

Final Report

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**CONTRACEPTIVE SOCIAL MARKETING
INFORMATION SYSTEM**

DESCRIPTION AND USER'S GUIDE

Prepared by the
International Contraceptive Social Marketing Project

With Input and Assistance From:

- Margaret S. Boone
- Gail A. Waschuck
- Henry C. Cole
- Bonnie B. Derr
- Betty B. Ravenholt

THE FUTURES GROUP
1029 Vermont Avenue, N.W.
Washington, D.C. 20005
(202) 347-8165

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A NOTE OF PRECAUTION:

This report contains specific instructions for accessing both the CSM Library Bibliographic System and the CSM Program Variables Files which have been developed by The Futures Group through its International Contraceptive Social Marketing Project. This report does not attempt to instruct potential users of an Apple II-Plus microcomputer in the complete use or capabilities of the Apple. Nor should this report be seen as an alternative to studying the Instruction Manual for DB Master (the software package used for accessing the library on the Apple II computer), the Apple Owners Manual, or other Apple programming manuals. Thus, for example, this report will not show the potential user how to design other programs using the DB Master software package. Additionally, this report will not provide its readers with instructions on all of the options available on the use of the library system (e.g., editing, deleting, adding new records; printing/setting up report formats, etc.) as these functions are not needed by the user of the library system. The sole purpose of this report is to detail how to search the records of the library for types of documents and how to access and compare the country specific data in the CSM Program Variables Files. The user is encouraged to consult the appropriate Apple manuals for alternative uses of the computer.

INTRODUCTION

The Futures Group, under a cooperative agreement with the Agency for International Development/Office of Population, is developing a CSM Information System to assist professionals involved in contraceptive social marketing worldwide. The CSM Information System provides a mechanism for sharing country specific program data in a regular, uniform manner and also provides a central source of information on available documents relating to CSM program development and management. Files for the CSM Information System are stored on portable, floppy disks for an Apple II-Plus microcomputer. Program disks are available from the International Contraceptive Social Marketing Project of The Futures Group. Periodic updating of the files can be accomplished by mailing the disks to the ICSMP which will input new information, then return disks to program managers for further use. Alternatively, new data can be mailed to program managers for input by each project.

The CSM Information System provides for data sharing of two major data bases:

- (1) A contraceptive social marketing library via its computerized, cross-referenced index to library listings of both published and unpublished references.
- (2) A computerized data base on CSM programs worldwide, consisting of both cross-country data files and country-specific data files on a variety of program variables and both social and commercial development measures.

This report provides a detailed description of both data bases and an explanation of how they can be used.

PRACTICAL USES OF THE CSM INFORMATION SYSTEM

While the CSM data bases can be used in basic scientific and marketing research, the CSM Information System was designed primarily to meet the practical needs of program managers and policymakers. The data bases can be updated and expanded as new references are catalogued; as new sales, outlet, and revenue figures become available; and as new socioeconomic and commercial indicators are developed (and older ones revised). The CSM Information System can be particularly useful in such activities as:

- (1) Informed Decisionmaking. Data bases can enhance management decisions by providing a variety of program measurement scales and against a variety of social, economic, and commercial yardsticks.
- (2) Program Forecasting. Data bases and initial cross-country comparisons can act as an aid in forecasting ranges of future sales and expenditures, based on past performance of CSM programs worldwide.
- (3) Strategy Development. Data bases can be used to help develop CSM strategies and policies in light of factors which appear historically to help or hinder creation of successful programs.

The CSM information system provides a unique collection of materials and data on both sociological and business factors that affect social marketing

programs in developing nations. The following report focuses on how the CSM data bases can help :

- plan for improved sales,
- develop and administer programs,
- identify past successes and areas for future project development.

PART I: DESCRIPTION OF DATA FILES

Data files for CSM library holdings and for CSM program variables are contained on floppy disks which can be accessed using an Apple II-Plus micro-computer. Content and organization of the files for the library and CSM program variables differ according to the system used to access them.

DESCRIPTION OF CSM LIBRARY FILES

The iCSMP Library and Resource Center is a collection of documents developed for and relevant to contraceptive social marketing. CSM library files are accessed using the Apple software package "DB Master", and therefore are organized according to parameters outlined by the DB Master program. (The procedure for searching a known reference (or "record") or for any list of records which would correspond to a specific type of document is outlined in Part II: Instructions for Accessing Files.)

Each CSM library record is defined in terms of the following categories: the country to which the reference refers, the subject according to three individual "topic" words (described in more detail below), the principal author, other authors, source (agency, journal, or publisher), date of the reference, language in which the reference is written, and shelf number.

Those with the Apple DB Master "Program Disk" and Instruction Manual will find the following chart of field types and sizes useful.

CSM Library File Fields*

(in order of each library record)

<u>Name</u>	<u>Length</u>
Country	25
Topic 1	35
Topic 2	30
Topic 3	99
Shelf Number	20
Author (Principal)	20
Other Author	20
Other Author	20
Title (6 lines long)	180 (total)
Source	15
Date	8
Language	18

*Those with a DB Master Disk should see the Instruction Manual for a full definition of "Field."

Each of the nearly 800 holdings in the library has been catalogued using a three-topic category coding system especially developed for the collection. Topic 1 codes (see following table) define the document by its overall purpose, e.g., feasibility study, contraceptive use survey, marketing plan, etc. The second topic category defines the method of contraception discussed in the document, allowing for identification of "multiple methods" where appropriate. Topic 3 further defines the document by its primary subject focus, e.g., advertising, distribution, family planning policy, community based distribution, etc. In addition, documents can be identified by subject country (see Annex A), or region for those documents which address multiple countries.

Thus the user is able to search for types of documents held in the library (e.g., all marketing plans, all contraceptive use surveys, etc.) as well as for specific documents (e.g. Nepal CRS project evaluation) by so directing the computer search.

CODES FOR -- TOPIC 1

BIBL	BIBLIOGRAPHY
CNRP	CONTRACT REPORT
CNUS	CONTRACEPTIVE USE SURVEYS
COAG	CONTRACT/AGREEMENT
CORR	CORRESPONDENCE
DIRC	DIRECTORY
EVAL	EVALUATION
FEST	FEASIBILITY STUDIES
FPLR	FAMILY PLANNING REPORTS
HLRP	HEALTH-RELATED REPORTS
MKPL	MARKETING PLANS
MKPR	MARKETING PROPOSALS/PROPOSALS
MKRS	MARKET RESEARCH/RESEARCH
NSLR	NEWSLETTER
PJPR	PROJECT PAPER (includes RFP's)
PJRP	PROJECT REPORTS (should include meeting notes, memos)
PROM	PROMOTIONAL MATERIALS
REST	REFERENCE/STATISTICAL BOOK
SMRP	SOCIAL MARKETING REPORTS
TARP	TECHNICAL ASSISTANCE REPORT

CODES FOR -- TOPIC 2

CNDM CONDOM
CTR CONTRACEPTIVE AGENTS
DPHG DIAPHRAGMS
HSTR HYSTERECTOMY
IJCT INJECTIBLES
IUDS IUDS
MLMT MULTIPLE METHODS
ORAL ORAL CONTRACEPTIVES
ORS ORAL REHYDRATION SALTS
PHRM PHARMACEUTICALS
SPRM SPERMICIDES
STRL STERILIZATION
TDMT TRADITIONAL METHODS

CODES FOR -- TOPIC 3

ADVT ADVERTISING
ATBH ATTITUDE/BEHAVIOR
CBD COMMUNITY BASED DISTRIBUTION
CEPT CONCEPT
CHLB CHILDBIRTH
CMMD COMMUNICATION/MEDIA
COST COST ANALYSIS/REVENUE USE
CSM CONTRACEPTIVE SOCIAL MARKETING
CTST COMMODITY QUALITY CONTROL TESTING
DEVG DEVELOPMENT GENERAL
DIST DISTRIBUTION
DTMD DETAILING PHYSICIANS
ECON ECONOMIC CONDITIONS
EDUC EDUCATION
FPOR FP ORGANIZATION
FPPL FAMILY PLANNING POLICY
FPPR FAMILY PLANNING PROGRAMS
HDIS HOUSEHOLD DISTRIBUTION
LAW LAW
LCTN LACTATION
MKTG MARKETING
MKTO MARKETING ORGANIZATION
MNCH MENARCHE
MNGT MANAGEMENT
MREG MENSTRUAL REGULATION
PDIS PHARMACY DISTRIBUTION
PHCO PHARMACEUTICAL COMPANIES
PKG PACKAGING
POPG POPULATION GROWTH
PRDV PROGRAM DEVELOPMENT
PRIC PRICING
SDEF SAF/SIDE EFFECTS, CONTRACEPTION
SOCI SOCIOECONOMIC DATA
TRNG TRAINING/CONFERENCES
VEND VENDING MACHINES

Library Searches

Library searches can be produced according to any combination of these categories. Requests for such searches should be addressed to The Futures Group. For those individuals who are not managers of on-going CSM programs, a charge for duplication and mailing will be made for any reference of reasonable length (book-length references will not be copied). Write or TELEX The Futures Group directly for information concerning specific references or searches.

Computer-produced print-outs of all holdings by country, author and subject are maintained for the library. These print-outs, which serve the purpose of a card catalogue, will be updated regularly. In addition to the computerized document system, the library and resource center is also the repository of project materials developed specifically for individual contraceptive social marketing projects. These materials include samples of packaging, advertising campaigns (print ads, radio scripts, point-of-purchase posters and signs), and other promotional tools (calendars, carry-all bags, pencil holders, etc.). Access to the project materials component of the library and resource center is not yet computerized.

Managers are encouraged to send program reports such as those listed in the topic 1 category as well as project materials and suggestions for new references to "CSM Library" in care of The Futures Group. The following sources are now used routinely for additions to the CSM library:

A. Data bases on population

1. POPLINE -- This data base includes the collections of the Population Information Program at Johns Hopkins, the Center for Population and Family Health at Columbia, and Population Index. Periodic updates are available.
2. Population Bibliography -- This data base includes the collection of the Carolina Population Center Library. Periodic updates are available.
3. DOCPAL --- Produced by CELADE in Chile. It includes documents about population produced in or about Latin America, mostly in Spanish.

B. Indexes and acquisitions lists

1. ADOPT, from Population Division, ESCAP, BANGKOK Index with abstracts, about 50 percent published in Asia.
2. Acquisitions List, Population Council.
3. IIPS Acquisitions List, India.
4. PIDSA Abstracts -- The only one published in and about Africa -- English and French.
5. DOCPAL Resumen -- Index journal. Spanish, CELADE, Chile.
6. ARDA -- Abstract journal. AID.
7. UNFPA Acquisitions List.
8. ICIA Cooperative Aquisitions List -- From IPPF London but includes entries from IPPF regional offices.
9. IPPF Open File.

C. Travel

The best, and often the only, way to acquire materials informally published in developing countries -- for example, 30 copies mimeo in Bangladesh -- is to have someone traveling in that country bring back a copy for the CSM library. Staff and consultants who travel are asked to keep an eye out for useful documents and project materials.

