"SUPERMARKET UNIVERSITY"
INSTRUCTION MANUAL FOR
SUPERMARKET CHAIN SIMULATOR*

by
Emerson M. Babb and Gene A. German**
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Abstract

The Supermarket Chain Simulator is used to train persons about business principles and techniques and in supermarket management. Operating decisions are made about product orders, departmental margins, promotions, advertising, store hours and labor. Financial decisions are made about opening new stores, remodeling, investments and loans. From 2 to 5 firms (teams) compete with one another. Decisions made by one team affect its performance and that of rivals. Results are reported in the form of operating statements, balance sheet, inventory, labor and ratio analyses, market share and competitive report, cash flow report and change in balance sheet accounts.

Keywords: supermarket simulator, supermarket management, financial management

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Situation

You and your business associates have just purchased a chain of three supermarkets. In recent years, the performance of these stores has not been good. The financial position of the supermarket chain has been fairly weak as reflected in operating statements and balance sheets. You and your associates have a history of buying weak companies and turning them into profitable operations. This is your goal in this acquisition. You can institute any policies that you think will improve performance.

You will make **operating** decisions for only one of these supermarkets for one representative week. This store is located on the north side of the city and is not in the same trade area as the other two stores you purchased, which are on the south and west side of the city. The weekly operating decisions made for the one store are used to project sales and other performance for your stores in other trade areas. In addition, you will make **quarterly** financial decisions for all stores involving remodeling, opening new stores, investments and loans. Financial results for all stores will be projected quarterly. Operating decisions made by the previous owner for the last quarter before you took over are shown in Table 1 and the results of those decisions are shown in Tables 2-6.

Competitive Trading Area

You are in competition with several supermarket firms (2 to 5 as specified by your instructor) who operate stores in each of your three trade areas. Information about the margins, advertising, etc. of competitors in the trade area for which you will be making operating decisions will be summarized in the Market Report (see Table 4). The trade area is urban and relatively stable.

In the past, competition was primarily among conventional supermarkets. There are now superstores, warehouses, hypermarkets, and other discounters that compete with conventional supermarkets for food sales. In this simulation, these types of discounters do business in the trade area, but you do not compete directly with them. All supermarkets in this simulation are of the conventional variety. Customers do move back and forth between conventional supermarkets and discounters, depending on relative prices and other factors discussed below.

Customers generally patronize stores close to them, but may be attracted to stores in other parts of the city by specials, promotions, and low prices. You can attract customers from outside of your trade area by utilizing similar strategies. If all stores in the trade area raised their prices, some of their present customers would shop in stores outside the trade area and at discounters. If all stores

lowered their prices they would undoubtedly attract some customers from other trade areas. If stores in the trade area raised their prices to the point that they generated excessively high profits, there is a good chance that this would be noticed by food retailers doing business elsewhere. It is likely that they would consider or actually enter the trade area with new stores which would dilute sales among firms doing business there. The instructor will inform you of interest by other retailers in entering your trade area or about actual new entrants. Once a new store opens, it is likely to remain open even if prices are subsequently reduced or profits deteriorate.

Sales

Factors affecting individual store sales and sales for the total trade area are strongly influenced by the interaction and relative differences among competitors and by policies and decisions made by competitors in the aggregate. Important among these factors are:

1. Price levels (gross margins)
2. Store programs
3. Double coupons
4. Advertising
5. Store hours
6. Specials
7. Out-of-stock conditions
8. Labor image
9. Promotional activities in prior quarter

Promotional Factor

A promotional carryover factor is shown on the bottom right-hand corner of Table 3. This factor reflects the store's cumulative merchandising image and suggests an approximation of the amount of sales increase or decrease that will occur in the next quarter as a result of prior promotional activity. The current level of sales is 0.9 percent below normal as a result of promotion activities that are a little lower than standard (Table 6).

Sales Response

You will probably find the sales response to price, advertising, specials, store programs, and coupons somewhat greater than might be experienced in an actual quarter of supermarket operations. The simulation attempts to emphasize the impact of various decisions which would lead to longer run profitability rather than decisions which might be profitable for a quarter, but result in adverse consequences over a longer time span. Sales depend not only on current decisions but also on those made in the past, i.e., there is a carryover effect.

It is suggested that teams should generally be conservative in the early stages of the simulation until they develop a "feel for the market." Your management team should decide upon a sales strategy and carefully develop a budget consistent with your sales estimate. Ordering, hiring, etc., should match your sales objectives. Remember, however, that your competitor's decisions may have a great impact on your final results. Thus, you should make change slowly and plan carefully.

Margins (Gross Margins or Gross Profit)

1. Merchandise costs the same for all competing supermarkets. Since all supermarkets in the trading area start with the same volume and have equal potential, no firm has a purchasing advantage over competition.

