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QC JMP USER'S GUIDE

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CHAPTER 1: INTRODUCTION

Created by the SAS Institute, developers of SAS programming software, JMP is an interactive software package designed for the nonprogrammer. It gives users a simple way to review, manipulate, and analyze data. JMP is most appropriate for FNS analysts who want to perform their own calculations using the QC (Quality Control) database. JMP 3.2 is the most recent version of the program acquired by the Food and Nutrition Service and Mathematica Policy Research.

This guide to JMP covers the following seven subjects. Chapter 1, "Introduction", defines the conventions used in this guide and provides an overview of the QC data and JMP software. Chapter 2, "Basics of JMP", provides a concise description of the features of JMP. Chapter 3, "Household Level Data", describes the content of two household-level datasets and provides several sample tabulations based on these data. Chapter 4, "Person-Level Data", describes the content of two person level datasets and provides several sample tabulations based on these data. Chapter 5, "Advanced Functions of JMP", explains the advanced features of JMP. Chapter 6, "Additional Advanced Examples", presents four more complicated sample tabulations based on household- and person-level data. Chapter 7, "Additional Functions of JMP", is a brief look at some other features of JMP.

Appendix A lists the variables in the four JMP datasets provided to FNS. Appendices B-E provide a keystroke listing and the output for each example from Chapter 3. Appendices F-G provide a keystroke listing and the output for each example from Chapter 4. Appendices H-J provide a keystroke listing and the output for each example from Chapter 5, and Appendices K-N provide the output for each example from Chapter 6.

1.1 Conventions Used in This Guide

VARIABLE NAMES	Variables are shown in uppercase letters without bold. For example, FSBEN and FYWGT are two variables from the household-level dataset.
FILENAMES	Files are shown in uppercase letters with bold. For example, QC96COMH.JMP is the JMP household-level dataset derived from the QC database.
Menu Items	Menu items are shown in initial caps with bold. For example, Tables and then Group/Summary are the menu items a user would select to start a group summary.

1.2 Using JMP with the QC Database

The purpose of this manual is to help you use SAS JMP to perform tabulations and analyses based on QC data. The QC database contains information on characteristics of food stamp

households and the level of Food Stamp Program (FSP) participation as they change over time in response to economic and demographic trends, and to legislative changes in eligibility requirements. FNS uses the QC database to track these changes and measure their effect on the FSP. The QC database is an edited version of the Integrated Quality Control System (IQCS) database, which is ideal for producing tabulations of the characteristics of food stamp units. The IQCS databases produced annually, contains detailed demographic, economic, and FSP eligibility information for a nationally representative sample of approximately 60,000 FSP units. The IQCS data are generated from monthly quality control (QC) reviews of FSP cases. State FSP agencies conduct these reviews to assess the accuracy of eligibility determinations and benefit calculations for the state's FSP caseload.

This manual will allow you to perform household- and person-level tabulations similar to those presented in the forthcoming report "Characteristics of Food Stamp Household: Fiscal Year 1996." You will be guided through several common queries about the FSP and ways to answer them within SAS JMP. You will also be shown how to save and print your output.

This manual is not a comprehensive guide to SAS JMP. It explains only those features used most commonly with the QC data. A deeper explanation of SAS JMP functions appears in the SAS JMP manuals. Also, this manual is not designed to explain the QC data, the IQCS data, or the QC editing process. A detailed explanation of QC data appears in the "Technical Documentation for the Fiscal Year 1996 FSP QC Database and QC Minimodel."

1.3 JMP Datasets Provided to FNS

MPR has provided FNS with the following four JMP datasets.^{1,2} Derived from the 1996 QC database, the JMP datasets can be used to analyse the characteristics of food stamp households and participants. The suffix "JMP" is part of the file name of each dataset.

QC96ALLH.JMP contains all household-level variables.

QC96COMH.JMP is a subset of **QC96ALLH.JMP**. It contains the household-level variables that are most likely to be used for tabulations and analysis. One of these variables (STATECD) is the two-character FIPS code for STATE.

QC96ALLP.JMP contains all person level variables plus the household-level variables STATE, FYWGT, MTHWGT, and HHLDNA. This file also represents people who are in and not in food stamp unit.

