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MAJORITY FALLACY GAME WITH INDEPENDENT STUDENT SIMULATION AND A CASE

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ABSTRACT

A refinement of the majority fallacy game to allow independent student trial runs and final decision input without involving the game administrator in receiving, recording, and managing decision inputs. A case to provide a plausible environment is included.

INTRODUCTION

A competitive simulation game to illustrate the majority fallacy product positioning concept was developed by Smead and Finn [3] to isolate the competitive positioning issues from other marketing environmental influences. Students designed a product position by making decisions regarding three product characteristics, choosing one of six levels for each characteristic. All decisions were then submitted through the instructor who ran the programs and provided results to show the shares of market earned by each competing t earn.

This revision allows students to simulate their product environment, repeatedly, on a trial basis, from a computer terminal prior to making a final game decision. Final student decisions are submitted to a central control program from the terminal, which is run at the instructor's discretion. A case is included to provide students with a plausible setting for the simulation.

THE MAJORITY FALLACY

When a new product is developed, decisions must be made regarding the quantity or intensity of each product characteristic or attribute (e.g. sweetness). Preference levels for light, medium, and heavy levels can be estimated through product research. The decision to introduce any specific brand at the most demanded level might, however, be a strategic error.

If a given level of an attribute or attribute set is highly demanded it is very likely that the market has already responded and products have already been introduced to satisfy those needs. The possibility of a new competitor or existing competitors new product introductions being profitable in the high demand product attribute set may be quite low. However, a Bet of attributes demanded by somewhat fewer people may have less competition. The unsatisfied demand that would be met by introduction of a product with attributes designed to fit that market may be larger than the demand for an additional product competing for the more common Bet of needs. [2]

CURRENT MODEL EXPERIENCE

The Smead and Finn model of the Fallacy simulation [3] was used in the authors' undergraduate and graduate marketing principles courses. The demand functions were set; these differed in each dimension. Functions were constructed to provide different demand environments between games. Teams were formed, decisions submitted, simulations run, reports presented, and results handed back and evaluated. In general the experience did meet the educational objective of conveying the meaning of the majority fallacy. [1] Educationally the game was a success.

On the other hand, the experience of the game administrator was not such a success. Some course sections were quite large. This necessitated multiple computer decks, large volumes of printouts, time-consuming paper shuffling, special rules, for submission of marketing position decisions, and, in general, administrative chaos. Several rounds of the game were required for students to understand the mechanics of making a decision in three dimensions with six levels each (a bonus learning experience of the game of perhaps equal value to the majority fallacy concept).

An additional concern was that, although the competitive environment was being simulated to provide "real world" experience, the power of simulation as a strategic planning technology was not demonstrated.

THE CASE

A concise case was developed (Appendix A--Carinaugua Jamaica) to present a hypothetical soft drink with three attribute dimensions (flavor/extract, sugar/ sweetness, and carbonation) with six levels each.
Preconceived notions of correct or proper attribute mixes have caused students to "know" good strategies rather than analyze the data given in trials with familiar product. To avoid this problem a situation was invented in a foreign market with an unfamiliar product. The drink, Jamaica, is a fantasy variation of a drink by that name actually sold by street vendors in Mexico.

The unfamiliar nature of the product allows the instructor the option of creating multiple games with different market characteristics to handle large or multiple sections. Each game may this have a unique competitive environment without changing the case.

THE STUDENT GAME

As in the original, the game is inaugurated in the classroom by introducing the competitors to a consumer preference map. For each of the three product characteristic decision variables the map shows how many consumers reported preferences in each of six possible levels according to a research survey in the case. A sample competitive situation is shown in a market share map as well. Market share maps graphically portray market shares controlled by each competitor and summaries of market share percents by competitor. Sample of both maps are shown in Figure 1.

A copy of the Carinaugua Jamaica Case is then given to each student or team. They are instructed to read the

FIGURE 1

CONSUMER PREFERENCE MAP
PLANE=EXTRACT ROW=SUGAR COL.=CARBONATION

LEVEL1

2	3	4	5	5	6
4	6	9	12	15	16
5	10	16	25	33	36
6	14	26	42	57	64
8	18	35	58	80	89
8	19	38	65	89	100

LEVEL2

8	10	9	7	6	5
11	16	16	15	15	15
13	20	23	26	31	33
14	23	31	42	53	57
14	25	39	56	73	80
13	24	40	61	81	89