DESCRIPTION OF CSM PROGRAM VARIABLES FILES

CSM program variables files are accessed using only one disk through a program written by The Futures Group which contains all files needed for storage, display, and analysis. (The Apple DB Master program is not used to access these files.) The actual procedure for examining any program variable or any social, economic, or commercial variable contained in the data base is outlined in Part II: Instructions for Accessing Files. Instructions are also given for obtaining and printing simple displays and analyses of the data contained in the files.

There are several types of CSM program variables files. Each has its own particular parameters and organizational system.

Type I. The CSM Country-Specific File. Each country with a contraceptive social marketing project now and/or in the recent past has its own separate file. Countries currently include: Jamaica, Mexico, Colombia, El Salvador, Egypt, Ghana, Bangladesh, Nepal, Sri Lanka, and India. The file name is the same as the country name. Although variables within each country file may differ, the first variable is always YEAR, which creates the framework for the "time series" of other variables. The first year in, for example, JAMAICA file, is the first year of project sales. To facilitate the graphics presentation of data on the computer, the last year for all files is 1984. This limitation can be changed in the future, as necessary.

Country files, therefore, contain different numbers of data points. For example, JAMAICA file begins with YEAR (19)75, and ends with (19)84. There are ten "data points" for each variable in JAMAICA file--one for each year. For other variables, the value of the data point is determined by its corresponding YEAR.

The next variable in all files is "change in condom sales" and is expressed in percentage rise or fall in sales from the preceding year to the year corresponding to the data point. The name of the variable in the files is always CHGCS. Changes

in oral contraceptive cycle sales is similarly abbreviated, CHGOS. A value, for example, of 9.23 at data point 2 for Jamaica, means that there was a rise in condom sales from 1975 to 1976 of 9.23 percent. Percentage drops are indicated by minus figures.

The time series created by a constant correspondence between YEAR and all other variables enables an individual working with the file to display cross-plots of data by year. Similarly, cross-plots of one variable by another will show how they relate in specific years.

Variables within country files differ because of the kinds of relevant data, the manner in which they are recorded, and the nature of the programs. For example, two of the ten country files contain no changes in sales of oral contraceptives because no OCs were sold in these programs. For a full listing of all variables in all country files, see Annex C of this report.

Suggestions for the addition of other country-specific variables are welcome. The staff of The Futures Group will make every effort to achieve comparability between country files in the future updating of country-specific files. Consistent reporting of program data will contribute to the expansion of the CSM Information System.

Like all other files in the CSM program variables files, the data can be manipulated using the statistical program capabilities which are built into the program files being used. An individual working with the country files can calculate an "average rise/fall" in condom sales by using the "Basic Statistics" subprogram listed on the disk "Menu". Further instructions will be given in Part III: Suggestions of Exercises Using Data Files.

Type II. The Cross-Country File. There are five cross-country files which compile different clusters of variables. The names of these files are: CSM (contraceptive social marketing program variables); SECDEV (socioeconomic

development variables); ETHNIC (ethnic, religious, linguistic, and other related variables); COMDEV (commercial development variables); and AID (a small number of "program effort" and foreign assistance variables, along with basic demographic data).

Cross-country files vary in size. The largest is CSM, with program variables. The smallest is AID. In all cases, data are arrayed in a specific order. There are ten data points for each variable, one corresponding to each country. The values for data point #1 always correspond to data for Jamaica. Values for data point #2 always correspond to data for Mexico, etc. The order of "country-data-points" is: Jamaica, Mexico, Colombia, El Salvador, Egypt, Ghana, Bangladesh, Nepal, Sri Lanka, and India.

This cross-variable comparability with respect to country enables an individual working with the cross-country files to determine correlations between variables using the "Correlation Matrix" subprogram listed on the disk Menu. This is another example of the statistical capabilities which are built into disk files. Cross-variable comparability also allows for a consistent graphic display format using the "Cross Plots" subprogram. Further illustrations and instructions will be given in Part III.

For a full listing of the variables, variable names, and variable definitions for cross-country files, see Annex B to this report.

Type III. Regression Files. Two files were established which contained all variables with Pearson product-moment correlations of .5000 and over, with two measures of program performance: (1) average monthly sales of CSM condoms, normalized on the basis of women of reproductive ages 15-49 years, and (2) average monthly sales of CSM oral contraceptives, normalized in the same manner. These files were used to perform simple regression analyses, as well as a step-wise

multiple regression analysis for both RSBW (the variable denoting sales of condoms) and SOBW (the variable denoting sales of orals).

An individual can enter a limited number of variables anew, and repeat this type of analysis using the "Regression" subprogram listed on the disk Menu. Further illustrations and instructions will be given in Part III.

Type IV. Historical Files. Files names MONTREAL and COMMERCIAL are large files containing the original variables in the data base. They will not be changed with successive updates and are retained for the purposes of documentation. They can be useful in that they contain combinations of variables that are separated in other files. As long as the data is checked against the most recent data available, these files can be used for further manipulations and displays.

To list all files contained on the disk, (1) press the CTRL key and while holding it down press C and release both keys, (2) press, RETURN , and (3) type "CATALOG." You will have to press RETURN at least once in the listing in order to see the names of all files.

PART II: INSTRUCTIONS FOR ACCESSING DATA FILES

To access the files described in the previous section you will need: (1) an Apple II-Plus microcomputer, (2) an Apple II disk drive and (3) a video monitor or television set with adapter for a microcomputer. For paper copies of data presentations from the monitor screen a printer can be used, although this is not necessary for using the CSM data files.

GENERAL INSTRUCTIONS FOR USING THE COMPUTER

Concepts and Terms

Before you begin work with the computer, make sure you are familiar with the following terms:

CATALOG	The files on a diskette as displayed on the screen.
CTRL	A Key used always with another key to instruct the computer to perform a certain function. When the program calls for you to use the CTRL key with another letter (e.g. CTRL A), you must hold down the CTRL key then press the "A" key, releasing both simultaneously.
CURSOR	The flashing white square on the TV monitor.
DISK DRIVE	The rectangular box into which diskettes are inserted. One or two disk drives may be used with the computer, depending upon the needs of the program you are running.
DISK INTERFACE CARD	Card used to connect disk drives to the computer.

FIELD	An individual category of information within a record. For example, "Topic I" is a field in the CSM library.
FILE	Collection of associated records. For example, the entire collection of holdings of the CSM library comprise the CSM library <u>data file</u> .
RECORD	A unique unit of a file. It is composed of a group of associated fields. Each individual document in the library is a separate record.
REPT	The REPEAT key is located next to the return key on the computer. If you hold down the REPEAT key while simultaneously pressing down a character key, the character will be repeated until you release the key. The <u>first</u> time you press the REPEAT key alone, it enters the last character typed.
(RTN)	The 'RETURN' key. Often you will have to depress this key after you respond to a prompt.
SCREEN	Information printed onto the MONITOR by the computer.
SLOT	Refers to the numbered areas inside APPLE II where disk drives are connected. Take off the computer top to view these slots.
SORT	How the computer has been programmed to deliver information. Currently, the CSM library has two preprogrammed sort options: by country, and by topic.

Hooking Up the Computer

It is best to have someone show you how to hook up the computer properly; however, here are some pointers:

- a. Make sure you have the necessary equipment. In addition to the computer keyboard, for hook-up you will need a monitor (TV), one or two disk drives and one disk interface card.
- b. When you plug the computer into an outlet, make sure the cord is secure both in the outlet in back of the keyboard and the wall outlet.
- c. In the back right side of the keyboard (as you face it) you will see a slot that says "video." Insert the monitor's black cord (with the silver end) here.
- d. Take the top off the keyboard. Find the numbered slots. (As you look down into the inside of the keyboard they will be at the top -- 0 through 7.) Find the disk interface card. (It may be already connected to the drive.) Notice that the extensions on the card fit into the slots inside the keyboard. If you are using either one or two disk drives, place the interface card in slot 6. A little pressure may be needed to get the card in securely.
- e. If the drive is not already connected to the card you can see that the extensions at the end of the drive's grey or striped cord fit into the numbered slots on the interface card. You should insert the disk drive extensions into the card slots which correspond in number to the number of the drive you are using. For example, disk drive #1 should go in interface card slot #1.
- f. You now have your computer hooked up. Place the top back on the keyboard. Make sure that the disk drive cord, which will extend out of the back of the keyboard is not twisted when you close the keyboard top.

The procedure for hooking up the computer is identical whether you want to use the CSM Library Program or the CSM Program Variables Files Program. The remainder of Part II will deal with specific instructions for accessing the library and CSM variables programs.

ACCESSING THE CSM LIBRARY FILES

As mentioned earlier, the CSM Library requires use of the Apple Software package "DB Master." The software package is comprised of three kinds of disks: (1) the "DB Master (program) Disk" which contains the preprogrammed capabilities of the software package; (2) a "utility disk" which stores user designed formats for record categories (fields), printed reports, and sort functions, and (3) "data disks" which contain the actual records of the CSM library system. The CSM library currently requires two data disks to accommodate all library holdings (Vol. 1 and 2). (The DB Master Instruction Manual provides further information on the use of these various disks.) As you use the library system, you will be instructed from time to time to insert one or another of these types of disks into the disk drive. When the computer instructs you to insert a specific disk, simply replace the disk in the disk drive with the one requested. Whenever you want to begin using the CSM library system, you will always start with the "DB Master" program disk.

Starting the Computer

The following steps can be used to start up the computer:

1. Make sure the computer's power switch (on the back of the keyboard) is in the OFF position.
2. Place DB Master program disk in disk drive.
3. Check your drives and slots. If you have one disk drive it should be in slot six, drive 1 (i.e., 6,1). A second drive (if you are using one)

should be placed in 6,2. Note which drive is "drive 1" and which is "drive 2." Disconnect any cards or drives which you do not plan to use. If you are using two disk drives, put the program disk into drive 1 to start the system. The computer will instruct you when to insert a specific disk into disk drive 2. (For the duration of this tutorial it will be assumed you are using only one disk drive.)

4. Turn on the monitor. Make sure you are on a "nonstation" channel (U). The monitor should read APPLE II.
5. Turn the computer on. The disk drive's red "IN USE" light should come on.

A title screen should appear with STONEWARE'S DB MASTER, and the copyright. Hit RETURN, and information appears about the numbers of slots and disk drives. Enter the number of disk drives you are using. The program then instructs you to insert the utility disk. Do so, and hit RETURN. The screen reads

PLEASE WAIT....

Then the program asks you for the date. Enter the date, making sure that you insert "dashes" between month-day-year. When you hit RETURN the disk drive light will come on, and the program will eventually ask for the DB Master disk once more (if you are using only one disk drive). The screen offers a DB Master Main Menu, which includes 3 options.

To find a record. To locate a single CSM reference, choose option #1, "Display/Edit/Delete Records," and hit RETURN. The program then instructs you to "insert the CSM Library File Vol 1." On the screen will be the series of field names and blank lines. The flashing cursor will be on the first field.