2. Merchandise is ordered and charged at **cost** (not at retail shelf price).

3. Margin goals must be established for each department. "Going in" margins recorded on the decision form indicate department average margins on all items other than those on special, which are assumed to be priced lower. Gross margins ("realized" margins) reported on the operating statement will be reduced by shrinkage and by the effect of the lower margin on featured specials and double coupons.

4. The margins recorded on the decision form must **not** be more than 4.0 percent higher or lower than the "Average Initial Margin" in the trading area the previous quarter, for each department. Average Initial Margins for the previous quarter are the average of "going in" margins for all competing supermarkets in the area. They are shown at the bottom of the Market Report (Table 4).

5. Consider specials as a separate decision (discussed below). If specials are featured, the "going in" margin (margin on non-special merchandise) for the department must be increased in order to realize the target gross margin. Experience will help determine the extent of adjustment necessary.

6. Sales response to change in margins differs among departments. Generally speaking, the larger the department the greater the sales response.

7. If margins in any department are set above those of competitors, some sales will be lost to rivals, and vice versa.

8. Total sales (and customer count) for all competing firms (in the trade area) are influenced by the average of margins established by competitors. For example, if margins are increased some consumers will travel to stores outside the trade area, attracted by the lower retail price.

Store Programs

1. You may offer various levels of the following store programs:

Program	Range of Cost as a % of Sales
Frequent Shopper	1.0-3.0
Amenities/Carry Out	0.5
Continuity Promotions	0.5-1.0
Senior Discount	0.5

2.   You enter the total cost as a % of sales you wish to invest in store programs. You may enter any percentage from 0 to 4.5%

3.   Sales will increase as much as 36% if the maximum investments in store programs are made, but the increase is not at a constant rate.

4.   Effectiveness of store programs depends on competition. The impact of this strategy is diluted as use of store programs by competitors increases.

Double Coupons

1.   Sales may be promoted by using double coupons. Double coupons refer to offering customers double the face value of any coupon brought in and applied to their purchases.

2.   These coupons can increase store sales as much as 10-15%, depending on market conditions. The effectiveness of double coupons is diluted as the number of firms using them increases.

3.   Since the extra redemption value of the coupon must be borne by the store, it will reduce gross margins, as much as 2% depending on market conditions.

4.   Double coupons will primarily affect the grocery, frozen foods, and general merchandise departments but will build traffic for the entire store.

Advertising

1.   Advertising expenditures are for newspaper ads and radio time. An increased expenditure has the effect of increasing sales but not at a constant rate.

2.   Specials, frequent shopper programs and double coupons promotions are more effective when advertised.

3.   Effectiveness of your advertising expenditure depends on competitors' strategies.

Store Hour Policy

1.   Policy 1 is for store hours of 9 to 9 Monday through Saturday and 10 to 6 Sunday, or 80 hours in total.

2.   Policy 2 is for store hours 7 to 11, 7 days a week, or 112 hours in total.

3.	Policy 3 is for store hours of 24 hours a day, 7 days a week, or 168 hours in total.

4.	Policy 2 results in a one time sales increase of about 10 percent over Policy 1, and Policy 3 results in a one time sales increase of about 15 percent over Policy 1. The firm currently operates on Policy 2.

5.	Labor required increases with store hours, but there is some gain in labor productivity. Labor needs should be based solely on projected sales dollars, not on hours of operation.

Specials

1.	Specials can be featured in each department. The maximum number of specials for each department is shown on the decision form (Table 1). These limits represent the number of specials offered in that department for one store for one week.

2.	A special, in effect, is selling some product at a margin less than the "going in"margin set for the department as a whole. All specials represent moderate mark-downs.

3.	Sales increase with the number of specials, but at a declining rate.

Orders

1.	Weekly orders for the six departments are made after considering the sales plan and inventory on hand in the representative store. Orders for this store are used to project quarterly orders for all stores for the quarter. Your orders are for one store for one week only.

2.	Weekly orders plus inventory on hand must cover sales or excessive stock-outs (and lost sales) will be encountered.

3.	Volume will be stable except as influenced by management decisions of each competitive store in the area. There will be no radical changes in sales volume due to such outside factors as the opening of a new store, unless the instructor tells you otherwise.

4.	Excessive inventory results in higher levels of shrink and ties up cash.

5.	A zero stock-out level shown on the inventory report (Table 3) indicates a normal out-of-stock condition. If stock-outs appear on the report, this would represent excessive out-of-stock; above the normal level. Out-of-stock is reported as lost sales (dollars).

6.	In order to avoid excessive out-of-stocks, it will be necessary to maintain inventory levels so that annual inventory turns do not exceed:

	Annual	**Weekly**	**Weeks of Supply**
Grocery	20	.38	2.63
Meat/Deli	45	.86	1.16
Dairy	50	.96	1.04
Produce	65	1.25	.80
Frozen Food	20	.38	2.63
General Merchandise	12	.23	4.35

Orders are entered at cost and should be related to sales goals at cost (cost of goods sold on operating statement). Stock-outs are also calculated at cost.