LEVEL3

16	22	18	10	5	4
24	32	28	18	13	11
28	37	35	28	25	24
30	40	42	40	41	42
30	42	47	51	56	58
24	35	44	52	61	65

LEVEL4

22	28	22	12	5	2
33	43	35	20	10	7
41	52	45	29	18	14
47	60	54	39	29	25
49	63	59	46	38	35
39	51	50	43	40	38

LEVEL5

18	23	18	9	3	1
29	37	30	16	7	3
40	51	42	24	12	7
52	65	56	34	19	13
57	71	62	40	24	17
46	57	51	35	24	19

LEVEL6

9	11	9	4	1	0
16	21	17	9	3	1
27	34	28	15	7	3
40	49	41	24	11	5
46	56	47	28	14	7
37	45	39	24	12	8

MARKET SHARE MAP

LEVEL1

E	E	E	E	F	F
D	D	F	F	F	F
D	D	D	F	F	F
D	D	D	F	F	C
D	D	D	D	C	C
D	D	D	D	C	C

LEVEL2

E	E	E	E	E	E
DE	E	E	E	F	F
D	D	D	F	F	F
D	D	D	F	F	F
D	D	D	AD	F	C
BD	D	D	AD	AC	C

LEVEL3

E	E	E	E	E	E
E	E	E	E	E	E
D	DE	E	E	F	F
BD	D	AD	A	F	F
B	BD	AD	A	A	F
B	B	ABD	A	A	AC

LEVEL4

E	E	E	E	E	E
E	E	E	E	E	E
BE	E	E	E	E	E
B	B	A	A	A	F
B	B	AB	A	A	A
B	B	B	A	A	A

LEVEL5

E	E	E	E	E	E
E	E	E	E	E	E
BE	E	E	E	E	E
B	B	ABE	AE	AE	AE
B	B	B	A	A	A
B	B	B	AB	A	A

LEVEL6

E	E	E	E	E	E
E	E	E	E	E	E
BE	E	E	E	E	E
B	B	BE	E	E	E
B	B	B	AB	A	A
B	B	B	B	A	A

TEAM	POSITION	SHR
A	354	17.0
B	462	23.5
C	156	10.4
D	253	13.3
E	424	23.0
F	245	12.7

case and plan their first round strategy. A deadline for final decisions in each round of play is Bet. Subsequently, instructions are given to each student in how to log on to a computer terminal and call up the Fallacy Simulation.

The Fallacy Simulation Consists of two FORTRAN programs representing slight modifications of the Smead and Finn original and two COBOL programs added by the authors. Copies of each are in Appendix B. Together, the programs permit competitors to make trial product positioning decisions (with the capability to manipulate suspected positioning of their competitors) and view the results of their trials immediately via printed Consumer Preference Maps and Market Share Maps. When satisfied with a positioning decision, an unalterable final decision is recorded for the instructor's use. Password protection allows each team to record only its own final decision.

Once all final decisions are recorded and the instructor has executed the master program (see Appendix B), each student/team receives a Market Share Map and a Consumer Preference Map which shows what positions were selected by each team and what shares were captured by that position.

THE INSTRUCTORS RUN

Before any play, the instructor runs one program to initiate the game, Bet demand functions and prepare for the number of teams that will be participating for each simulation. After the deadline for recording final decisions in each round, the instructor then runs the master program. Final decisions for teams that did not record a final decision by the deadline default to the last previously entered final decision. This program prompts for number of copies to be printed, performs the Fallacy Simulation, prints the results, and prepares files for the next round of play.

DISCUSSION

The use of the Carinaugua Jamaica Case has greatly facilitated the introduction of the majority fallacy situation. Particular advantages of the foreign environment is the reduction of the instances of complaints of deviation from a preconceived "reality" such as "these numbers cant be right," "this just can't be," and "this doesn't make any sense--nobody would want that." It allows a distinctive demand environment to be used at the same time or changes from term to term without creating situations of dubious credibility.

The independent student input/output trial program allows students to gain valuable experience and greater understanding of their market without tying up class time or involving a games administrator. The focus of decision making in early rounds turns from figuring out how to read a three-dimensional map to anticipation and analysis of competitors' moves--the purpose of studying the majority fallacy in the first place.

The instructor's master program allows the instructor to control when the final decision is due and the Fallacy Simulation run without having to handle or transpose any student input. This minimizes the effect of problems such as "my partner has our decision; he'll be here Boon," "that wasn't what we submitted," "we didn't know when you wanted it," etc. The computer management side is reduced to calling up the program when decisions are due and handing out copies of resulting maps. This frees instructors for more productive instructional activities such as review of students' analyses and interpretation of their results.