¹Although this user's guide describes only the JMP files based on the 1996 QC database, it is likely that FNS will request past or future QC databases to be converted to JMP files. Also, MPR has suggested that additional databases such as CPS and SIPP could be made available as JMP files.

²As of this writing, FNS has requested and received additional JMP files for the 1996 QC database, adjusted for the 1999 baseline.

QC96COMP.JMP is a subset of **QC96ALLP.JMP**. It contains the person-level variables that are most likely to be used for tabulations and analysis, the four household-level variables from **QC96ALLP.JMP**, and the recodes of STATECD, AGEGROUP (age groups), RACE (race groups), and CTZNGRP (citizenship groups). The dataset also includes persons who are in the food stamp case under review (i.e., FSAFIL between 11 and 19).

QC96COMH and **QC96COMP** lets you perform analyse using fewer variables. This speeds the process of loading the dataset into JMP and performing the tabulations and analyses. However, if you want access to all household- and person-level variables, you can load either **QC96ALLH** or **QC96ALLP**, respectively. Appendix A lists all variables in each of the four JMP datasets.

CHAPTER 2: BASICS OF JMP

This chapter explains how to start JMP, describes the initial screen, and highlights some key menu commands. To start JMP, double click on the JMP icon or select JMP from the **Start Menu** (under **Programs**). Either action will bring up the initial JMP screen. Notice the menu and tool bars across the top of the screen. The menu provides access to numerous commands like those in other Windows applications. The tool bar serves a similar function but gives quicker, single-click access to a subset of menu commands.

To open a data file, select **File** from the menu bar. Next, select the **Open** command. At the File Name prompt, type in the file name **QC96COMH.JMP**. You will then see a spreadsheet-like presentation of the data in the field. The rows represent the observations in the data, in this case the recipient households. The columns represents the variables, which are various household characteristics. The top left cell in the first row shows the number of columns and number of rows. The rest of the first row further identifies information about each column, showing the variable names, the modeling types, and the role assignments. The scroll bar on the left and the bottom allows you to move to other sections of the spreadsheet.

You have already used one of the most important commands, **File, Open**. Other very important commands are **File, Save** and **File, Save As**. These commands allow you to save any changes you have made in the actual numbers or in the data characteristics. **Save** overwrites the original file with you changes under the same filename; **Save As** prompts you to assign a new file name to your changed version while maintaining the original file under the original name. Also under the **File** menu, you will see the **Exit** command to end your JMP session. In addition, your most recently opened files appear below Exit on the File menu. Instead of using **File, Open**, you can simply select one of the files from this list.

The **Edit** command includes some more important options. The **Journal** option allows you to save output to a journal, which you can save or print. The **Search** command lets you look for specific data or information. The **Help** command is also available under the main menu for context-sensitive help.

CHAPTER 3: HOUSEHOLD-LEVEL DATA

This chapter explains how to use JMP with the household level datasets **QC96ALLH** and **QC96COMH**. It covers loading the datasets, the information in the rows and columns of these two datasets, and some sample tabulations using household-level data.

3.1 Loading the QC96COMH.JMP Dataset

The **QC96COMH.JMP** dataset is loaded as follows:

- Double click on the JMP icon to start the program
- Select **File** from the menu at the top of the screen
- Select **Open** to open the JMP dataset
- Double click on the **QC96COMH.JMP**

The dataset should take a minute or two to load. **QC96ALLH.JMP** is loaded in the same way.

Once the dataset is loaded, the number of rows and columns in the dataset will appear in the upper left cell on your screen as shown below. The lower left corner shows the number of rows and columns selected (0\0). The first number refers to the number of rows selected, and the second number refers to the number columns selected. Although all the data are available for use by default, you can restrict your analysis to the data you want by selecting only certain rows and columns.