Personnel

1. There are currently 4 full-time and 4 part-time people in the meat/deli department and 30 full-time and 35 part-time people in the rest of the store. Part-time people are recorded as full-time equivalents. Teams must decide on the mix of full and part-time people which best meets their operating strategy. You must have at least 3 full-time people in the meat/deli department and 15 full-time people in the rest of the store.

2. All full-time people are guaranteed 40 hours of work per week.

3. All part-time people are guaranteed 30 hours of work (on full-time equivalent basis),but are available to work 40 hours if needed.

4. Meat/Deli Department:

    a. At least 3 full-time people must be scheduled for the meat/deli department.

    b. These employees are guaranteed 40 hours of work per week.

    c. The wage rate for the meat/deal department of $18.50 per hour includes fringe benefits.

    d. Meat/deli department personnel work overtime at the rate of $27.75 per hour. Meat/deli sales will decline if there is excessive overtime.

    e. Full-time meat/deli people cannot work outside the meat/deli department and full-time persons in other parts of the store do not work in the meat/deli department.

5.   Rest of Store (General)

    a.   At least 15 full-time people must be scheduled for the rest of the store.

    b.   These employees are assured 40 hours of work per week.

    c.   The wage rate for the general store of $14.50 per hour includes fringe benefits.

    d.   General store personnel work overtime at the rate of $21.75 per hour.

6.   Part-time Help

    a.   Part-time people can work in any department in the store as scheduled. The lower wages paid part-time employees is somewhat offset by lower productivity levels.

    b.   The wage rate is $7.50 for part-time help and includes fringe benefits.

    c.   Part-time people do not work overtime.

    d.   As the proportion of part-time to full-time employees increases above 25 percent, total labor productivity for the store goes down. The proportion of part-time help should not exceed 60 percent of the hours scheduled in the general store.

7.   Labor productivity as measured in terms of sales per hour is constant for each type of labor and does not vary among competitors. The meat/deli department is, however, different than the rest of the store. In the simulation, management cannot affect labor productivity except by changing the mix of full-time and part-time employees. Also, when sales increase, there is some increase in labor productivity.

8.   Labor productivity figures for the meat/deli department and general store are listed separately. These figures are on the "sales/hr. worked" column under the labor analysis of your print out. Your should utilize these figures in scheduling labor for future periods.

9.   A "Labor Image Factor" is given at the bottom of the operating statement to indicate the extent of customer irritation due to long waiting lines developing at the check out. Excessive overtime by general store personnel will indicate this condition. A labor image factor of 1.0 represents no appreciable customer irritation or loss of sales during the next quarter while a .98 would indicate a 2 percent loss of sales next quarter due to customer dissatisfaction.

Remodeling Existing Stores

1.   The original stores average three years of age. Generally the industry remodels or updates stores every six years.

2.   The remodel decision calls for a complete remodeling job. This process will be completed in one quarter.

3.   The store being remodeled stays open during the quarter the work is being done. However, the remodeling reduces sales for this store by 20 percent for this quarter.

4.   In quarters following the remodeling, sales for the remodeled store will increase about 30 percent.

5.   Cost of a remodel is $600,000. Funds for this project must be available at the beginning of the quarter during which the work is taking place.

6.   Funds to cover remodeling costs can come from cash, investments called, or borrowed funds (see cash management).

7.   The store undergoing remodeling is not the one for which you are making operating decisions on the decision form. Thus, a decision to remodel will have no effect on your decisions with regard to the representative store, including orders.

8.   One of the stores is six years old. Management should remodel that store by the fourth quarter or anticipate a gradual deterioration in sales in that store as it ages.

Opening New Stores

1.   A decision to open a new store requires funds of $800,000 to cover the investment in fixtures and equipment.

2.   These funds must be available in the quarter that the decision is made (see cash management). The new store will be ready for business the following quarter.

3.   During the quarter that the store opens, additional funds must be available to inventory the shelves and to cover a $30,000 grand opening cost.

4.   The inventory in the representative store should be used as a guide for inventory requirements for the new store.

5.   As in the case of remodeling, a new store is never the representative store, or the store used for your basic operating decisions.

Investments

1.   Excess cash can be invested in short term securities (bank C.D.) which pay 6 percent interest.

2.   Thsee investments can be called to generate cash for future remodeling, store openings, etc. If your team needs funds for the quarter, you would call investments on the decision form. These funds are available in your cash balance the first day of the quarter.

Loans

1.   Cash obligations can be funded by bank borrowing.

2.   Bank loans are in the form of 10-year notes and carry an interest rate of 9 percent if your D/E ratio was less than 1.0 in the previous quarter, otherwise money borrowed costs you 13 percent.