If you know only the primary author's name, and you want all references by this person, follow these instructions. Hit RETURN enough times so that the

flashing cursor moves to the line marked "AUTH1." If you go too far, hit ESC, and you will move line-by-line back up the screen. At the "AUTH1" line, type the author's last name. At this point you have a choice of procedures. You may choose now to:

- o type in a comma-space-first initial-second initial.

Example #1.

FARLEY, JU

- o search for references with only the first initial.

Example #2

FARLEY, J

- o search for all references by all individuals with this last name by typing an * after the last name.

Example #3

FARLEY*

This latter procedure may be timesaving in the long run.

Hit RETURN after entering the author's name as completely as you choose to make it. You will now be on line marked "AUTH2." Hit CTRL F, in order to Find records with this author's name. The disk drive will go on and off (light up and go off) for an extended period of time as the program searches for references. At the same time the asterisk in the lower right hand corner of the screen will continue blinking signifying that this search is in process. The disk in the drive is still Vol. I of the CSM library. You will be able to print references from Vol. I first before going on to Vol. II to continue the search (when the program instructs you to do so).

When the program finishes the search, the complete record of the first reference by the author will appear on the screen. You now have an option to print this reference by hitting CTRL P. Once the reference is printed, the reference will reappear on the screen.

The next reference can be accessed by hitting CTRL N (for "Next"). Continue in this fashion until the last reference, when the screen will read "CAN'T FIND RECORD."

To return at any point to the DB Master Main Menu, hit CTRL C. The same search process can be completed for any of the fields of the CSM Library. You can locate references by COUNTRY, TOPIC or SOURCE, for example. You may also search for records by multiple fields (Bangladesh/Marketing Plans, Jamaica/Marketing Research/Advertising, etc.) by entering information in the appropriate fields. The number of fields tapped for a specific search however, is in direct proportion to the length of time required to complete the search. Thus, use only those fields absolutely necessary for retrieving the exact reference or type of reference you desire. After you have filled in the last field of the search, you must hit RETURN once more to get you to the field just below it. Then use CTRL F and follow the instructions above.

To end the program, choose option //8 from the DB Master Main Menu, which is "Close Files and Exit." Once you have located the documents appropriate to your needs, contact The Futures Group to request paper copies of the documents you have identified.

INSTRUCTIONS FOR ACCESSING THE CSM PROGRAM VARIABLES FILES

Starting the Computer

Insert the disk labelled "Statistics Program Version 1.4 - The Futures Group" into the disk drive. Then turn on the video monitor and turn on the Apple II with the switch at the back. This initially "boots the disk" (i.e., starts the program). At any point in the middle of the program, when, for example, you want to enter a new file, the disk can be booted in another manner: Press CTRL, then C, then RUN.

This re-boots the disk, and starts the program all over. **Never press a key while the disk drive's red light is on.**

To Enter a File

The built-in statistical capabilities of the disk are very handy. However, they require that an individual working with the disk enter data files from the statistical program. After booting the disk as described above, the video screen will read:

LOADING STATISTICS PROGRAM.

These words will be flashing, and you will hear a whirring sound from the disk drive. When the Statistics Program has been "loaded"--which takes some time--the light on the disk drive will go out, and the screen will read

STATISTICAL ANALYSIS PROGRAM

VERSION 1.4

11/11/82

PRESS RETURN TO BEGIN.

Press RETURN , and the screen will read:

THE PROGRAM IS SET TO ALLOW THE USE OF

8 VARIABLES AND 150 DATA POINTS

DO YOU WANT TO CHANGE THIS CONFIGURATION

(Y or N)

The configurations for the CSM Information Data bases are different from the "default" configuration. Therefore, 1.) press Y; 2.) press RETURN.

The screen now reads:

CONFIGURATION
ENTER THE NUMBER OF VARIABLES TO BE
USED:

Enter different configurations for the different types of files. For the cross-country, regression, and historical files, enter 27 (the maximum possible number of variables for 10 data points, that is, 10 countries). Enter 25 variables for the country-specific files, the maximum number of variables allowable for 17 data points (the number needed to take the longest running CSM program through 1984). After entering the number of variables, the screen reads:

ENTER THE NUMBER OF DATA POINTS TO BE
USED:

Enter 10 for cross-country files, and 17 for country-specific files. After doing so, the screen reads:

WARNING-NOTE THAT 27 VARIABLES WITH (... or 25)
10 DATA POINTS ARE BEING USED (... or 17)

The screen also gives instructions to press RETURN to continue. Do so, and the screen asks:

DO YOU WANT TO ENTER THE DATA FROM
1. THE KEYBOARD
2. A DISK FILE

To enter the files described above, press 2. These files are already entered. However, if you wish to temporarily add new variables to compare with variables already in the data base, then press 1. If you press 2, the screen then reads:

ENTER FILE NAME . . .

At this point enter the name of the file you wish to enter, either a country name, or one of the names of the cross-country files listed on pages 16 and 17. For example, type ETHNIC to enter the ETHNIC file. You will again hear a whirring sound and the disk drive light goes on. When it goes off, the screen gives a "Menu."

WHAT DO YOU WANT TO DO

- | | |
|-----------------------------|----------------------------------|
| 1 ENTER DATA | 7 BASIC STATISTICS |
| 2 EXAMINE DATA | 8 ANALYSIS OF VARIANCE |
| 3 CHANGE DATA | 9 CORRELATION MATRIX |
| 4 TRANSFORM DATA | 10 REGRESSION ANALYSIS |
| 5 DISPLAY CROSS PLOTS | 11 STORE THE DATA IN A DISK FILE |
| 6 DISPLAY A FREQUENCY CHART | 12 END |

ENTER 1 TO 12 TO INDICATE YOUR CHOICE

This menu allows for the choice of operations through which data on the disk can be examined, changed temporarily, displayed, and analyzed. Graphic displays can be obtained using an Apple printer, and the displays can then be reproduced by photocopying. Graphic displays usually appear on the screen first with a question about whether a printed copy is desired.

If, after making a choice from the menu, you want to return to the menu, press CTRL, then C, then RETURN. Then type GOTO 1000, and you will return to the menu. The program can be interrupted at any point for this return to the menu.

Once in a particular file, the program must be "re-loaded" to enter any other file. Thus, press CTRL, then C, then RETURN, RUN. This will show once more:

STATISTICAL ANALYSIS PROGRAM

VERSION 1.4

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The specifications as to file size must be stated once more, and the new file named for entry into that file. Another way to re-load the program, and therefore enter another file, is to simply turn off, then on, the Apple II using the button at the back of the machine.

When all work is finished, the option to END (option #12) may be chosen. The program then asks:

ARE YOU SURE YOU WANT TO END?

Type Y for yes and the program ends. The alternative is simply to turn off the equipment.

PART III. SUGGESTIONS FOR EXERCISES USING DATA FILES

EXERCISE I. A SIMPLE DISPLAY

It may be useful to program managers to review basic data on their country-specific programs. Refer first to Annex B for a complete list of program variables and their definitions. Be sure to note sections on "How to Read the Chart," which includes directions for interpreting figures in the data base when necessary. For example, some values are expressed in thousands, so it would be necessary to add three zeros to the figure seen on the screen.

For purposes of this tutorial, let us review past budget expenditures. The variables available for display are:

RBUD Total budget over the length of the program in thousands of U.S. dollars. (Excludes commodity costs)

RADB Total advertising budget over the length of the program in thousands of U.S. dollars.

RBBW Total budget (as above) per women of reproductive age.

ABBW Total advertising budget (as above) per women of reproductive age. (Excludes commodity costs)

CRSBP Percentage of total budget represented by advertising budget.

Various kinds of displays are possible that will give the CSM manager a clearer picture of past expenditures.

Display #1. Examine Data. All variables listed above are in the CSM cross-country file. Enter this file according to the procedure outlined in the previous section, and choose option number 2 from the menu. The screen will then read

WHICH VARIABLE DO YOU WANT TO USE?

The screen will also list all the variables in the CSM file. There are 26 variables, and the program will list them very rapidly, so that the beginning of the list is not visible.¹ When it is necessary in this (or any other file) to list variables more slowly, press CTRL and S to stop the listing. Pressing RETURN will begin the listing once more. The screen also requires that the number of the variable be entered. RADB, for example, is variable number 14, so enter 14. The program then asks:

DO YOU WANT TO USE A PRINTER?

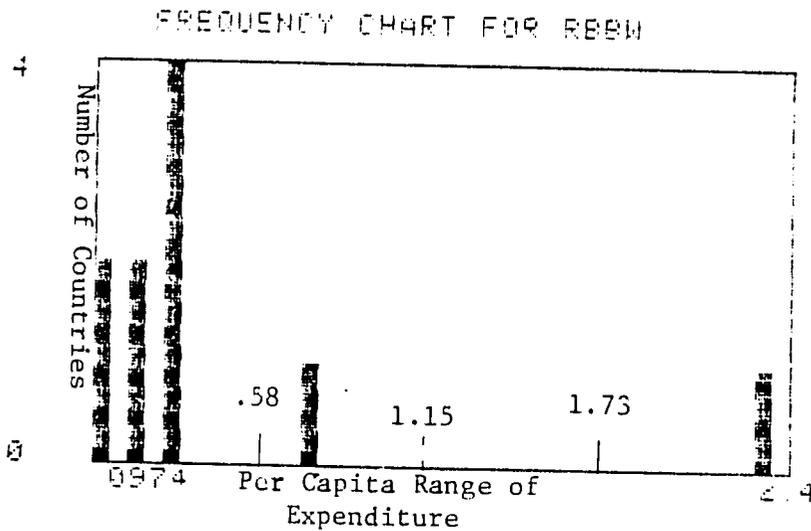
If a printer is available, and a permanent copy is desired, respond Y. If not, respond N. If N, then the program will list values on the screen, from 1 to 10 for the ten country programs. If an individual is interested in a particular country, refer to the ordering of countries given on page 17. Data point number 3, for example, gives the value for Colombia, and data point number 7 gives the value for Bangladesh. A useful feature of this display is that it allows comparison of figures for different programs. Although these total figures are of limited value, RBBW, which illustrates the amount of CSM budget input, normalizes the data on the basis of women of reproductive age, and is more useful for comparative purposes.