Row	BENMAX	FSAFDC	FSALLPA	FSASSET	FSBEN	FSCONT	FSCSEXP	FSCSUPRT	FSDEEM	FSDEF
1	119	0	1	0	10	0	0	0	0	0
2	119	0	0	0	119	0	0	0	0	0
3	119	0	1	0	119	0	0	0	0	0
4	119	0	0	0	119	0	0	0	0	0
5	119	0	1	0	115	0	0	0	0	0
6	119	0	1	0	119	0	0	0	0	0
7	119	0	1	0	112	0	0	0	0	0
8	119	0	1	429	45	0	0	0	0	0
9	119	0	1	45	12	0	0	0	0	0
10	119	0	1	0	38	0	0	0	0	0
11	119	0	0	0	10	0	0	0	0	0
12	119	0	1	267	119	0	0	0	0	0
13	218	0	1	0	37	0	0	0	0	0
14	119	0	0	1080	10	0	0	0	0	0
15	119	0	1	0	119	0	0	0	0	0
16	218	0	0	5	141	0	0	540	0	0

3.2 Rows in the Household-Level Datasets

Each row in a JMP dataset corresponds to one record in the household level QC database. The complete 1996 QC database contains 50,883 records, so the JMP datasets **QC96ALLH.JMP** and **QC96COMH.JMP** contain 50,883 rows. As shown above, each row, or record, is identified by a number at the left of your screen.

3.3 Columns in the Household-Level Datasets

Each column in a JMP dataset corresponds to one variable in the QC database. The QC database contains 87 household variables, so there are 87 columns, or variables, in the JMP dataset **QC96ALLH.JMP**. However, since **QC96COMH.JMP** is a subset of **QC96ALLH.JMP**, this file includes only 55 variables, represented by 55 columns on your screen. The scroll bar at the bottom of your screen lets you see/select the variables not displayed above.

The screen above also shows two boxes at the top of each column. The letter in the box on the left represents the type of variable. A **C** stands for continuous variables, **O** for ordinal variables, and **N** for nominal variables. The letter in the box on the right indicates the role of the variable. A blank stands for no role, **X** for an X variable, **Y** for a Y variable, **W** for a weight variable, **F** for Freq, and **L** for a Label.

Most of the variables in the JMP files are continuous. That is, they do not have discrete values. For example, **FYWGT** (full year weight) and **FSBEN** (food stamp benefit amount) are continuous variables. Ordinal variables have discrete values and are associated with order or magnitude. **FSUSIZE** (food stamp unit size) is the only ordinal variable. Nominal variables have discrete values but are not associated with any magnitude. **STATE** (state FIPS Code) and **RACETH** (race code) are nominal variables.

By default, the variable **FYWGT** in the four JMP datasets has a role of weight (**W**). This means that all tabulations based on these datasets will be weighted with the **FYWGT** variable. Therefore, when you request the mean of **FSBEN**, you will actually get the mean of **FSBEN** weighted by **FYWGT**.

3.4 Example 1: Calculating Selected Household Variables by State

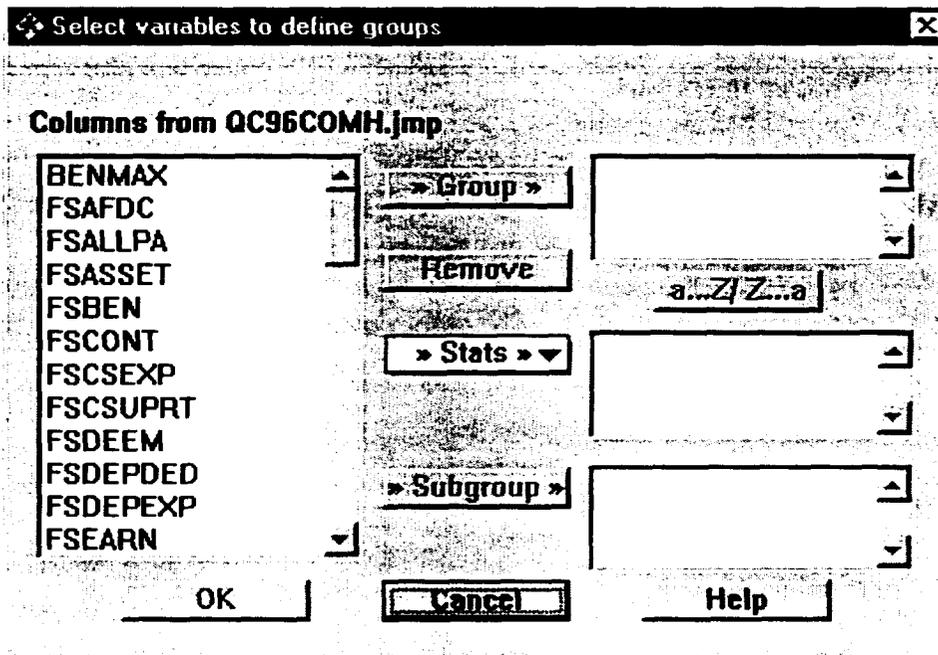
The following sample tabulation shows how to use JMP to produce weighted counts of households, average **FSBEN** (food stamp benefit amount), average **FSGRINC** (gross income), and average **FSNETINC** (net income) for each state. A detailed list of keystrokes along with output appears in Appendix B.