3.   The bank requires a D/E ratio of 1.5 or less. The maximum amount that can be borrowed in any quarter is listed at the bottom right corner of Table 3.

4.   Principal and interest on notes are calculated quarterly. The amount reported on the current liabilities section of the balance sheet in Table 3 as "Principal Payable" is due and payable during the next quarter (you make no decisions about this). Any amount of the note repaid under "repay loan" on the decision form is in excess of this required principal payment.

5.   Loans are secured or repaid at the beginning of the quarter.

6.   Poor cash planning may require emergency cash loans. Banks do not offer such loans. Consequently, funds must be obtained from Friendly Finance Company at an interest rate of 18 percent, repayable in full the following quarter.

Cash Management

1.   The maximum funds available at the beginning of the quarter which can be used to remodel a store or to open a new store is the ending cash from the previous quarter, adjusted for decisions you make about cash for the current quarter. That is, maximum funds available is ending cash less additional loan repayment, less additional money invested in CD's, plus CD's called, plus additional money borrowed, up to the maximum borrowing limit indicated at the bottom of Table 3. If funds are not adequate to meet your remodel, store purchase, or CD purchase decisions, these decisions will not be implemented.

2.   A minimum cash balance of $5,000 per store must be maintained. The minimum balance may be above $5,000 per store if anticipated income tax is reduced because of interest on the Friendly Finance loan.

3.   Depreciation of fixtures and equipment is $25,000 per quarter for each store you now operate plus $25,000 for each store you add or each store you remodel. This reflects a life of six years and the straight line method as applied to these accounts.

Taxes

1.   Rates for federal and state income taxes are as follows:

Net Income	Tax Rate
$0 - $50,000	17%
$50,000 - $75,000	27%
$75,000 - $100,000	36%
Over $100,000	41%

2.   Losses are carried over to subsequent quarters. Note that you have a tax loss carryover of $5547 from the last quarter.

Balance Sheet

The following accounts on the Balance Sheet are not controllable: accounts receivable, other assets, accounts payable, and contract payable. Nothing can be done during the exercise to affect the level of each of these accounts, thus you may ignore them.

Simulation Results

The results of the decisions made will be transmitted to each team in the form of a report composed of an operating statement, balance sheet, and other information about your operation. In addition, you will receive a market report (Table 4) showing the percentage of sales each team has and other information about the specials, store programs, double coupons, and advertising policies of rivals. The information in these reports should be carefully studied in planning the decisions for the next quarter as it provides valuable insight regarding problems and suggests areas where results may be improved. Good luck in your new venture!

SUPERMARKET UNIVERSITY DECISION FORM

Trade Area Number   **1**

Team Number   **1**

Quarter Number   **0**

Margins*

Grocery (percent)	+ or - 4	2 2 . 8
Meat/Deli (percent)	+ or - 4	3 1 . 6
Dairy (percent)	+ or - 4	2 4 . 2
Produce (percent)	+ or - 4	3 8 . 9
Frozen Food (percent)	+ or - 4	2 9 . 7
General Merchandise (percent)	+ or - 4	2 6 . 6

Promotions

Store Programs (percent of sales)	0 to 4.5	1 . 0
Double Coupons	0=No, 1=Yes	0
Advertising ($6000 basic for # stores)		6 0 0 0
Store Hour Policy (number)	1,2,3	2

Specials

Grocery (number)	0 to 40	1 5
Meat/Deli (number)	0 to 20	7
Dairy (number)	0 to 10	4
Produce (numbers)	0 to 10	4
Frozen Food (number)	0 to 10	4
General Merchandise (number)	0 to 10	4

Orders

Grocery (dollars)	9 5 0 0 0
Meat/Deli (dollars)	3 7 0 0 0
Dairy (dollars)	1 3 5 0 0
Produce (dollars)	1 6 0 0 0
Frozen Food (dollars)	7 0 0 0
General Merchandise (dollars)	7 0 0 0

People**

Full time people in meat/deli dept.	3 or more	4
Part time people in meat/deli dept.	< 60%	4
Full time people rest of store	15 or more	3 0
Part time people rest of store	< 60%	3 5

Facilities

Remodel store (number)	0
Open new store (number)	0

Money

Borrow money (dollars) ***	0
Repay loan (dollars)	0
Make investment (dollars)	0
Call investment (dollars)	0

*   Maximum and minimum margins for the next quarter are shown at the bottom of your market share report.

