC.EXE, Decsn#, and Codes# files onto this disk. The # designates the industry identification. Students will use this disk and the TMGDEC.EXE program to enter their quarterly decisions.
- 4) After they have entered their decisions, collect the disk from the teams, use the TMG.EXE program to copy these decisions onto the industry files, process them, and print out the results.
- 5) Return the disks and the printed results to the teams so that they can enter the next quarter decisions.
- 6) Repeat steps 4 and 5 for each of the decision quarters.

Using the Decision Form to Enter Decisions

- 1) Create the industry and associated files (see above).
- 2) Ask students to turn in their quarterly decisions using the decision form. This form can be found in the appendix of this manual and the Top Management Game: Simulated Decision-Making © book.
- 3) Enter the decisions, process them, and print out the results.
- 4) Distribute the team results.
- 5) Repeat steps 2 through 4 for each of the decision quarters.

Discussion of Various Business Concepts

In addition to discussing and demonstrating relationships among and between various functional areas (marketing vs. production, marketing vs. finance and accounting, financing vs. accounting, etc.), you can bring in more detailed concepts associated with production, finance, and marketing. Among these concepts are inventory planning and costing, implications of different financing instruments and options, and relative importance of marketing decisions. These concepts are built into the simulation and will be briefly discussed below.

Inventory Options

As part of the simulation, you can discuss various Inventory Models and their implications. Analysis of decrease/increase in the production costs (based on production/purchase levels) vs. inventory carrying and financing costs (see the cost equations and carrying costs in the student text) can be part of this discussion. These concepts can (e.g. Economic Order Quantity) be clearly explained and demonstrated using the production/purchase costs (based on volume) and storage costs (based on level of inventories). Especially since **Product "C"** is being purchased and resold and the managers can vary their level of order at any time, there are cost related issues associated with large orders (larger discounts) and ending inventories vs. small orders and no ending inventories. In fact, the team can place very large orders (take a large discount) and carry inventories which can be sold over time (carrying costs). The participants can project sales over time and based on these projections calculate discounts vs. carrying costs. Since production process has additional costs (e.g. shutting down lines), the issue of costing and inventory planning is more complex and not as easily demonstrable.

$$\text{Economic Order Quantity} = \sqrt{\frac{2FU}{CP}}$$

Where:

F = the fixed cost of placing an order

U = the number of units used per year

C = the inventory carrying cost

P = unit cost of the product

Financing Options

There are various financing options available to the team members and they each have different short term-and long-term implications. These options can be explained and their implications (managerial and cost) can be discussed. When is it more financially prudent to use traditional financing (short-term bank loans) vs. trade credit vs. equity (long-term) financing? All three of these options are available as operating decisions and their implications are built into the simulation model.

In the simulation, there are three financing mechanisms. These are discussed and explained in the "Financing Section" of the TMG Book.

- a. Bank Loan - Interest rates are determined by the degree of leverage (see Financing Section in the student text)
- b. Trade Credit - Used only when purchasing Product C and has 5/90, n/180 terms. This translates to approximately 5% interest/quarter.
- c. Issue new shares of stock or recall existing outstanding stock.

Sensitivity Analysis and Forecasting

Sensitivity analysis and forecasting can be discussed using various marketing variables incorporated into the simulation (e.g. Avg. Price, Avg. Adv., Avg. R&D and the individual and or compounded effect of Sales Force and Retail Outlets on Industry Sales and Market Shares, etc.)

SYSTEM REQUIREMENTS

1. A stand-alone or networked personal computer with Windows® operating system with a disk drive.
2. Access to a network printer or one connected to the stand-alone personal computer.

CONTENTS of ACCOMPANYING DISKS

Administrative Disk Accompanying This Manual

1. TMGDEC.EXE - Decision Entry Module for TMG (also on Student Disk). This program can only be used to enter Company Decisions.
2. TMG.EXE - Main simulation program. This program is used to enter and process the company decisions and to print out the results.
3. TMGCTRL.EXE - Utility Program for Administrative Use. This program is used to establish companies and industries, and make changes in all aspects of the game as it is played. Access to this disk should be controlled very carefully.
4. CTRL.DTA - Security file associated with the administrative disk. If this file is tempered with or missing, the TMGCTRL Program cannot be used.
5. DATATMG.DTA - This file contains the starting database for the game. If it is missing, the new industry (group of teams) cannot be established. Contents of this file can be modified using TMGCTRL.EXE program.
6. BEGINTMG.DTA - This file contains the starting decisions (sample) for the game. If it is missing, the new industry (group of teams) cannot be established. The contents of this file can be modified using TMGCTRL.EXE program.

Student Disk Accompanying the Top Management Game Book

1. TMGDEC.EXE - Decision Entry Module for the simulation. This program can be used only to enter Team Decisions.
2. SCEN.EXE - Main Decision Tool and a simulation of Top Management Game. This program can be used to test the industry assumptions and Company Decisions before they are finalized and entered into TMG to be processed.
3. SCEN1 - The data file containing Scenario Results for Quarter #1. This file also contains initial database, sample competitor assumptions and sample decisions for Quarter #1.
4. SCEN1.TXT - Print file for the Scenario Results for Quarter #1. This file contains the Quarter #1 results in ASCII format and can be printed out using any word processing program.
5. README.TXT - If this file is on the disk, it will contain information on the latest changes and/or additions to the files after the Top Management Game: Simulated Decision-Making has been published. It will contain the latest information.