CONCLUSIONS

These refinements of the Smead and Finn [3] majority fallacy game strengthen the learning experience by greatly increasing students' opportunities to experiment with and learn from simulation as a strategic planning tool. In addition, the instructor is freed from burdensome game administration tasks.

APPENDIX A
CARINAUGUA JAMAICA

When foreign investors were permitted to invest in Carinaugua they found that in addition to soft drinks, citizens were fond of a fruit drink made of crushed flower petals called Jamaica. This was made by street vendors, each of whom claimed to have a "secret recipe. Product research showed that the only ingredients were the extract from the flowers, sugar, and water. While each secret recipe had its advocates, the only differences were the amounts of extract, sugar, and carbonation in the water,

The University of Carinaugua home economics department found that there were about six levels of each ingredient, from weak to strong, which would combine to make almost all recipes known in the country. Demand for each mixture was determined in a national preference test. Results are shown in the top half of the Consumer Preference Map (Planes = extract; Rows - sugar; columns carbonation).

When the Department of Economic Development decided to allow bottlers to open plants in Belie, the capital of Carinaugua, they decided to limit the market to six competitors. Applications were taken and the following were accepted.

Ace Bottling - a Texas soft-drink company
Brusco Limited - a firm which made Jamaica ext r act
Coma Todo - a Belie Supermarket chain
Distillery Specialty Company - a California bottle manufacturer
Epoca - a Carinauguan conglomerate
Fabricos International - a Central American manufacturer

All have the ability to enter the market on the first day permitted. Each may select whichever formula is believed best. Consumers will purchase the flavor closest to their preference. Equally distant brand split markets evenly.

You are the product manager of one of these firms and will determine the recipe [e.g. (2 extract, 3 sugar, 2 carbonation) or (4 extract, 1 sugar, 6 carbonation)]. Once a decision is made the product will enter the market for one period.

After each period a government report will describe the resulting shares of the Carinauguan Jamaica market.

The product formula may be changed, however to avoid

government intervention from the Department of Economic Development revisions may not exceed a maximum of a combined total of four levels (e.g., +1 extract, -l sugar, +2 carbonation).

Students' Final Decision Program

```
1   IDENTIFICATION DIVISION.
1.1 PROGRAM-ID. MKTDRIVER.