**   Full time equivalents

***   The maximum amount which can be borrowed next quarter is shown at the bottom of your balance sheet.

Table 2. Results of Decisions Made by Previous Manager

```
              TRADE AREA   1      FIRM   1       QUARTER   0
                        OPERATING STATEMENT
                               WEEK      PERCENT     QUARTER
SALES - DOLLARS
  GROCERY                    $ 120,669    53.0    $ 4,706,083
  MEAT/DELI                  $  48,870    21.5    $ 1,905,918
  DAIRY                      $  16,663     7.3    $   649,845
  PRODUCE                    $  23,040    10.1    $   898,548
  FROZEN FOOD                $   9,223     4.1    $   359,680
  GENERAL MERCHANDISE        $   9,128     4.0    $   355,985
                             ---------    -----   -----------
TOTAL                        $ 227,591   100.0    $ 8,876,058


COST OF GOODS SOLD
  GROCERY                    $  95,282            $ 3,716,012
  MEAT/DELI                  $  35,915            $ 1,400,682
  DAIRY                      $  13,158            $   513,169
  PRODUCE                    $  16,560            $   645,827
  FROZEN FOOD                $   6,825            $   266,175
  GENERAL MERCHANDISE        $   7,026            $   274,021
                             ---------    -----   -----------
TOTAL                        $ 174,766    76.8    $ 6,815,887


GROSS MARGIN
  GROCERY                    $  25,386    21.0    $   990,071
  MEAT/DELI                  $  12,955    26.5    $   505,235
  DAIRY                      $   3,505    21.0    $   136,676
  PRODUCE                    $   6,480    28.1    $   252,721
  FROZEN FOOD                $   2,398    26.0    $    93,504
  GENERAL MERCHANDISE        $   2,102    23.0    $    81,964
                             ---------    -----   -----------
TOTAL                        $  52,825    23.2    $ 2,060,171


OPERATING EXPENSES
  WAGES AND FRINGES          $  30,690    13.5    $ 1,196,900
  ADVERTISING EXPENSE        $   2,000      .9    $    78,000
  STORE PROGRAMS COST        $   2,276     1.0    $    88,761
  OTHER VARIABLE EXPENSE     $   8,738     3.8    $   340,794
  OCCUPANCY EXPENSE          $   9,637     4.2    $   375,841
                             ---------    -----   -----------
TOTAL                        $  53,341    23.4    $ 2,080,296


NET OPERATING PROFIT        $    -516     -.2    $   -20,125
  OTHER INCOME                             .2    $    20,448
  INVESTMENT INCOME,C.D.                         $     2,250

  INTEREST COST                            .4    $    35,203
  GRAND OPENING COST                             $         0

TOTAL NET PROFIT BT                       -.4    $   -32,629
  INCOME TAX                                     $         0
TOTAL NET PROFIT AT                              $   -32,629
TOTAL NET PROFIT AT PCT.                                -.37


SALES PER SQ. FT.       10.84         NO. STORES OPEN     3.
NO. CUSTOMERS           12179.
```

Table 3. Balance Sheet, Ratios, Inventory and Labor Analysis

```
                    TRADE AREA   1     FIRM   1      QUARTER   0
                                 BALANCE SHEET
              ASSETS          -------------  LIABILITIES AND EQUITY
    CASH                    $    22,306  ACCOUNTS PAYABLE      $   554,338
    BANK C.D.               $   150,000  BANK NOTE - CURRENT   $    22,500
    ACCOUNTS RECEIVABLE     $   254,338  FRIENDLY FINANCE      $         0
    INVENTORY               $ 1,326,941                        -----------
                            -----------  CURRENT LIABILITIES   $   576,838
      TOTAL CURRENT ASSETS  $ 1,753,585  BANK NOTE - LONG TERM $   851,319
                                         CONTRACT PAYABLE      $   209,338
    GROSS FIX. & EQUIP.     $ 1,200,000                        -----------
      -DEPRECIATION         $    75,000  L.T. LIABILITIES      $ 1,060,657
                            -----------
    FIX & EQUIP - NET       $ 1,125,000    TOTAL LIABILITIES   $ 1,637,495
    OTHER ASSETS            $    44,338
                            -----------  ORIGINAL INVESTMENT   $ 1,318,057
      TOTAL FIXED ASSETS    $ 1,169,338  RETAINED EARNINGS     $   -32,629
                                                               -----------
                                         TOTAL EQUITY          $ 1,285,428
    TOTAL ASSETS            $ 2,922,923  TOTAL LIAB. + EQUITY  $ 2,922,923
                            ===========                        ===========
********************* RATIO ANALYSIS (ANNUALIZED) *********************
CURRENT RATIO                3.04      AT RETURN ON TOTAL ASSETS    -4.47
DEBT TO EQUITY               1.27      AT RETURN ON EQUITY         -10.15
ASSET TURNOVER              12.15      AVE RETURN ON EQUITY        -10.15
*********** INVENTORY INVESTMENT ANALYSIS - ONE WEEK ONE STORE **********
                                              INVENTORY           ANNUAL
  DEPARTMENT        SHRINK %   STOCK-OUT   AVERAGE     ENDING   STOCK TURNS
    GROCERY           .85      $     0   $ 334,923 $ 334,782      14.8
    MEAT/DELI        4.04      $1,245   $  30,687 $  31,229      60.9
    DAIRY            1.97      $   436   $  12,375 $  12,546      55.3
    PRODUCE          9.37      $     0   $  16,064 $  15,784      53.6
    FROZEN FOOD      2.04      $     0   $  17,635 $  17,723      20.1
    GEN MERCHANDISE  1.54      $     0   $  30,263 $  30,250      12.1
                    -----      ------   --------- ---------      -----
  TOTAL             2.60      $1,681   $ 441,947 $ 442,314      20.6
      TOTAL SHRINK DOLLARS      $ 5,908
************** LABOR ANALYSIS REPORT - ONE WEEK; ONE STORE **************
                          SALES PER      HOURS       HOURS        NO.
                SALES    HOUR WORKED    REQUIRED   AVAILABLE    PERSONS
MEAT DEPT.    $ 48,870     $133.8         365         160         4.
MEAT PART TIME                                        160         4.
REST OF STORE $178,722     $ 85.8        2,083       1,200        30.
GEN PART TIME                                        1,400        35.
              --------     ------        ------      ------       ----
TOTAL STORE   $227,591     $ 93.0        2,448       2,920        73.
                                                    TOTAL     LABOR PCT
                   HOURS PAID         LABOR COST    LABOR     OF TOTAL
                REGULAR  OVERTIME  REGULAR OVERTIME  COST       SALES
MEAT PERSONS      160      45       2,960   1,255    4,215       1.9
MEAT PART TIME    160               1,200            1,200        .5
STORE PERSONS   1,200       0      17,400       0   17,400       7.6
GEN PART TIME   1,050               7,875            7,875       3.5
                ------    -----    ------- -------  -------     -----
TOTAL           2,570      45      29,435   1,255   30,690      13.5
                ----------------------------------------------------
  LABOR IMAGE FACTOR       1.000    MAX. BORROWING NEXT QTR. $ 290,646     GEN
PART TIME - PCT     .50        MEAT PART TIME - PCT            .44
```