1. See Annex C for lists of variables in each cross-country file.

FOR VARIABLE RBBW

1	2.4021	(Jamaica)
2	.4077	(Mexico)
3	.4103	(Colombia)
4	.799	(El Salvador)
5	.1153	(Egypt)
6	.3784	(Ghana)
7	.2129	(Bangladesh)
8	.3711	(Nepal)
9	.2528	(Sri Lanka)
10	.9974	(India)

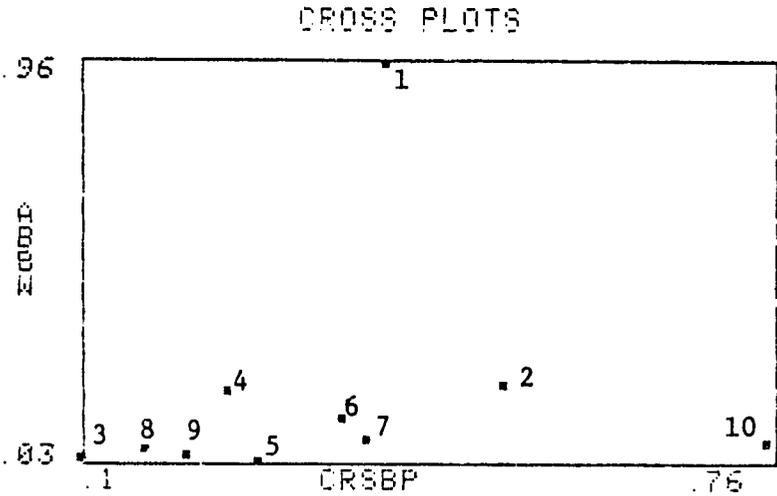
Display #2. Frequency Chart. Choose option number 6 from the menu, "Display a Frequency Chart," to obtain a graphic representation of any variable. Choose RBBW, for example, and the screen shows a bar graph for the values of RBBW listed by choosing option number 2. The program also asks if a printed copy is desired. Respond with Y or N. (Important note: The first printing of a chart or graphic is frequently "in negative image." If this happens, simply request the chart again from the menu.) A frequency chart allows a more graphic visualization of the relative position of one value in a context of values for other countries.



This chart indicates that nine countries have expenditures per woman below 1.8 level. (See specific RBBW values above). Only one country exceeds the 2.0 level.

Display #3. Cross-Plots. Another type of display can be obtained by choosing option number 5, "Display Cross Plots" from the menu. If this option is chosen, the program asks which variable is desired for the "x (horizontal) axis," and which for the "y (vertical) axis." A simple cross-plot could be produced to compare size of advertising budget per WRA, to the percentage that budget is of total budget. Choose variable 8 for ABBW, and variable 9 for CRSBP. In this case, it would not matter which variable is on which axis. In other cases, a display is often more visually "understandable" with a given variable on one axis rather than the other. For example, each file contains the variable COUNTRY, which is simply the previously mentioned numbered order of the countries. In this case, it is more useful to have COUNTRY on the x axis, and the measured variable on the y axis.

To identify a specific point on a cross-plot when neither of the variables is COUNTRY—as above, with ABBW and CRSBP—the original values must be examined. For example, on the chart below, one value for ABBW appears particularly high in relation to CRSBP.



To identify the country, choose option number 2 from the Menu, ("Examine the Data"), and determine which country it is through a comparison of values with the chart.

FOR VARIABLE ABBW

1	.9472
2	.2947
3	.0404
4	.1947
5	.0315
6	.1307
7	.0797
8	.1599
9	.0506
10	.9131

FOR VARIABLE CRBP

(Jamaica)	1	.29
(Mexico)	2	.5
(Colombia)	3	.1
(El Salvador)	4	.14
(Egypt)	5	.27
(Ghana)	6	.35
(Bangladesh)	7	.37
(Nepal)	8	.16
(Sri Lanka)	9	.2
(India)	10	.15

All simple displays can be used in a variety of ways:

- to illustrate reports (or as a basis for the development of more complex illustrations than this program gives).
- to examine past performances and characteristics of CSM programs worldwide, and identify "upper and lower ranges" of variables.
- to place a specific country program in context of other programs, to help in planning possible future changes, or areas for emphasis.

- to provide some framework for "expected values" of variables in the future.
- to illustrate which variables appear highly related and which do not.
- to develop historical perspective for a specific country program.

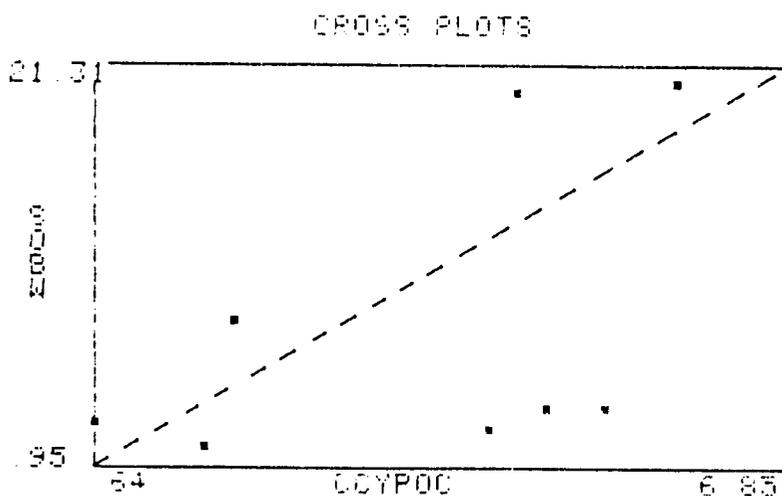
EXERCISE II. SHOWING PAST RELATIONSHIPS

Relationships between CSM program variables, or between program variables and social/commercial factors, can be illustrated in two basic ways: graphically and statistically. Because the cross-country files contain data on only ten country programs, great caution must be taken in interpreting both graphic and statistical displays. Small numbers of cases can create "arbitrary effects" that are not so important when large numbers of cases are analyzed. However, with this precaution in mind, the graphic and statistical capabilities of the program can be used to suggest past relationships and areas for future study and detailed documentation.

The Graphic Representation of a Relationship. Choose option #5 from the menu, "Display Cross Plots." The program again asks for choices for the "y axis" and the "x axis." If two factors are related to each other, they tend to cluster

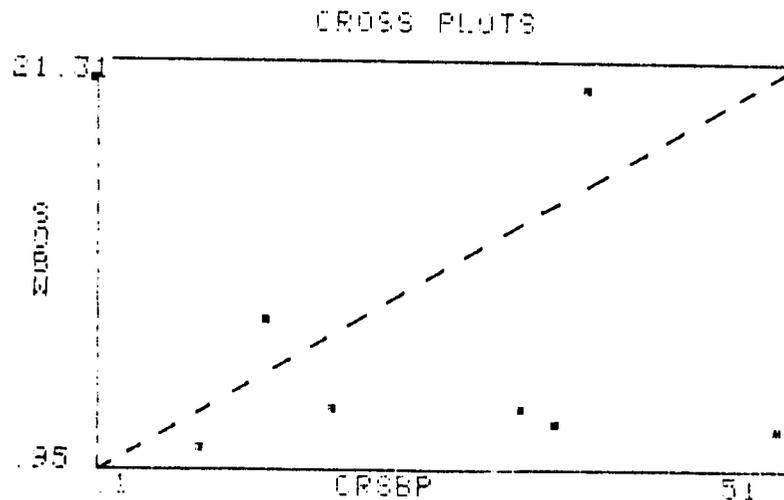
along an imaginary line, from the point where the x axis and y axis meet (if one increases as the other increases). Or, they cluster along a similar line slanting to the left, if one decreases as the other increases. If two factors are not related, they tend to be "scattered" or "randomly placed" on a cross plot. A cross plot can give a visual impression of whether two factors have in the past been related.

For example, after entering the CSM file, and choosing option #5, the program again asks that variables for the "y axis" and "x axis" be chosen. Place variable #2, average monthly sales of oral contraceptives per women of reproductive age (SOBW) on the "y axis." On the "x axis" place variable #4, the price of a couple-year-protection of oral contraceptives (CCYPOC). The screen displays a cross-plot of eight points (two countries sold no orals). You can imagine a line going from the point where the x-axis and y-axis meet, to the edge of the cross-plot. In general, it appears that the higher the price of a couple-year-protection of oral contraceptives in the past, the higher the sales of oral contraceptives. In other words, the points are not "just scattered."



To demonstrate a scattered cross-plot, choose variable #2 (SOBW) and variable #9, the percent of the total budget represented by the advertising

budget (CRSBP). In this case, there is no easily imagined line. As one variable gets higher, the other does not necessarily get higher. The program also asks if a printed copy is desired. Respond with Y or N.



Again, the countries can be identified by choosing option number 2 from the Menu ("Examine the Data) and comparing the values to one chart.

The Statistical Representation of a Relationship. The program is able, through option #9, to give some indication of whether a linear relationship exists between two variables. In general, even with only 8 or 10 data points, "correlation coefficients" (the result of choosing option #9) can give some suggestion of whether two factors are related "other than by chance." If a correlation coefficient is over .6, then it is "suggestive." Correlation coefficients over .7 provide an even stronger indication in social research that factors are related.

For example, enter file AID, and choose option #9. The screen reads:

COMPUTING CORRELATION MATRIX . . .

This message stays on the screen for a time that corresponds to the size of the cross-country file. The longer the file, the longer the time. The program then asks

DO YOU WANT TO USE THE PRINTER?

Depending on whether a printer is available, respond Y or N. If you respond N, the correlation matrix will be displayed "piece by piece," and you will have to enter RETURN to see it all. If the correlation matrix is large, the printer will also print it out piece by piece. These pieces can then be fitted together for copying, if desired.

Once the correlation matrix is displayed on either the monitor screen or print-out, examine the number for SOBW (x) MBPE2. The coefficient, or .8853, suggests that there may indeed be a relationship between the average monthly sales of orals per women of reproduction age (SOBW) and a published indicator of program effort (MBPE2.)¹ This is simply one example of the statistical representation of a past relationship. Again, great caution should be used in interpreting results because of the small number of country programs.

For those individuals who want to go beyond this step, and who have access to statistical tables, a simple t-test can be run to determine whether any correlation coefficient is "statistically significant." Using the following formula, determine n (the number of cases in which values for both variables are given--go back and check this), and r (given in the correlation matrix).

$$t = \frac{r \sqrt{n - 2}}{\sqrt{1 - r^2}} \quad \text{where } df = n - 2$$

Using the CSM data base as it now stands, the following variables were significantly related (at the .05 level) to average monthly sales of oral contraceptives:

1. Maudlin Berelson, "Family Planning Program Effort Index". Maudlin, W. Parker and Berelson, B. "Conditions of Fertility Decline in Developing Countries, 1965-75," Studies in Family Planning 9(5).

MPBE2 - A family planning program index (also at the .01 level)

FREE - an index of freedom of the press

MBSS - an index of social setting (i.e., "development")

CCYPCM - price of a couple-year-protection of condoms

FEPE - percentage of female enrollment in primary education

RBBW - CSM budget normalized on the basis of target population

PERURB - percentage urban population in the country

CCYPOC - price of a couple-year-protection of orals

The following variables were significantly related (at the .05 level) to average monthly sales of condoms:

ISOL - an index of island status or relative isolation (also at the .01 level)

ADEF - an index of CSM advertising effort

ADEF2 - another index of CSM advertising effort

LANDIS - maldistribution of land index

The use of a t-test gives added assurance that, even with small numbers of country programs, there are real (rather than spurious) relationships between some of the variables in the CSM data base.

EXERCISE III. TEMPORARILY CHANGING AND AUGMENTING THE DATA BASE

Correlation matrices similar to the ones described in Exercise II can be determined by adding new variables temporarily to a file, and then choosing option #9 ("Correlation Matrix"). To add a new variable, choose option #1, "Enter Data."