Open the dataset **QC96COMH.JMP** if it is not already opened.

Select **Tables** from the menu bar.

Select **Group/Summary**. This allows you to group the data and summarize your results. In this case, we will group the data by the variable **STATE** and summarize **FYWGT**, **FSBEN**, **FSGRINC**, and **FSNETINC**.

Once you select group/summary, the screen shown below will appear.



Select **STATE** for the **Group** variable

Select **FYWGT**, then **Stats**, and then **Sum**

Select **FSBEN**, then **Stats**, and then **Mean**

Select **FSGRINC**, then **Stats**, and then **Mean**

Select **FSNETINC**, then **Stats**, and then **Mean**

Select **OK** to produce the table

The results of this query are displayed in a table with 53 rows (1 for each state plus Guam and the Virgin Islands). The columns show the **STATE** that was grouped, the number of rows in each group, and the four variables we requested statistics on. The first variable we requested, **Sum(FYWGT)**, is shown in the fourth column. This variable represents the weighted number of

households in each STATE. The remaining three columns are the statistics Mean(FSBEN), Mean(FSGRINC), and Mean(FSNETINC). These three statistics were all weighted by the variable FYWGT since, as mentioned, FYWGT was assigned the role of Weight. This table can be printed out or saved. (For a listing of state codes, please see Appendix D of the "Technical Documentation for the Fiscal Year 1996 FSP QC Database and QC Minimodel".)

When you request a **Table/Summary**, JMP produces another window with a table containing the results. However, the original table is still available and can be viewed by selecting **Window** from the menu bar. Near the bottom of the menu, you will see **QC96COMH** and **QC96COMH.JMP By State**, which are the currently available tables. The first table is the dataset that was loaded initially, and the second is the table that was just created. JMP operates on the table that is currently active. Therefore, you can run additional tabulations on **QC96COMH** by selecting this table from the **Window** menu item.

3.5 Example 2: Calculating Selected Household Variables for All States

In example 1, we calculated certain variables by STATE. Example 2 shows how to get the

same statistics without grouping by STATE. The output and keystroke sequence for this example appear in Appendix C.

Open the dataset **QC96COMH.JMP** if it is not already opened.

Select **Tables** from the menu bar.

Select **Group/Summary**.

Select **FYWGT**, then **Stats**, and then **Sum**.

Select **FSBEN**, then **Stats**, and then **Mean**.

Select **FSGRINC**, then **Stats**, and then **Mean**.

3.6 Example 3: Calculating Detailed Statistics for Selected Household Variables

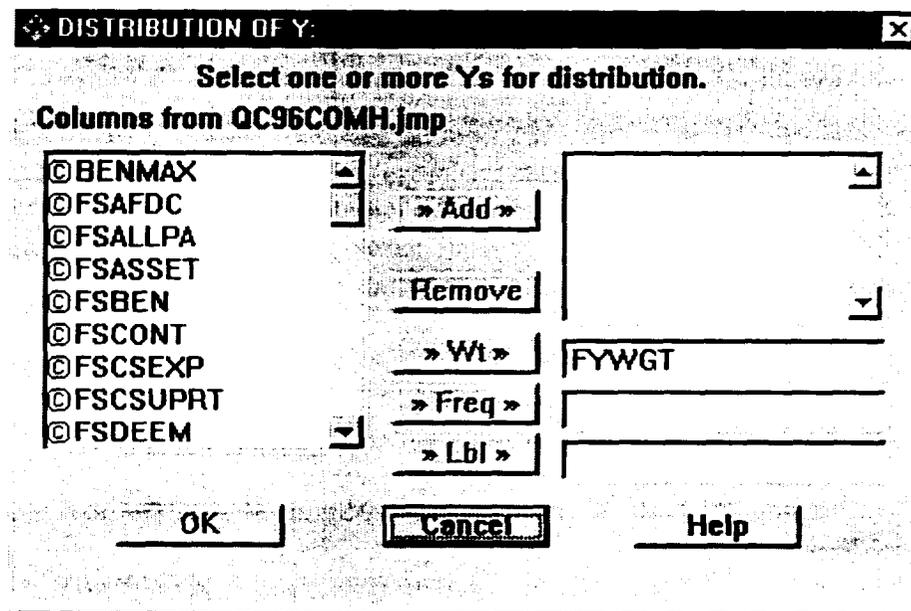
Examples 1 and 2 showed how to calculate simple statistics (sum and mean) for selected variables. However, JMP can provide more information on selected variables. The following example shows how to calculate the same statistics and more using the **Analyze** menu option. The output and keystroke sequence for this example appear in Appendix D.