1.2 ENVIRONMENT DIVISION.
1.3 INPUT-OUTPUT SECTION.
1.4 FILE-CONTROL.
1.5       SELECT TEAM-FILE-OUT
1.6            ASSIGN TO 'TEAMFL1'.
1.7 DATA DIVISION.
1.8 FILE SECTION.
1.9 FD TEAM-FILE-OUT
2       RECORD CONTAINS 80 CHARACTERS
2.1     DATA RECORD IS TEAM1-REC.
2.2 01 TEAM-REC                          PIC X(80).
2.3
2.4 WORKING-STORAGE SECTION.
2.5
2.6 01   INPUT-FIELDS.
2.7      05  YOUR-TEAM                  PIC 9(03).
2.8
2.9 01 ACCEPT-FIELDS.
3        05  RESPONCE                     PIC X(01)  VALUE S
3.1      05  TEAM-NUM                     PIC 9(01) VALUE +
3.2
3.3 01   OUTPUT-FIELDS.
3.4      05  FILLER                         PIC X(04)  VALUE
3.5      05  TEAM-NUM-OUT                   PIC 9(01).
3.6      05  FILLER                         PIC X(08)  VALUE
3.7      05  FILLER                         PIC X(03)  VALUE
3.8      05  YOUR-TEAM-OUT                  PIC 9(03)  VALUE
3.9      05  FILLER                         PIC X(61)  VALUE
4
4.1
4.2 PROCEDURE DIVISION.
4.3-
4.4 000-DRIVER-ROUTINE.
4.5       OPEN  OUTPUT TEAM-FILE-OUT
4.6
4.7      PERFORM 011-START-DIALOG THRU 011-EXIT.
4.8      PERFORM 055-MASTER-RUN-SETUP THRU 055-EXIT.
4.9      PERFORM 077-LOAD-THE-TEAMS THRU 077-EXIT.
5        PERFORM 088-BUILD-THE-FILE THRU 088-EXIT.
5.1      PERFORM 999-END-THE-PROGRAM.
5.2
5.3 011-START-DIALOG.
5.4
5.5      DISPLAY 'ENTER YOUR TEAM NUMBER'.
5.6      ACCEPT TEAM-NUM.
5.7 011-EXIT. EXIT.
5.8
5.9 055-MASTER-RUN-SETUP.
6
6.1     DISPLAY
6.2      'ARE YOU READY TO MAKE YOUR FINAL DECISION FOR TH
6.3       DISPLAY ' CONTINUE ( Y OR N )'                    .01
6.4       ACCEPT RESPONCE                                   .1
6.5     IF RESPONCE = 'Y'                                   .2
6.6       DISPLAY ' '
6.7     ELSE
6.8       MOVE SPACES TO RESPONCE
6.9       DISPLAY                                           .1
7           'OK.... DO YOU NEED TO RUN THE SIMULATION PROG.2
7.1       ACCEPT RESPONCE
7.2          IF RESPONCE = 'Y'
7.3       PERFORM 999-END-THE-PROGRAM.
7.4 055-EXIT. EXIT.
7.5
7.6 077-LOAD-THE-TEAMS.
7.7       DISPLAY ' ENTER YOUR TEAM'S POSITION '
7.8       DISPLAY                                           .1
7.9             '..... THREE DIGITS   NO COMMAS OR SPACES
8         ACCEPT YOUR-TEAM
8.1       DISPLAY ' YOUR FILE HAS BEEN CREATED '.
8.2 077-EXIT. EXIT.
8.3                                                         .1
8.4 088-BUILD-THE-FILE.
8.5       MOVE SPACES TO TEAM-REC
8.6       MOVE TEAM-NUM TO TEAM-NUM-OUT
8.7       MOVE YOUR-TEAM TO YOUR-TEAM-OUT
8.8       WRITE TEAM-REC FROM OUTPUT-FIELDS.
8.9 088-EXIT. EXIT.
9
9.1 999-END-THE-PROGRAM.
9.2
9.3       CLOSE TEAM-FILE-OUT
9.4       STOP RUN.
```