Table 4. Market Share Report

```
                          MARKET REPORT
                 TRADE AREA  1      QUARTER  0

                   FIRM   1   FIRM   2


SHARE OF MARKET
----- -- ------
    GROCERY               50.0        50.0
    MEAT/DELI             50.0        50.0
    DAIRY                 50.0        50.0
    PRODUCE              50.0        50.0
    FROZEN FOOD           50.0        50.0
    GEN MERCHANDISE       50.0        50.0
    TOTAL                 50.0        50.0



INITIAL MARGINS
------- -------
    GROCERY               22.8        22.8
    MEAT/DELI             31.6        31.6
    DAIRY                 24.2        24.2
    PRODUCE              38.9        38.9
    FROZEN FOOD           29.7        29.7
    GEN MERCHANDISE       26.6        26.6


NUMBER OF SPECIALS
------ -- --------
    GROCERY               15.0        15.0
    MEAT/DELI              7.0         7.0
    DAIRY                  4.0         4.0
    PRODUCE              4.0         4.0
    FROZEN FOOD            4.0         4.0
    GEN MERCHANDISE        4.0         4.0


OTHER POLICIES
----- --------
    ADVERTISING         6000.0      6000.0
    DOUBLE COUPONS          N           N
    STORE PROGRAMS         1.0         1.0
    STORE HOURS            2.0         2.0
    REMODEL STORE          .0          .0
    STORES OPEN            3.0         3.0



AVERAGE INITIAL MARGIN LEVELS FOR THE MARKET     MARGIN RANGE FOR NEXT QUARTER
------- ------- ------ ------ --- --- ------      ------ ----- --- ---- -------
    GROCERY                22.8                          18.8  -  26.8
    MEAT/DELI              31.6                          27.6  -  35.6
    DAIRY                  24.2                          20.2  -  28.2
    PRODUCE               38.9                          34.9  -  42.9
    FROZEN FOOD            29.7                          25.7  -  33.7
    GENERAL MERCHANDISE    26.6                          22.6  -  30.6
```

Table 5. Change in Balance Sheet Accounts

```
                          TEAM BALANCE SHEET REPORT

            TRADE AREA  1                     FIRM  1

                        QUARTER  -1       QUARTER  0        CHANGE

ASSETS
   CASH                 $      4,666   $     22,306   $     17,640
   BANK C. D.           $    150,000   $    150,000   $          0
   ACCOUNTS RECEIVABLE  $    252,470   $    254,338   $      1,868
   INVENTORY            $  1,324,710   $  1,326,941   $      2,231
   FIX. & EQUIPMENT     $  1,200,000   $  1,125,000   $    -75,000
   OTHER                $     42,470   $     44,338   $      1,868

   TOTAL                $  2,974,316   $  2,922,923   $    -51,393

LIABILITIES
   ACCOUNTS PAYABLE     $    552,470   $    554,338   $      1,868
   NOTE - CURRENT       $     22,500   $     22,500   $          0
   FRIENDLY FINANCE     $          0   $          0   $          0
   NOTE - LONG TERM     $    873,819   $    851,319   $    -22,500
   OTHER                $    207,470   $    209,338   $      1,868

EQUITY
   ORIGINAL INVESTMENT  $  1,318,057   $  1,318,057   $          0
   RETAINED EARNINGS    $          0   $    -32,629   $    -32,629

   TOTAL                $  2,974,316   $  2,922,923   $    -51,393
```