Open the dataset **QC96COMH.JMP** if it is not already opened.

Select **Analyze** from the menu bar.

Select **Distribution of Y**.

You will then see the following screen. As shown, the **Weight** variable is already chosen to be **FWYGT**.



Select **FSBEN**, then **Add**.

Select **FSGRINC**, then **Add**.

Select **FSNETINC**, then **Add**.

Select **FSUSIZE**, then **Add**.

Select **OK** to produce the results.

The results of the query are displayed in a distribution chart, quantiles, and moments, which run vertically on the page. Each variable is shown horizontally on the page. The distribution chart shows a histogram representation of the variable selected as well as an outlier chart just to the right of the histogram. The outliers are represented by the black dots. In this example, FSBEN has many outliers. The boxes of the outlier chart represent the interquartile range of the selected variable. The next output box is the Quantiles box, which displays the variable values at various quantiles. The last box contains the Moments table, which displays the mean, standard deviation, and other summary statistics for the given variable.

Note that the JMP **Analyze/Frequency** option produces different output for continuous variables like FSBEN and FSGRINC as compared to nominal variables like FSUSIZE. The results for FSUSIZE are displayed in the form of a mosaic plot and a frequency table with unweighted counts of FSUSIZE.

The main advantage to using the **Analyze** menu option is that many different statistics are displayed at one time. Some of these statistics are available from the **Group/Summary** menu option, but they are not as detailed as what **Analyze** provides.

3.7 Example 4: Calculating Statistics for Households with Children

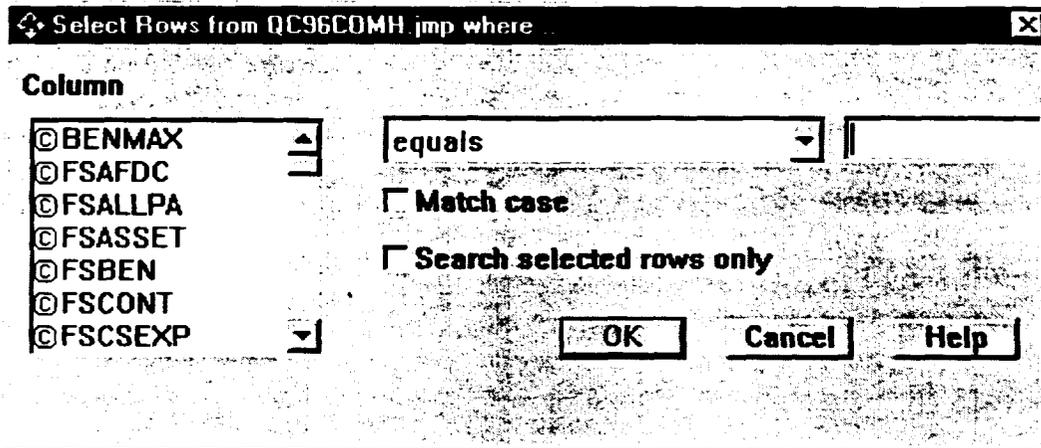
The previous three examples included all households in the analysis. You also have the ability to select only those households you want to use before you perform any tabulations or analysis. In this example, we want to look only at households containing at least one child. The first step is to identify which rows (households) have children and to use only these rows in the analysis. The output and keystroke sequence for this example appear in Appendix E.

Open the dataset **QC96COMH.JMP** if it is not already opened.

Select **Rows** from the menu bar.