The program will respond:

DO YOU WANT TO ENTER THE DATA FROM

1. THE KEYBOARD

2. A DISK FILE

ENTER 1 OR 2 TO INDICATE YOUR CHOICE

Respond with 1, and the screen reads:

ENTER THE VARIABLE NAME:

Enter any name you choose to stand for the variable you want to enter temporarily.

For example, enter VAR1. The screen will read

FOR VARIABLE VAR1

ENTER DATA POINTS, ONE TO A LINE

ENTER UP TO 10 DATA POINTS

ENTER 'NA' FOR 'NOT AVAILABLE'

AT THE END ENTER 'END'

1

Add data on the country corresponding to number 1 (Jamaica) and so forth, all the way to 10, for the 10 country programs. Next to 11, type END, and press RETURN. The screen reads:

DO YOU WANT TO ENTER ANOTHER VARIABLE

(Y or N)?

PLEASE RESPOND WITH YES OR NO (Y or N)

If you are finished, respond with N. To show that your new variable is indeed entered temporarily, select option #2, "Examine Data." Select the new variable by its new computer-assigned number, and the program asks

DO YOU WANT TO USE A PRINTER?

For simple proofreading, select N, and the values for your new variable will appear on the screen, with a command to:

PRESS 'RETURN' TO CONTINUE.

You have now returned to the menu. If you have made no mistakes and want to do no editing, simply select option #9 once more and run your new correlation matrix. If you have made mistakes, select option #3, "Change Data." The screen will now read

WHICH VARIABLE DO YOU WANT TO USE?

It will list all the variables. Choose the new variable, VAR1, by its number. The program then asks:

DO YOU WANT TO:

1. CHANGE A DATA POINT
2. ADD A NEW DATA POINT
3. DELETE A DATA POINT
4. DELETE AN ENTIRE VARIABLE
5. INSERT A DATA POINT

To change a mistake in data entry, choose #1 and continue with the program. Return to the menu and select option #9 for a correlation matrix.

Never, after making a change, or adding a new variable, select option #11 ("Store the data in a disk file"). This will destroy the comparability of disks used by program managers worldwide. If you have documentation of an error in the existing data base, send the documentation to The Futures Group in Washington, D.C., and the changes will be passed on to all managers and other individuals using the data base.

After making a change and running a new correlation matrix or new "Basic Statistics," Option #7, end the program. The next time you "boot the disk," the change will not appear. It was only used temporarily.

In the same way, option #4 makes it possible temporarily to transform the data in the files, in order to develop new indices. For example, an individual

working with the program might want to calculate the average monthly advertising budget over the length of the CSM program. Enter file CSM, and choose option #4. You will hear a whirring sound as the program moves to this new menu and one screen will ask:

- DO YOU WANT TO
1. ADD A CONSTANT TO A VARIABLE
 2. MULTIPLY A CONSTANT BY A VARIABLE
 3. ADD TWO VARIABLES
 4. SUBTRACT TWO VARIABLES
 5. MULTIPLY TWO VARIABLES
 6. DIVIDE TWO VARIABLES
 7. TAKE THE LOG OF A VARIABLE
 8. LAG A VARIABLE
 9. LEAD A VARIABLE
 10. CREATE A MOVING AVERAGE

To construct a new variable which represents the average monthly advertising budget, it will be necessary to divide RADB by LENG, or, the total advertising budget by the total months. Choose option #6 from the menu above. The program then lists all variables and asks:

ENTER FIRST VARIABLE

Enter the number of the numerator, 14, and RADB. Then the program asks

ENTER VARIABLE TO DIVIDE INTO

THE FIRST VARIABLE

Enter 10 for LENG. The program then asks for the number of the variable being created. This can be any number (because the change is temporary), although picking the last number offered is convenient. The program reads

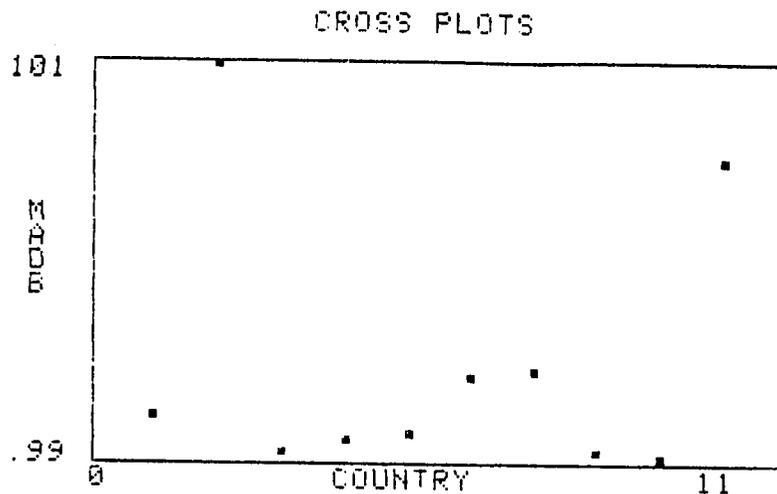
ENTER THE NUMBER OF THE VARIABLE
BEING CREATED

THE NUMBER MUST BE BETWEEN 1 AND 27.

If adding this new monthly advertising budget to the CSM file, the last number will be 27 (the maximum number of allowable variables). The last possible number for the new variable could be another number in another file. In this case, enter 27. The program then asks:

ENTER THE NEW NAME FOR VARIABLE 27

Choose a variable name, such as MADB, for monthly advertising budget. You will then return to the main menu. To check to see if your variable has been created, choose option #2, "Examine Data," and examine variable 27. You can either use a printer or not. If N, then the values will appear on the screen. These values can now be displayed graphically, or manipulated statistically. The following cross-plot is a graphic representation of this new variable MADB by COUNTRY.



New Variable 27: MADB

The temporary storage capacity of a program allows:

- construction of new indices using variables already in the data base;

- entry (temporarily) of new variables, and comparison and manipulation of these;

- graphic displays of both old and new variables to see, for example, which have strong relationships to sales of orals or condoms (or any other variables).

The Visual Representation of a Relationship Using Country-Specific Files.

The country-specific files are not yet as well developed as the cross-country files. Eventually, there will be a number of variables in time-series throughout the years of the CSM programs worldwide. It will be possible to run cross plots of these variables by year (with YEAR on the "x axis"). Comparison of these graphs may ultimately suggest variables that relate in time. For example, changes in a country's family planning policies may cause either an upswing or a downturn in sales of contraceptives.

ANNEX A
COUNTRY CODES FOR CSM LIBRARY

ANNEX A: COUNTRY CODES FOR CSM LIBRARY

	Code, for labelling books and files
Africa	AAF
Algeria	DZA
Angola	AGO
Botswana	BWA
Burundi	BDI
Cameroon	CMR
Cape Verde Island	CPV
Central African Republic	CAF
Chad	TCD
Comoro Islands	COM
Congo, Peoples Republic of(Brazza)	COC
Dahomey	DKY
Egypt, Arab Republic (UAR)	EGY
Equatorial Guinea	GNQ
Ethiopia	ETH
Gabon	GAB
Gambia	GMB
Ghana	GHA
Guinea	GUI
Kenya	KEN
Lesotho	LSO
Liberia	LBR
Libya	LBY
Malagasy Republic	MDG
Mali	MLI
Mauritania	MRT
Mauritius	MUS
Morocco	MAR
Mozambique	MOZ
Niger	NER
Nigeria	NGA
Portugese Guinea	GNP
Reunion	REU
Rhodesia	RHO
Rwanda	RWA
Senegal	SEN
Seychelles	SYC
Sierra Leone	SLE
Somali Republic	SOM
South Africa	ZAF
Spanish Sahara	ESH
St Helena	SHN
Sudan	SDN
Swaziland	SWZ
Tanzania, United Republic of	TZA
Togo	TGO

Tunisia	TUN
Uganda	UGA
Upper Volta	UVO
Zaire	ZAR
Zambia	ZMB
Americas	AAM
Antigua	ATG
Argentina	ARG
Bahamas	BHS
Barbados	BRB
Belize	BLZ
Bermuda	BMU
Bolivia	BOL
Brazil	BRA
British Virgin Islands	VGB
Canada	CAN
Cayman Islands	CYM
Chile	CHL
Colombia	COL
Costa Rica	CRI
Cuba	CUB
Dominica	DMA
Dominican Republic	DOM
Ecuador	ECU
El Salvador	SLV
Falkland Islands	FLK
French Guyana	GUF
Grenada	GRD
Guadeloupe	GOU
Guatemala	GTM
Guyana	GUY
Haiti	HTI
Honduras	HND
Jamaica	JAM
Martinique	MTQ
Mexico	MEX
Montserrat	MSR
Netherlands Antilles (Curacao)	ANT
Nicaragua	NIC
Panama	PAN
Panama Canal Zone	PAZ
Paraguay	PRY
Peru	PER
Puerto Rico	PRI
ST Kitts, Nevis, Anguilla	KNA
St. Lucia	LCA
St Pierre and Miquelon	SPM
St Vincent	VCT
Surinam	SUR
Trinidad and Tobago	TTO
Turks and Caicos Islands	TCA
Uruguay	URY

Unitid States of Amerika	USA
Venzuela	VEN
Asia	AAS
Bangladesh	BGD
Bhutan	BTN
Brunei	BRN
Burma	BUR
Cambodia,see Khmer Republic	KHM
Ceylon,see Sri Lanka	LKA
China,Peoples Republic of	CHN
Hong Kong	HKG
India	IND
Indonesia	IND
Japan	JPN
Khmer Republic (Cambodia)	KHM
Korea,Democratic Peples Republic (North)	KOR
Korea,Republic of (South)	KOR
Laos	LAO
Macao	MAC
Malaysia (Sub-divide to Sarawak,Sabah,and West Malasia if req.	MYS
Maldives	MDV
Mongolia	MNG
Nepal	NPL
Pakistan	PAK
Phillippines	PHI
Portugese Timor	TMP
Sikkim	SKM
Singapore	SGP
Sri Lanka (Ceylon)	LKA
Taiwan	TWN
Thailand	THA
Vietnam	VNM
Europe	AAE
Albania	ALB
Andorra	AND
Austria	AUT
Belgum	BEL
Bulgaria	BGR
Czechoslovakia	CSK
Denmark	DNK
Eire (Irish Republic)	IRL
Finland	FIN
France	FRA
German Democratic Republic (East)	DDR
German Federal Republic (West)	DEU
Gibraltar	GIB
Greece	GRC
Hungary	HUN
Iceland	ISL