Table 6. Cash Flow Report

```
            TRADE AREA  1           FIRM  1          QUARTER  0




                         CASH FLOW REPORT
                         ----------------


         CASH IN
           BEGINNING CASH                  4,666

           Profit After Taxes                 0
           Depreciation                   75,000
           Inventory Decrease                 0
           Call Bank C.D.                     0
           Borrow from Bank                   0
           Friendly Finance                   0
                                        -----------
           Total                          79,666

         CASH OUT
           ENDING CASH                    22,306

           Loss for Quarter               32,629
           Buy Bank C.D.                      0
           Build New Stores                   0
           Remodel Old Stores                 0
           Inventory Increase             2,231
           Repay Bank Note                    0
           Principal Payable             22,500
           Repay Friendly Finance             0
                                        -----------
           Total                          79,666


         TAX LOSS CARRYOVER                5,547
         PROM. CARRYOVER FACTOR             .9912
```

SUPERMARKET UNIVERSITY
Quick Reference Guide

Note - The following sections outline the steps to be followed when running the Supermarket University (SM) programs. The prompts you will see on the screen are in script. The response option(s) is (are) next to the prompt in <>. At the end of the line, examples of the response are enclosed in double quotation marks.

Running the Program

1.   **Start DOS** (version 5.0 or higher). If you have a hard disk, C> indicates the system is ready for a command. Otherwise your default drive is usually A>. Program execution will be faster if you load programs in a directory on your hard disk and operate from that directory.
2.   **Enter EGAD** with the appropriate printer suffix if you want to print copies of the graphs from your screen. These can be used to make transparencies. Use /T to put EGAD in memory and /U to remove it. For example, if you use a HP Laser printer enter "EGADHP/T".
3.   **Enter A**: to change default drive.
    4.   Insert SM diskette in drive A.
    5.   In response to the prompt A>, **enter SM**, or **enter SM** from the directory on your hard disk in which programs are stored.
    6.   After SM is loaded, the main menu will appear on the screen and you have 4 choices:
          1.   Enter/Edit Team Decisions
          2.   Process Decisions
          3.   Graph Team Results on Screen
          4.   Exit to DOS
       At the prompt **Task**: enter the number of the task you want to perform. After the appropriate program is loaded, you will have a menu for the task to guide you through its execution.
    7.   To stop program execution and return to SM menu, use Ctrl-Break.

Enter/Edit Team Decision(ED)

The menu for this task contains a number of options, but the main ones you will use are **N: New File Creation** and **R: Add a Quarter** which are described below. It is important to enter **E:End Edit** when each task is completed so that entries are made to file. For example, if you wanted to **C:Change Team Data** for a previous quarter and **R:Add a Quarter** you should make changes using **C** option and then **E:End Edit**. You then can then enter team decisions for another quarter using **R:Add a Quarter and E: End Edit**. If you **C:Change Team Decisions** and **R:Add a Quarter** and then **E: End Edit** you will have a problem. In sum, **E: End Edit** after completing each option. Normally you will be using only one option at each entry session, either creating a new file or adding a quarter. Do not enter a negative number. In case of an abort, a file with extension .BAK is created. You can rename the .BAK file and start again.

Create New File

1.   **File Name** <filename> "TRADE1, TRADE2," etc.
2.   **Driver**: <A/B/C> "A" Note: **Enter the drive that contains SM.**
3.   **Option?** "N" (create a new file)
      Note: **"H"** provides a menu which lists all the editor options.
4.   **Trade Area**? ,<nbr> "1", "2", etc.
5.   **Number of Stores per Firm n <=99?**, <nbr> "3" "6", etc.
6.   **Number of Teams 2 <=5?** <nbr> "2", "3", etc.
7.   Administrative data is now complete. At this point, you can use the arrow keys to move the cursor to any entry on the screen to make corrections or changes. To store the entries on the screen, you simultaneously hit the Ctrl-End keys. This takes you to the next screen. For all screens in the editor, after making all entries on the screen, you can move the cursor to change any entry and you hit the Ctrl-End keys to store entries and go to the next screen.