Select **Select** and then **Where**. This allows you to identify rows that meet specific conditions.

The user is then presented with the following screen.



Highlight FSNKID, pull down the item for is **greater than**, and put 0 in the box on the far right. This tells JMP you want to select those rows where $FSNKID > 0$, which represents households containing any children. Then click **OK**. After a few seconds, JMP identifies which rows have been selected by blacking them out. Also, in the lower hand corner, you will see a count of the rows selected, which should read 30,265\0.

Select **Rows** from the menu bar, and then select **Invert Selection**. This will switch the rows selected with those not selected. This is done in order to select households that contain no children. Alternatively, we could have done this by initially selecting rows where $FSNKID = 0$.

Select **Rows** from the menu bar, and then select **Exclude/Include**. This means that the rows selected will not be used in any analysis. JMP identifies these rows with the symbol of a circle with a line through it.

We used the **Invert Selection** option to select the rows that needed to be excluded. The **Exclude/Include** option excludes only rows that are selected and includes only rows that have been excluded.

Select **Analyze** from the menu bar.

Select **Distribution of Y**.

Select FSBEN, then **Add**.

Select FSGRINC, then **Add**.

Select FSNETINC, then **Add**.

Select FSUSIZE, then **Add**.

Select **OK** to produce the results.

The results of the query are displayed in a distribution chart, quantiles, and moments for FSBEN, FSGRINC, and FSNETINC. FSUSIZE is displayed with a mosaic plot and a frequency table. These results can be compared with Example 3 to show that they are different in that the number of households selected is smaller. In the output, moments shows that the Sum of Weights is 6,280,049, which corresponds to 6,280,049 food stamp households with a least one child. This is smaller than the entire 10,551,656 weighted households used for the first three examples.

The process of selecting and deselecting rows to restrict further analysis is not applicable when requesting a **Group/Summary** tabulation. To select only certain rows for a **Group/Summary** tabulation, use the **Subset** option described in Chapter 5.

CHAPTER 4: PERSON LEVEL DATA

This chapter explains how to use JMP with the person-level datasets **QC96ALLP.JMP** and **QC96COMP.JMP**. It explains how to load the files, describes the rows and columns of these two datasets, and presents some example tabulations using person level data.

4.1 Loading the QC96COMP.JMP

The **QC96COMP.JMP** dataset is loaded as follows:

- Double click on the JMP icon to start the program
- Select **File** from the menu
- Select **Open** to open the JMP dataset
- Double click on the name **QC96COMP.JMP**

The dataset should only take a minute or two to load. **QC96ALLP.JMP** is loaded in the same way.

Once the dataset is loaded, the upper left hand corner of your screen will show the number of rows and columns in the dataset.

4.2 Rows in the Person-Level Datasets

The rows in the person-level datasets **QC96ALLP.JMP** and **QC96COMP.JMP** correspond to people rather than records in the QC database. In the QC database, each household record contains variables for 15 people. Therefore, to represent one characteristic, AGE, for 15 people, there is AGE1 through AGE15. However, the data in **QC96ALLP.JMP** and **QC96COMP.JMP**, has been transposed: there are up to 15 records per household and only one characteristic variable for AGE. The dataset **QC96ALLP.JMP** contains 140,480 records, which correspond to the total number of persons in the QC database. **QC96COMP.JMP**, the commonly used dataset, contains 126,311 records, which correspond to the total number of food stamp participants with an FSAFIL code between 11 and 19 (i.e., persons within the food stamp unit under review).

4.3 Columns in the Person-Level Datasets

Each column in the person-level datasets **QC96ALLP.JMP** and **QC96COMP.JMP** represents a person-level or a household-level variable. **QC96ALLP.JMP** contains 28 person-level variables and 4 household level variables. The four household level variables allow some of the household characteristics to be represented on this person-level file and give you the option of joining the household-level data with the person-level data. As a subset of **QC96ALLP.JMP**,

QC96COMP.JMP contains 26 person-level variables, 4 household-level variables, and 4 recode variables.

4.4 Example 5: Calculating the Number of Food Stamp Participants by Sex

This sample tabulation explains how to produce weighted counts of food stamp participants by the person-level variable SEX. The dataset QC96COMP.JMP is particularly appropriate for this tabulation, since it contains only food stamp participants in the review case. A detailed list of keystrokes used and the output generated appears in Appendix F.