Instructor's Simulation Program

```
C     PROGRAM FALLACY: A GAME TO ILLUSTRATE THE MAJORITY FALLACY
C
      CHARACTER MSG*40
      DIMENSION MAP(6,6,6),RMAP(6,6,6),M2(216),R2(216),IT(216,3),
     1  ITEAM(3,6),M(6),SHR(6),C1(2,3),C2(3,3),LET(8),MSG(10)
      EQUIVALENCE (MAP(1,1,1),RMAP(1,1,1),M2(1),R2(1))
      DATA C1/1.,4., 2.,5., 3.,9./,C2/2.,4.,2., 2.,5.,5., 6.,1.,6./
C     EACH PREFERENCE CENTER'S LOCATION(C2 ABOVE) IS BY COLUMN-PLANE-ROW
      DATA LET/1HA,1HB,1HC,1HD,1HE,1HF,1H+,1H /
C
C     GENERATE CONSUMER DISTRIBUTION MAP USING THE 3 PREFERENCE
C     CENTERS (C2) AND THEIR FUNCTION PARAMETERS (C1).
      FMAX=0.
      DO 20 I = 1,6
      DO 20 J = 1,6
      DO 20 K = 1,6
      RMAP(I,J,K)=0.
      DO 10 L = 1,3
      DIS = (I-C2(1,L))**2 + (J-C2(2,L))**2 + (K-C2(3,L))**2
   10 RMAP(I,J,K)=RMAP(I,J,K) + C1(1,L)*2.718**(-DIS/C1(2,L))
   20 FMAX = AMAX1(FMAX,RMAP(I,J,K))
      DO 30 I = 1,216
   30 M2(I)=R2(I)/FMAX*100.
C
C     READ  IN TEAMS, COPIES, TEAM POSITIONS AND MESSAGE TO BE PRINTED
   35 READ(1,40,END=170) NTEAM,NCOP,(ITEAM(2,L),ITEAM(3,L),ITEAM(1,L),
     1 L=1,6),(MSG(L),L=1,10)
   40 FORMAT(I1,I3,6(3X,3I1),10A4)
      IF(NTEAM.EQ.0) GO TO 110
C
C      ALLOCATE CONSUMERS TO TEAMS
      DO 45 I = 1,6
   45 SHR(I)=0.
      TOT = 0
      DO 90 I = 1,6
      DO 90 J = 1,6
      DO 90 K = 1,6
      LOC = I +(J-1)*6 + (K-1)*36
      FMIN = 100
      KT = 1
      DO 70 L = 1,NTEAM
      DIS = (I-ITEAM(1,L))**2 + (J-ITEAM(2,L))**2 + (K-ITEAM(3,L))**2
      IF(DIS-FMIN)50,60,70
   50 KT = 0
      FMIN = DIS
   60 KT = KT + 1
      N(KT)=L
   70 CONTINUE
      TOT = TOT + M2(LOC)
      Q = FLOAT(M2(LOC))/KT
      IT(LOC,2) = LET(8)
      IT(LOC,3) = LET(8)
      DO 80 L = 1,KT
      SHR(N(L)) = SHR(N(L)) + Q
   80 IT(LOC,MIN0(3,L))=LET(N(L))
      IF(KT.GT.3) IT(LOC,3)=LET(7)
   90 CONTINUE
      DO 100 I = 1,NTEAM
  100 SHR(I)=SHR(I)/TOT*100
C
C     PRINT IT OUT
  110 DO 160 KOP = 1,NCOP
      WRITE(3,120) MSG
  120 FORMAT(1H1,///,50X,'CONSUMER PREFERENCE MAP',/
     1 45X,'PLANE=EXTRACT ROW=SUGAR COL.=CARBONATION',
     1 //,45X,10A4,5(/))
       WRITE (3,165)
  165  FORMAT(19X,'LEVEL1',T53,'LEVEL2',T87,'LEVEL3')
      DO 124 I = 1,216,36
      J = I + 17
  124 WRITE(3,130) (M2(K),K=I,J)
      WRITE(3,135)
       WRITE(3,131)
  131  FORMAT(19X,'LEVEL4',T53,'LEVEL5',T87,'LEVEL6')
      DO 126 I = 19,216,36
      J = I + 17
  126 WRITE(3,130) (M2(K),K=I,J)
  130 FORMAT(//3(10X,6I4))
  135 FORMAT(6(/))
      IF(NTEAM.EQ.0) GO TO 160
      WRITE(3,140)
  140 FORMAT(1H1,///,50X,'MARKET SHARE MAP'///)
       WRITE(3,165)
      DO 144 I = 1,216,36
      J = I + 17
  144 WRITE(3,145) ((IT(K,L),L=1,3),K=I,J)
  145 FORMAT(//,3(10X,6(2A1,A2)))
      WRITE(3,135)
       WRITE(3,131)
      DO 146 I = 19,216,36
      J = I + 17
  146 WRITE(3,145) ((IT(K,L),L=1,3),K=I,J)
      WRITE(3,150)
  150 FORMAT(///,10X,'TEAM    POSITION      SHR',//)
      WRITE(3,155) (LET(L),ITEAM(2,L),ITEAM(3,L),ITEAM(1,L),SHR(L),L=1,
     1 NTEAM)
  155 FORMAT(11X,A1,I9,2I1,F10.1)
  160 CONTINUE
      GO TO 35
  170 STOP
```