Italy	ITA
Liechtenstein	LIE
Luxembourg	LUX
Malta	MLT
Monaco	MCO
Netherlands	NLD
Norway	NOR
Poland	POL
Portugal	PRY
Romania	ROM
San Marino	SMR
Spain	ESP
Sweden	SWE
Switzerland	CKE
United Kingdom	UKN
USSR	SUN
Yugoslavia	YUG
Middle East	AAD
Afghanistan	AFG
Bahrain	BUR
Cyprus	CYP
Iran	IRN
Iraq	IRQ
Israel	ISR
Jordan	JOR
Kuwait	KWT
Lebenon	LBN
Muscat and Oman	OMN
Qatar	QAT
Saudi Arabia	SAR
Syria	SYR
Turkey	TUR
Yemen,Arab Republic	YEM
Yemen Peoples Democratic Republic	YMD
Oceania	AAO
American Samoa (US territory)	ASM
Australia	AUS
British Soloman Islands	SLB
	BRN
Cook Islands	COK
Fiji	FJI
French Polynesia (French overseas territory)	PYF
Gilbert and Ellice Islands (UK colony)	GEL
Guam (US territory)	GUM
Heard and McDonald Islands (Australian terr.)	HMD
Midway Island (US territory)	MID
Nauru (Republic of Nauru)	NRU
New Caledonia (French overseas terr.)	NCL
New Hebrides (Anglo-French condominium)	NHB
New Zealand	NZL

Niue Island (New Zealand dependency)	NIU
Norfolk Island	NFK
Pacific Islands US Trust	PCI
Papua New Guinea	PNG
Pitcairn Islands (UK colony)	PCN
Tokelau Islands (New Zealand dependency)	TKL
Tonga (Kingdom of Tonga)	TON
United States miscellaneous Pacific Islands (US territory)	PUS
Wake Island (US territory)	WAK
Wallis and Futuna Islands(French overseas territory)	WLF
Western Samoa (Independent State of W.S.)	WSM
Polar Regions	AAP
Antarctica	ATA

ANNEX B
CSM CROSS-COUNTRY FILE VARIABLES

ANNEX B: DESCRIPTION OF VARIABLES IN THE CSM PROGRAM VARIABLES FILES

Definition List

Diskette File: CSM

This list gives the definitions of the variables in the CSM file, and how to read the charted material. The CSM file includes variables related to program characteristics and performance.

1. RSBW. This variable is one of two used as a dependent variable in all correlation matrices and regression analyses. It measures the average monthly sales of condoms, over the length of the CSM program, per women of reproductive age in 1980 (basic data from Globescan). Average monthly sales were derived by dividing total sales over the length of the program, by total months of the program. "Length" of the CSM program thus relates directly to sales in this data base. The CSM program "begins" when sales figures are available (which may differ by a month or two from start of the program), and ends in the last month for which sales are available (although, for example, the program may be ongoing at the present time). No matter what years the CSM program covered, the average monthly sales figures were normalized on the basis of 1980 total females, ages 15 through 49 years inclusive. All countries had these sales and population figures, so there were no missing data points.

How to Read the Chart. Because the divisor of this variable is reported in thousands of women of reproductive age, the charted figure must be divided by 1,000; or, the decimal place must be moved three places to the left. Thus, in Sri Lanka, where the highest average monthly sales of condoms per WRA occur, there were .1336 condoms sold in the CSM program on an average monthly basis, per woman of reproductive age, (not 133.6 condoms per woman).

2. SOBW. This variable is the other of the two used as a dependent variable in all correlation matrices and regression analyses. It measures the average monthly sales of oral contraceptives cycles, per women of reproductive age. WRA is calculated as explained above for RSBW. Sales figures also relate to length of the program, as for RSBW, and were derived in the same manner. Whereas all countries had figures for WRA, two countries (Egypt and India) sold no oral contraceptives in their respective CSM programs. Therefore, there are two missing data points for this variable, and, at least two missing data points for all other variables related to sales of orals, and for all analyses in which sales of orals are used.

How to Read the Chart. Again, because the divisor of this variable is reported in thousands of women of reproductive age, the charted figure must be changed by moving the decimal point three places to the left. Thus, there were .0203 cycles sold in the CSM program in Colombia (the high scorer), on an average monthly basis, per WRA, for the length of the program.

Diskette File CSM Definition List (continued)

3. CCYPCM. This variable measures the cost to the consumer of one couple-year-protection of condoms in the CSM program. It was calculated from the basic price of one condom (the most common one, where there are two, as in Ghana), multiplied by 120 condoms for the year. Values were available for all cases, so there are no missing data points.

How to Read the Chart. The chart can be read in terms of U.S. dollars and cents. Thus, the cost of one couple-year-protection was least in Bangladesh and India, where 120 condoms cost about \$1.20 in each case. Highest costs were in Colombia, Mexico, and Jamaica, in that order.

4. CCYPOC. This variable measures the cost to the consumer of one couple-year-protection of oral contraceptives in the CSM program. It was calculated from the basic price of one cycle (the most common, or the first one, where there is a low-dose oral added well after the program has been in operation), multiplied by 13 cycles for the year. Values were available for all countries except Egypt and India, where programs sold no orals. There are therefore two missing data points.

How to Read the Chart. The chart can be read in terms of U.S. dollars and cents. Thus, the cost of one couple-year-protection of orals is highest in Colombia, where it costs \$5.99. The lowest cost is in Bangladesh, at about \$0.66 annually.

5. CCYPCG. This variable is a measure of the relative cost of one couple-year-protection for condom users, compared to gross national product per capita in 1975. It gives some indication of "how expensive" a couple-year-protection of condoms is on an average basis.

How to Read the Chart. The chart can only be read as an index, defined by the ratio calculated above. The relative cost is highest in Nepal, and lowest in Ghana.

6. CCYPOG. This variable is a measure of the relative costs of one couple-year-protection for orals users, compared to gross national product per capita in 1975. It gives some indication of "how expensive" a couple-year-protection of orals is on an average basis.

How to Read the Chart. The chart can only be read as an index, defined by the ratio calculated above. The relative cost is highest in Nepal, and lowest in Mexico. There are two missing data points, Egypt and India, because no orals were sold in their CSM programs.

7. RBBW. This variable measures the total CSM budget input per woman of reproductive age in 1980. The divisor is calculated in the manner described above, and also reported in thousands of women. The dividend was calculated by summing the total budget figures for all years of the CSM program, and is reported in thousands of U.S. dollars. Dollar amounts exclude commodity costs.

How to Read the Chart. The variable RBBW illustrates the relative amount of money invested in a single woman from country to country. The major disadvantage of the variable is that the dividend includes a time dimension, but the divisor does not. With this in mind, it is interesting to note the low score of the

Diskette File CSM Definition List (continued)

longest-running CSM program, in India. This low score of the longest-running CSM program, in India. This low score shows how a very large divisor changes a relative measure such as RBBW. The value of RBBW as a relative measure is also underscored by the fact that the high scorer, Jamaica, is not the shortest program. By keeping its drawbacks in mind, RBBW can be useful in picturing relative investment in dollars, from one CSM program to another. Because both dividend and divisor are expressed in thousands (of dollars over women), the figures can be read directly. Thus, in Jamaica, the CSM expended \$3.40 over the length of the program, for each woman of reproductive age.

8. ABBW. This variable measures the total CSM advertising, over the length of the program, per WRA. It is similar to the variable RBBW, and can be read in the same way. Total CSM budget as measured by RBBW, and total CSM advertising budget, as measured by ABBW, were available for 10 country programs, and therefore there are no missing data points.

How to Read the Chart. ABBW must be read as a relative measure of a specific type of budget investment. As both dividend and divisor are also reported in thousands (of U.S. dollars, and women of reproductive age), the figure can be read directly. Thus, the high scorer, Jamaica, expended \$0.95 per woman over the length of the CSM program--in advertising alone. The low scorer was Egypt, which invested \$0.03 per woman.

9. CRSBP. This variable is the ratio CSM advertising budget (the dividend) to the CSM total budget (the divisor), over the length of the program. Thus, it is expressed as a percentage.

How to Read the Chart. Figures may be read directly as percentages. Thus, high scorer India had a budget of which 75 percent was committed to advertising. This may be somewhat misleading, because of the relatively small size of the total budget. Next high scorer was Jamaica, whose advertising budget was .39, or 39 percent of total budget. Low scorer was Colombia, with a 10 percent advertising budget.

10. LENG. This is the length of the program in months, from the beginning of the contract (or a close first month of sales) to the "end" of the contract (although not necessarily of sales), or "now" (or the last month for which sales were available) if the program is still contracted.

How to Read the Chart. Figures can be read directly as number of months, or divided by 12 to get the number of years. The longest running program was Nirodh in India, and the shortest running program was in Ghana.

11. RSALLES. This variable measures average monthly sales of condoms, from product launch to end of contract, or "now," the last month for which sales figures are available. Figures were available for all countries, so there are no missing data points. The high scorer is India, with an average of more than 6½ million condoms per month; while the low scorer is Jamaica, with more than 55,000 condoms sold per month. This variable was used to calculate RSBW.

Diskette File CSM Definition List (continued)

How to Read the Chart. The chart can be read directly, as numbers of condoms sold per month.

12. RSOC. This variable measures average monthly sales of oral contraceptive cycles, from product launch to end of contract, or "now." Again, Egypt and India have no values for this variable because their programs sold only condoms. The high scorer is Colombia, with an average of more than 136,000 cycles sold per month over the program length. The low scorer, excluding those countries in which no orals were sold, was El Salvador, where the sale of orals was initially hampered by legal restrictions. The next lowest scorer was Nepal, with a little more than 6,000 cycles sold per month. RSOC was used to compute SOBW.

How to Read the Chart. The chart can be read directly, as numbers of orals cycles sold per month.

13. RBUD. This variable measures the total CSM budget in thousands of U.S. dollars. This variable was available for each program, so there are no missing data points. The high scorer is, not surprisingly, India, simply because of the long length of the program. Next highest is Mexico. The low scorer is El Salvador. RBUD was used to calculate RBBW.

How to Read the Chart. The chart can be read in thousands of U.S. dollars. Thus, Mexico's total budget figure over the length of the program was 6,371.7 thousands, or, \$6,371,700. The decimal place should be moved to the right three places to express dollars.

14. RADB. This variable measures advertising budget over the program's length, in the same way that RBUD measures total budget. There are no missing data points. The high scorer is India again, and next highest is Mexico. Low scorer is Sri Lanka. RADB was used to calculate ABBW.

How to Read the Chart. The chart can be read in thousands of U.S. dollars. Thus, Mexico's total advertising budget figure over the length of the program was 3,200 thousands, or \$3,200,000. The decimal place should be moved to the right three places to express dollars.

15. CRTOUT. This variable measures the number of retail outlets in which CSM products were sold. While these retail outlets vary over time, information was usually not available which gave a time perspective on the growth or decline of CSM retail outlets. In general, this number of retail outlets can be assumed to be the number toward the beginning of the programs. No figures were available for Colombia, or for Egypt, so there are two missing data points.

How to read the Chart. The chart can be read directly as numbers of outlets. Thus, India had approximately 221,000 retail outlets in which Nirodh was sold.

16. CPHOUT. This variable measures the number of pharmacy outlets in which CSM products were sold, and in the same manner. Figures were unavailable for Ghana and India, so there are missing data points.

Diskette File CSM Definition List (continued)

How to Read the Chart. The chart can be read directly as numbers of pharmacy outlets. Thus, Mexico had about 11,000 pharmacies in which CSM products were sold. When looking at CRTOUT and CPHOUT, customary preferences should be taken into account. For example, in some countries it is preferable to obtain all contraceptive products at pharmacies, while in other countries it makes little difference.