>Over

8. **Enter Print Control Data**. The screen shows the reports to be printed under normal use. If you want to change the reports to be printed, move the cursor to the report not wanted and enter "N". Otherwise, press Ctrl-End.
9. **Quarter (K) - Market Growth from Last Quarter (%)?** <nbr> "0"
10. **Automatic/Manual Entry, A/M** <A/M>. Decisions regarding margins, promotions and specials can be done by automatic entry as in Table 1 of the instruction manual by entering "A", or from the team decision form by entering "M" for manual entry.
11. **Team Number**? <nbr> "1", "2", etc.
12. **Team Decisions** - respond to prompts to enter data.
    Note: 1. Use of numeric keypad makes entering data easier. Depress Number Lock key to use keypad.
    2. Errors can be corrected while on the screen by moving the cursor to the entry to be changed or by use of Change option, "C".
13. **Option? "E"** (END edit).
    Note: Refer to the menu (option "H") if another option needs to be used.

Add a Quarter

1. **File Name**? <filename> "TRADE 1", "TRADE2", etc.
2. **Driver**: <A/B/C> "A"
3. **Option? "R"** (Add a quarter)
   Note: Refer to the menu (option "H") for other options.
4. **Quarter (K) - Market Growth from Last Quarter (%)?** <nbr> "0"
5. **Team Number**? <nbr> "1", "2", etc.
   Note: Enter the number of the team for which data is being entered.
6. **Team Decisions** - respond to prompts.
7. **Option? "E"** to END edit.

Process Decisions (SMSC)

1. **Your choice?** <nbr> Enter "1" to preview output or "2" to print output. If "1" is selected enter path and filename such as "C:Example". You can then use the type command to view output on screen.
2. **Input File Name?** <filename> "TRADE1", "TRADE2", etc.
3. **Input Driver:** <A/B/C> "A" Note: Enter the drive that contains SM.
4. **Quarter to Run?** <nbr> "1", "2", etc.
   Note: Enter the most recent quarter for which data was entered. You may need to start with quarter 1 if you got a message to this effect at the end of the edit.
5. **Team to Print** (0 = ALL)
   Normally you enter <0> to get reports for all teams. If only results for a specific team are needed, enter the desired team number "1", "2", etc.

Graph Team Results on Screen (GRAPH)

Note: You cannot make graphs if only quarter 1 has been run. You must run at least 2 quarters to obtain graphs.

1. If using Windows 95, start your computer from DOS.
2. **Input File Name?** <filename> "TRADE1", "TRADE2", etc.
3. **Input Driver:** <A/B/C> "A" Note: Enter the drive that contains SM.
4. Select graph from menu and enter corresponding number.

5.   To obtain a hard copy of graph, press Shift and PrtSc simultaneously (valid only if EGAD had been entered at start of session).

6.   Press any key to continue graphs or press "Enter" at team performance graphs to return to the menu.

SUPERMARKET UNIVERSITY DECISION FORM

Trade Area Number   ____
Team Number   ____
Quarter Number   ____

Margins*

Grocery (percent)	+ or - 4	____ ____ . ____
Meat/Deli (percent)	+ or - 4	____ ____ . ____
Dairy (percent)	+ or - 4	____ ____ . ____
Produce (percent)	+ or - 4	____ ____ . ____
Frozen Food (percent)	+ or - 4	____ ____ . ____
General Merchandise (percent)	+ or - 4	____ ____ . ____

Promotions

Store Programs (percent of sales)	0 to 4.5	____ . ____
Double Coupons	0=No, 1=Yes	____
Advertising ($6000 basic for # stores)		____ ____ ____ ____
Store Hour Policy (number)	1,2,3	____

Specials

Grocery (number)	0 to 40	____ ____
Meat/Deli (number)	0 to 20	____ ____
Dairy (number)	0 to 10	____ ____
Produce (numbers)	0 to 10	____ ____
Frozen Food (number)	0 to 10	____ ____
General Merchandise (number)	0 to 10	____ ____

Orders

Grocery (dollars)	____ ____ ____ ____ ____
Meat/Deli (dollars)	____ ____ ____ ____ ____
Dairy (dollars)	____ ____ ____ ____ ____
Produce (dollars)	____ ____ ____ ____ ____
Frozen Food (dollars)	____ ____ ____ ____ ____
General Merchandise (dollars)	____ ____ ____ ____ ____

People**

Full time people in meat/deli dept.	3 or more	____ ____
Part time people in meat/deli dept.	< 60%	____ ____
Full time people rest of store	15 or more	____ ____
Part time people rest of store	< 60%	____ ____

Facilities

Remodel store (number)	____
Open new store (number)	____

Money

Borrow money (dollars)*	____ ____ ____ ____
Repay loan (dollars)	____ ____ ____ ____
Make investment (dollars)	____ ____ ____ ____
Call investment (dollars)	____ ____ ____ ____

*   **Maximum and minimum margins for the next quarter are shown at the bottom of your market share report.**
**   **Full time equivalents**
***   **The maximum amount which can be borrowed next quarter is shown at the bottom of your balance sheet.**