Students' Simulation Program

```
      $control subtitle='file=1-3,NOLIST
      C     PROGRAM FALLACY: A GAME TO ILLUSTRATE THE MAJORITY FALLACY
      C
            CHARACTER MSG*40
            DIMENSION MAP(6,6,6),RMAP(6,6,6),M2(216),R2(216),IT(216,3),
           1  ITEAM(3,6),N(6),SHR(6),C1(2,3),C2(3,3),LET(8),MSG(10)
            EQUIVALENCE (MAP(1,1,1),RMAP(1,1,1),M2(1),R2(1))
            DATA C1/1.,4.,  2.,5.,  3.,9./,C2/2.,4.,2.,2.,5.,5.,  6.,1.,6./
      C     EACH PREFERENCE CENTER'S LOCATION(C2 ABOVE) IS BY COLUMN-PLANE-ROW
            DATA LET/1HA,1HB,1HC,1HD,1HE,1HF,1H+,1H /
      C
      C     GENERATE CONSUMER DISTRIBUTION MAP USING THE 3 PREFERENCE
      C     CENTERS (C2) AND THEIR FUNCTION PARAMETERS (C1).
            DISPLAY 'HOW MANY RUNS THRU IN THIS SET (NO MORE THAN 4)'
            ACCEPT NTIMES
            IF (NTIMES .GT. 4 ) NTIMES = 4
            DO 200 M = 1,NTIMES
            FMAX=0.
            DO 20 I = 1,6
            DO 20 J = 1,6
            DO 20 K = 1,6
            RMAP(I,J,K)=0.
            DO 10 L = 1,3
            DIS = (I-C2(1,L))**2 + (J-C2(2,L))**2 + (K-C2(3,L))**2
         10 RMAP(I,J,K)=RMAP(I,J,K) + C1(1,L)*2.718**(-DIS/C1(2,L))
         20 FMAX = AMAX1(FMAX,RMAP(I,J,K))
            DO 30 I = 1,216
         30 M2(I)=R2(I)/FMAX*100.
            NCOP = 1
            DISPLAY '****  ENTER THE NUMBER OF TEAMS IN THIS RUN  ****'
            ACCEPT NTEAM
            IF ( NTEAM .GT. 6)  NTEAM = 6
            DO 38 L = 1,NTEAM
            DISPLAY 'ENTER POSITIONS FOR TEAM',L,'SEPARATED BY C''MAS'
            ACCEPT ITEAM(2,L),ITEAM(3,L),ITEAM(1,L)
         38   CONTINUE
            IF(NTEAM.EQ.0) GO TO 110
      C
      C      ALLOCATE CONSUMERS TO TEAMS
            DO 45 I = 1,6
         45 SHR(I)=0.
            TOT = 0
            DO 90 I = 1,6
            DO 90 J = 1,6
            DO 90 K = 1,6
            LOC = I +(J-1)*6 + (K-1)*36
            FMIN = 100
            KT = 1
            DO 70 L = 1,NTEAM
            DIS = (I-ITEAM(1,L))**2 + (J-ITEAM(2,L))**2 + (K-ITEAM(3,L))**2
            IF(DIS-FMIN)50,60,70
         50 KT = 0
            FMIN = DIS
         60 KT = KT + 1
            N(KT)=L
         70 CONTINUE
            TOT = TOT + M2(LOC)
            D = FLOAT(M2(LOC))/KT
            IT(LOC,2) = LET(8)
            IT(LOC,3) = LET(8)
            DO 80 L = 1,KT
            SHR(N(L)) = SHR(N(L)) + D
         80 IT(LOC,MIN0(3,L))=LET(N(L))
            IF(KT.GT.3) IT(LOC,3)=LET(7)
         90 CONTINUE
            DO 100 I = 1,NTEAM
        100 SHR(I)=SHR(I)/TOT*100
      C
      C     PRINT IT OUT
        110 DO 160 NOP = 1,NCOP
            IF (CPM .EQ. 1) GOTO 777
            WRITE(3,120)
        120 FORMAT(1H1,///,50X,'CONSUMER PREFERENCE MAP',//
           1 45X,'PLANE=EXTRACT ROW=SUGAR COL.=CARBONATION',
           1  7(/))
              WRITE (3,165)
        165  FORMAT(19X,'LEVEL1',T53,'LEVEL2',T87,'LEVEL3')
            DO 124 I = 1,216,36
            J = I + 17
        124 WRITE(3,130) (M2(K),K=I,J)
            WRITE(3,135)
              WRITE(3,131)
        131  FORMAT(19X,'LEVEL4',T53,'LEVEL5',T87,'LEVEL6')
            DO 126 I = 19,216,36
            J = I + 17
        126 WRITE(3,130) (M2(K),K=I,J)
        130 FORMAT(///3(10X,6I4))
        135 FORMAT(6(/))
            IF(NTEAM.EQ.0) GO TO 160
              CPM = 1
        777  CONTINUE
            WRITE(3,135)
            WRITE(3,140)
        140 FORMAT(1H1,///,50X,'MARKET SHARE MAP'///)
              WRITE(3,165)
            DO 144 I = 1,216,36
            J = I + 17
        144 WRITE(3,145) ((IT(K,L),L=1,3),K=I,J)
        145 FORMAT(///,3(10X,6(2A1,A2)))
        147 WRITE(3,135)
              WRITE(3,131)
            DO 146 I = 19,216,36
            J = I + 17
        146 WRITE(3,145) ((IT(K,L),L=1,3),K=I,J)
            WRITE(3,150)
        150 FORMAT(///,10X,'TEAM    POSITION     SHR',//)
            WRITE(3,155) (LET(L),ITEAM(2,L),ITEAM(3,L),ITEAM(1,L),SHR(L),L=1,
           1 NTEAM)
        155 FORMAT(11X,A1,I9,2I1,F10.1)
        160 CONTINUE
        200   CONTINUE
        170 STOP
            END
```