17. RTOUT. This variable measures all retail outlets in the country, whether or not they sold CSM products. Data were missing for Colombia, Egypt, Ghana, and Bangladesh, so there are four missing data points.

How to Read the Chart. The chart can be read directly, as in the case of CRTOUT and CPHOUT, as numbers of retail outlets in country, toward the beginning of the CSM program.

18. PHOUT. This variable measures all pharmacy outlets in the country, whether or not they sold CSM products. Data were missing for Bangladesh, Nepal, and India, so there are three missing data points.

How to Read the Chart. The chart can be read directly, as numbers of pharmacies in country. Mexico is the high scorer with about 120,000 pharmacies.

19. TOTAB. This variable was taken from an advertising trade newspaper, which gave total advertising billings for all agencies in country. It measures commercial development.

How to Read the Chart. The chart can be read directly in terms of thousands of U.S. dollars. Thus, in Mexico, all agency billings totaled 458,857 thousands of dollars, or \$458,857,000. Data were unavailable for Bangladesh and Nepal.

TOTAB should be in the COMDEV file, along with other indicators of commercial development. It is, however, used in the calculation of the two indices of "relative advertising effort" of the CSM programs, so is placed in CSM.

20. ABBW2. This variable is for calculation and display purposes only. It is the variable ABBW (#8) multiplied by one million. This variable might be used in a cross plot when the normal values are so small they would result in an unreadable chart.

21. ADEF. This variable is one of two variables to measure "relative advertising effort," that is, the extent of the CSM advertising effort. CRSBP has already measured the proportion that the CSM advertising budget is of the total budget. ADEF and ADEF2 will measure CSM advertising activity relative to all advertising effort in country. ADEF is calculated by multiplying ABBW (the CSM advertising budget per woman of reproductive age, by 1,000,000). The result is then divided by TOTAB, the total advertising billings in country. This calculation is necessary to arrive at numbers that are large enough for a printout of a chart.

Diskette File CSM Definition List (continued)

How to Read the Chart. The chart can only be read as an index of relative advertising effort, as defined by the ratio calculated above. Care must be taken to keep in mind the bases on which divisor and dividend are normalized (the dividend on the basis of WRA, and the divisor on the basis of time, i.e., one year). Measured this way, relative advertising effort is greatest in Jamaica, and least in Mexico. The latter result may be partly because of the extensive advertising business in Mexico, relative to other countries. The next lowest is Colombia.

22. CRSPB2. This variable is for calculation and display purposes only. It is the variable CRSPB (#9) multiplied by one million. This variable might be used in a cross plot when the normal values are so small they would result in an unreadable chart.

23. ADEF2. This variable is the other of two variables to measure "relative advertising effort." It is calculated by multiplying CRSBP by 1,000,000, and then dividing the result by TOTAB. Thus, it is some indication of the relative effort of CSM advertising, relative to, in turn, total incountry advertising business.

How to Read the Chart. As in the case of ADEF, ADEF2 must be read only as an index defined by the calculation above. Care must be taken to keep in mind the calculations in both dividend and divisor. Measured this way, relative advertising effort is highest in Sri Lanka, and lowest in Mexico (again, probably because of the large Mexican advertising business). Next lowest is again Colombia.

A word about ADEF and ADEF2. These two surrogate variables must be interpreted with care. However, they are the only two variables in the entire 10-country data base with correlation coefficients higher than .6, with average monthly condom sales. Data are missing for Bangladesh and Nepal, because of the absence of a value for TOTAB.

24. UNITCM. This variable states the price to the consumer for one condom in each program country. The variable is calculated by dividing CCYPCM (cost to the consumer for a one-year supply of condoms) by 120.

25. UNITOC. This variable states the price to the consumer for one cycle of oral contraceptives in each program country. It is calculated by dividing CCYPOC (cost to the consumer for a one-year supply of orals) by 13.

26. COUNTRY. This variable allows comparison of any one variable to a country in the order (left to right) of Jamaica, Mexico, Colombia, El Salvador, Egypt, Ghana, Bangladesh, Nepal, Sri Lanka, India, except in the case of cross plots when the country identification must be determined by examining the value of the other variable.

Definition List

Diskette File: SECDEV

This list gives the definitions of the variables in the SECDEV file, and how to read the charted material. The SECDEV includes variable related to the socio-economic development characteristics of the countries in which CSM programs have been located.

1. RSBW, and
2. SOBW. Both dependent variables occur in all computer files for ease of computation. Definitions are listed in the CSM file materials.
3. GNPPC. This variable measures gross national product per capita in 1975 (basic data from Globescan). GNP per capita (or income per capita) is widely accepted by economists as the prime indicator of socio-economic development. The variable is one of two which are calculated as part of the Mauldin/Berelson social setting index (defined below). It is therefore not surprising that GNPPC follows a similar pattern as MBSS, from country to country. However, discrepancies are enlightening. For example, the two high-scorers on GNPPC are Jamaica and Mexico. However, when their "social setting indices" are examined, they are not that much higher than Colombia. One could conclude that factors other than GNP per capita raise the social setting index of Colombia, relative to Jamaica and Mexico. Low scorer for GNPPC was Bangladesh, not unexpectedly, although its total social setting index is higher than next-scorer, Nepal. There are no missing data points for GNPPC.

How to Read the Chart. The chart can be read directly as U.S. dollars per annum. Some of these figures are quite low. Low-scorer Bangladesh is recorded as having only a \$95 per capita gross national product.

4. MBSS. W. Parker Mauldin and Bernard Berelson published in 1978 a "social setting index," which combined statistical measures of GNP per capita, % males in nonagricultural labor force, life expectancy at birth, infant mortality rate, adult literacy for those 15 and over, and primary and secondary school enrollment as a percentage of the 5-19 age group. They developed this index from a large data base, after trying many independent variables. It correlates well with sales of oral contraceptives. High-scorer is Jamaica again, and low-scorer is Nepal. There are no missing data points.

How to Read the Chart. The number on the chart can be read only as a combined index. In their original publication the setting varied between high-scorer Hong Kong, with a score of 95, and low-scorer Upper Volta, with a score of 6. Countries with CSM programs vary from Jamaica's score of 87, to Nepal's score of 14.

5. PERURB. This variable is the other (in addition to GNP per capita) which is included in the Mauldin/Berelson social setting index. It measures percent urban population, or, the degree to which the society is "urbanized," as of 1975 (basic data from Globescan). There are no missing data points.

Diskette File SECDEV Definition List (continued)

How to Read the Chart. The chart can be read as a display of percentages, with the dividend the population urban, and the divisor, the total population. It ranges from high-scorer Colombia, with 65.5% urban population, to Nepal, with only 4.4% urban population. PERURB is not always interpreted as a "positive" sign of development. In Colombia, a major population problem centers on the maldistribution of the population, with "too many" urban dwellers.

6. FEPE. This variable measures female enrollment in primary education. It is the percent of primary school female enrollees, compared to total female children of primary school age. The index can be more than 100, if there are females older than primary school age who are enrolled in primary school. The variable is an attempt to measure indirectly the changes in female status and roles, as modernization proceeds. These changes have been shown to correlate broadly with acceptance of family planning.

How to Read the Chart. The chart can be read directly as a series of percentages, (with the addition that the percentage can be "more than 100" if there are many of non-primary age who attend primary school). There are no missing data points. High-scorer is Mexico, with Colombia close behind. Low-scorer is Nepal, where female role restriction is severe.

7. TOTFR. This variable measures the total average number of live births per woman, assuming her fertility is equivalent to that in her age group (thus TOTFR can change for successive cohorts). It does not include stillbirths, but can include infants who were born live but later died. Basic data is from Globescan for the time period 1975-1980.

How to Read the Chart. The chart can be read directly as numbers of live births (with the additional aspects of the definition given above. High-scorer is Ghana, with Bangladesh insignificantly behind. Low-scorer is Sri Lanka. While it is difficult to relate CSM program performance to fertility drop, it may well be that it contributed to this relatively low 1975-1980 total fertility rate.

8. PRONAT. This variable is an arithmetic addition of ISLAM and CATH. It was developed to measure the percentages of the populations who belong to faiths with historically pronatalist positions.

How to Read the Chart. The chart can be read directly as percentages. Thus, in Ghana a total of 21% of the population belongs to the Islamic and Catholic faiths, combined. These figures can be disaggregated by looking back at ISLAM and CATH. Thus, Ghana has 10% in the Islamic faith, and 11% in the Catholic faith.

9. INDI₃. This variable is an index of income distribution in each country. It comes from Taylor and Hudson's HANDBOOK OF POLITICAL AND SOCIAL INDICATORS. In their original publication, the index ranged from a high of 48.8 for Guatemala to a low of 5.0 for the United Kingdom. The lower the index, the more equitable the income distribution. The higher the index, the more income is concentrated in a small segment of society. The range for countries with CSM programs is from a high of 48.7 for Jamaica, to 21.2 for Bangladesh. There are four missing data points: for Colombia, Ghana, Nepal, and Sri Lanka.

Diskette File SECDEV Definition List (continued)

How to Read the Chart. The chart can be read only as an index.

10. LANDIS. This variable is an index to land distribution in each country, and also comes from Taylor and Hudson's Handbook. In their original publication, the index ranges from a high of 93.3 in Peru, with rather poor land distribution, to 35.1 for Finland. The range for countries with CSM programs is from a high of 86.4 for Colombia, to a low of 22.5 in India. Again, there are missing data points for Ghana, Nepal, and Sri Lanka.

How to Read the Chart. The chart can be read only as one index. Both INDIS and LANDIS offer some measure of the extent to which income reaches the poorest segments of society. Research has shown that improvement in land and income distribution is part of the modernization process, and encourages family planning acceptance.

11. COUNTRY. This variable allows comparison of any one variable to a country in the order (left to right) of Jamaica, Mexico, Colombia, El Salvador, Egypt, Ghana, Bangladesh, Nepal, Sri Lanka, India, except in the case of cross plots when the country identification must be determined by examining the value of the other variable.

12. UNITOC. This variable states the price to the consumer for one cycle of oral contraceptives in each program country. It is calculated by dividing CCYPOC (cost to the consumer for a one-year supply of orals) by 13.

13. UNITCM. This variable states the price to the consumer for one condom in each program country. The variable is calculated by dividing CCYPCM (cost to the consumer for a one-year supply of condoms) by 120.

Definition List

Diskette File: ETHNIC

This list gives the definitions of the variables in the ETHNIC file, and how to read the material. The ETHNIC file includes variables related to religious and ethnic characteristics of the countries in which CSM programs are located.

1. RSBW, and
2. SOBW. Both dependent variables occur in all computer files for ease of computation. Definitions are listed in the CSM file materials.
3. CATH. This variable measures the percent of the population of the Catholic faith. There are no missing data points. Several countries, however, have "0" which means that there are no individuals in the Catholic faith, or, for all practical purposes, "near zero."

How to Read the Chart. The chart can be read directly as percentages. Thus, 85% of Mexico's population is Catholic.

4. ISLAM. This variable measures the percent of the population in the Islamic faith. There are no missing data points. Several countries, however, have "0" which means that there are no individuals of the Islamic faith, or, for all practical purposes, "near zero." There were two substitutions made: the figure for Egypt is the listed value for the United Arab Republic, the figure for Bangladesh, is the listed value for (united) Pakistan and (thus possible an over-estimate).

How to Read the Chart. The chart can be read directly as percentages. Thus, 85% of Egypt's population is Islamic.

5. PRONAT. This variable is an arithmetic addition of ISLAM and CATH. It was developed to measure the percentages of the populations who belong to faiths with historically pronatalist positions.

How to Read the Chart. The chart can be read directly as percentages. Thus, in Ghana a total of 21% of the population belongs to the Islamic and Catholic faiths, combined. These figures can be disaggregated by looking back at ISLAM and CATH. Thus, Ghana has 10% in the Islamic faith, and 11% in the Catholic faith.

6. PROT. This variable measures the percent of the population of Protestant faiths. There are no missing data points, although there is one country (Nepal) which has zero or "near zero" population of Protestant faiths. Jamaica has the largest percentage of Protestants, with 43%.

How to Read the Chart. The chart can be read directly as percentages.

7. FRAC. This variable measures ethnic and linguistic "fractionalization," and comes from Taylor and Hudson's Handbook. There are no missing data points.

How to Read the Chart. The chart can be read only as a series of indices. Thus, India has the highest degree of ethnic and linguistic fractionalization, with an index score of .89, while Egypt has the least, with a score of .04.

Diskette File ETHNIC Definition List (continued)

8. COUNTRY. This variable allows comparison of any one variable to a country in the order (left to right) of Jamaica, Mexico, Colombia, El Salvador, Egypt, Ghana, Bangladesh, Nepal, Sri Lanka, India, except in the case of cross plots when the country identification must be determined by examining the value of the other variable.
9. ISOL. This variable is an index to measure the relative isolation of the country, including island status, to other markets.

Definition List

Diskette File: AID

This list gives the definitions of the variables in the AID file, and how to read the charted material. The AID includes a small number of variables on: basic population statistics; and indices of "aid" or "program effort" in the countries with CSM programs.

1. RSBW, and
2. SOBW. Both dependent variables occur in all computer files for ease of computation. Definitions are listed in the CSM file materials.
3. MPBE2. W. Parker Mauldin and Bernard Berelson published in 1978 a "family planning program effort index," which combines statistically 15 different "measures of supply (of family planning products and services)." There are no missing data points.

How to Read the Chart. The chart can be read only as a series of numerical indices. Jamaica has the highest index score of 23, and both Ghana and Bangladesh have a low score of 3, each. In the original publication, scores ranged from a high of 26 for Singapore, to a low of zero for 45 different countries representing either very "weak" or no programs.

4. USAID. This variable measures total U.S. economic assistance, excluding military aid, from 1958 to 1965. There are no missing data points. (Basic data from: Taylor and Hudson.)

How to Read the Chart. The chart can be read in millions of U.S. dollars. Thus, high-scorer Colombia received 32,07 millions of dollars, or \$32,070,000.

5. POP75. This variable lists the total population of the country in thousands of individuals, in 1975 (basic data from Globescan). There are no missing data points.

How to Read the Chart. The chart can be read directly as thousands of individuals. India has the largest population, with 618,831 thousands of people, or 618,831,000 people. Jamaica has the smallest population, with 2,943,000.

6. TOTFR. This variable measures the total average number of live births per woman, assuming her fertility is equivalent to that in her age group (thus TOTFR can change for successive cohorts). It does not include stillbirths, but can include infants who were born live but later died. Basic data is from Globescan for the time period 1975-1980.

How to Read the Chart. The chart can be read directly as numbers of live births (with the additional aspects of the definition given above. High-scorer is Ghana, with Bangladesh insignificantly behind. Low-scorer is Sri Lanka. While it is difficult to relate CSM program performance to fertility drop, it may well be that it contributed to this relatively low 1975-1980 total fertility rate.

Diskette File AID Definition List (continued)

7. WRA. This variable lists the total women of reproductive age in thousands of individuals in 1980. It is the sum of women aged 15 to 49 years inclusive. It is also the nearest cross-country approximation of "target population" in this data base.

How to Read the Chart. The chart can be read directly as thousands of individuals. India has the largest population of women of reproductive age, and Bangladesh has the next, with 19,262.5 thousands of women, or 19,262,500.

8. COUNTRY. This variable allows comparison of any one variable to a country in the order (left to right) of Jamaica, Mexico, Colombia, El Salvador, Egypt, Ghana, Bangladesh, Nepal, Sri Lanka, India, except in the case of cross plots when the country identification must be determined by examining the value of the other variable.

Definition List

Diskette File: COMDEV

This list give the definitions of the variables in the COMDEV file, and how to read the material. The COMDEV file includes variables on commercial factors in the countries in which CSM programs are located.

1. RSBW, and
2. SOBW. Both dependent variables occur in all computer files for ease of computation. Definitions are listed in the CSM file materials.
3. FREE. This variable is a measure of "freedom of the press," and comes from Taylor and Hudson's Handbook. In their publication, the index ranges from 4.00 to -4.00. Their high-scorer is Norway, with 3.06, and relatively strong freedom of the press, and their low-scorer is Albania, with -3.50. There are no missing data points.

How to Read the Chart. The chart should be read only as an index. While conditions can change the degree of freedom of the press radically from time to time, a perusal of the chart suggests no score which is dramatically out of line with conditions now in country. The high-scorer is El Salvador, with Colombia insignificantly behind. Low-scorer is Egypt. In the case of El Salvador, freedom to advertise contraceptive products was high when the CSM program began, and changed during the course of the program. The score is therefore a more accurate reflection of press freedom toward the beginning of the program.

4. NEWS2. This variable lists newspaper circulation per 1,000 population, and comes from Taylor and Hudson's Handbook. There are no missing data points. High-scorer is Mexico, with Jamaica again second. Low-scorer is Nepal.

How to Read the Chart. The chart should be read only as an index calculated according to the above procedure. It is a measure of commercial development, in that it taps extent of potential advertising penetration. It is also a measure of socio-economic development, in that it implies the extent of literacy in the country.

5. RAD2. This variable measures numbers of radio receivers per 1,000 population, and comes from Taylor and Hudson's Handbook. There are no missing data points.

How to Read the Chart. The chart is best read as an index. It measures the penetration of commercial media, and therefore potential penetration of advertising.

6. TV2. This variable measures numbers of television receivers per 1,000 population, and comes from Taylor and Hudson's Handbook. There are no missing data points.

How to Read the Chart. The chart is also best read as an index, and also measures the penetration of commercial media. While figures for radios and televisions go

Diskette File COMDEV Definition List (continued)

back to the mid-60's, and have changed since that time, these indices have the advantage of being available for all ten countries. Commercial data is not difficult to obtain for Jamaica, Colombia, or Egypt, but it is more difficult to obtain for Ghana, Sri Lanka, and Nepal. The indices for radios and televisions should be read as relative indications of media penetration.

7. TOTAB. This variable measures total advertising billings in each country. It is in the CSM file, so that ADEF and ADEF2 can be computed. For definition, see CSM file definition list.

8. RTOUT. This variable measures all retail outlets in the country, whether or not they sold CSM products. Data were missing for Colombia, Egypt, Ghana, and Bangladesh, so there are four missing data points.

How to Read the Chart. The chart can be read directly, as in the case of CRTOUT and CPHOUT, as numbers of retail outlets in country, toward the beginning of the CSM program.

18. PHOUT. This variable measures all pharmacy outlets in the country, whether or not they sold CSM products. Data were missing for Bangladesh, Nepal, and India, so there are three missing data points.

9. PHOUT. This variable measures all pharmacy outlets in the country, whether or not they sold CSM products. Data were missing for Bangladesh, Nepal, and India, so there are three missing data points.

10. CCOM. This variable measures the concentration of export commodities, and thus to a degree "commercial modernization," (with the implication that the more diversified an economy is, the more "modern" it is). The index comes from Taylor and Hudson, and is defined by the formula

$$C = \sum p_i^2$$

where C is concentration, and p_i is the proportion of total value of exports accounted for by the i^{th} commodity. The index ranges from Libya's high score of .99 to the Netherlands' low score of .06, that is, from high concentration, to low concentration. The high scorer in this chart is Ghana, with .54, while the low scorer is Mexico with .09.

How to Read the Chart. The chart should be read only as an index, calculated by the above formula.

11. CCOU. This variable measures the concentration of export receiving countries, and also comes from Taylor and Hudson's Handbook. There is one missing data point, for Nepal. The index is defined by the following formula.

$$C = \sum p_i^2$$

where p_i is the proportion of total value of exports going to the i^{th} country. In their original publication, the index ranges from high-scorer Dominican Republic, Diskette File COMDEV Definition List (continued)

with .67, to low-scorer United Kingdom, with .05. In this chart the high-scorer is Mexico, with .31, and the low-scorer is Bangladesh with .06.

How to Read the Chart. The chart should be read only as an index of relative concentration of countries to which the CSM country is exporting, defined by the above formula. Like CCOM, CCOU is an attempt to measure degree of commercial and industrial modernization.

How to Read the Chart. The chart can be read directly, as numbers of pharmacies in country. Mexico is the high scorer with about 120,000 pharmacies.

12. ABWRA. This variable measures advertising billings per woman of reproductive age. Billings are given for 1981 by the variable TOTAB. Women of reproductive age figures are given in the variable WRA, for 1980. The variable is a measure of the relative extent of advertising business, normalized by "target population," and therefore some indication of the extent to which each woman would be contacted through the advertising media.

How to Read the Chart. The chart should be read only as an index calculated by the above procedure. Thus, the high-scorer is, not surprisingly, Mexico, with Jamaica the next highest. Low-scorer is Sri Lanka. There are two missing data points; Bangladesh and Nepal.

13. COUNTRY. This variable allows comparison of any one variable to a country in the order (left to right) of Jamaica, Mexico, Colombia, El Salvador, Egypt, Ghana, Bangladesh, Nepal, Sri Lanka, India, except in the case of cross plots when the country identification must be determined by examining the value of the other variable.

ANNEX C
CSM COUNTRY-SPECIFIC FILES VARIABLES

ANNEX C: VARIABLES DEFINITION LIST FOR COUNTRY
SPECIFIC FILES

<u>Variable Name</u>	<u>Location</u>	<u>Variable Definition</u>
(1) YEAR	all	Years of the CSM program, from the first year in which any sales were made, through 1984.
(2) CHGCS	all	Changes in condom sales, expressed as percentage change (either positive or negative) from the year previous. CHGCS is for the "major condom" sold in the CSM program.
(3) CHGOS	all but Egypt & India, where no orals sold	Changes in oral contraceptive sales, expressed as percentage change (either positive or negative) from the year previous. CHGOS is for the "major OC" sold in the CSM program.
(4) OCOUT	only Jamaica	Numbers of CSM outlets which sold oral contraceptives.