Open the dataset QC96COMP.JMP if it is not already opened.

Select **Tables** from the menu bar.

Select **Group/Summary**. This allows you to group the data and summarize your results. In this case, the data will be grouped by the variable SEX, and FYWGT will be summarized.

Select SEX for the **Group** variable.

Select FYWGT, then **Stats**, and then **Sum**.

Select **OK** to produce the table.

The results of your query are displayed in a table with three rows. One row shows SEX=F³, another row shows SEX=M, and a third row shows SEX=U. In this last row, SEX is a missing value. One of the advantages of JMP is that it handles missing data very well. In the QC file, missing values indicate that data are missing on the input IQCS file, that the value is out of range, that the QC reviewer coded as unknown, or that the variable was unable to be constructed. The only requested statistic, Sum(FYWGT), is shown in the last column. This statistic corresponds to the weighted number of food stamp participants within the 1996 QC database.

4.5 Example 6: Calculating Selected Statistics by Race

In this example, the **Group/Summary** function is used to calculate certain statistics by the variable RACETH. A detailed list of keystrokes used and the output generated appears in Appendix G.

³The coding of SEX was changed from 1/2 for male/female to M/F in order to make SEX a more descriptive variable. SEX is the only variable for which the coding scheme was changed.

Open the dataset **QC96COMP.JMP** if it is not already opened.

Select **Tables** from the menu bar.

Select **Group/Summary**. This allows you to group the data and summarize your results. In this case, the data will be grouped by the variable **RACETH**, and **FYWGT** and **AGE** will be summarized.

Select **RACETH** for the **Group** variable.

Select **FYWGT**, then **Stats**, and then **Sum**.

Select **AGE**, then **Stats**, and then **Mean**.

Select **OK** to produce the table.

The results of this query are displayed in a table with six rows. One row shows when the value for **RACETH** is missing. The weighted number of food stamp participants is shown in the **Sum(FYWGT)** column, and the average age for each **RACETH** group is shown in **Mean(AGE)**.

CHAPTER 5: ADVANCED FUNCTIONS

This chapter explains how to perform three advanced functions of JMP: subset, join, and new column.

5.1 Example 7: Subset

Example 4 explained how to calculate statistics for households with children. We selected rows where FSNKID>0 (households with children) and eventually used the **Analyze** menu to look at statistics for selected variables on those households with children. However, if you want to use the **Group/Summary** function, or if you want a household level dataset only with children as opposed to all records in QC96COMH, you can use the **Subset** function.

The **Subset** function actually creates a new table based on the rows selected (i.e., marked in black). The following steps show how to create a household-level dataset in which each household contains at least one child. The output and keystroke sequence for this example appear in Appendix H.

Open the dataset QC96COMH.JMP if it is not already opened.

Select **Rows** from the menu bar.

Select **Select** and then **Where**.

Highlight FSNKID, pull down the item for **is greater than**, and insert a 0 in the box on the far right. This tells JMP that you want to select rows where FSNKID>0, that is, households containing children. Then click **OK**. After a few seconds, JMP identifies the rows that have been selected by blacking them out. Also, a count of the rows selected will be shown in the lower left corner. It should read 30,265\0.

Select **Tables** from the menu bar.

Select **Subset**.

This process creates a new table that has 30,265 rows instead of 50,883 rows.

5.2 Example 8: Join

The **Join** function is used to bring together variables from the person-level dataset with variables from the household-level dataset. For example, if you want to determine the number of male and female food stamp participants only for households with at least one child, you would need the variable FSNKID, which is a household-level variable, and the variable SEX, which is a person-

level variable. **Join** lets you combine household-level data with the person-level data through the common variable HHLDNO. The output and keystroke sequence for this example appears in Appendix I. The **Join** function is performed as follows:

Open the dataset **QC96COMH.JMP** if it is not already opened.

Select **Rows** from the menu bar.

Select **Select** and then **Where**.

Highlight FSNKID, pull down the item for **is greater than**, and insert a 0 in the box on the far right. This tells JMP that you want to select rows where $FSNKID > 0$, that is, households containing any children. Then click **OK**. After a few seconds, JMP identifies the rows you have selected by blacking them out. Also, the number in the lower left corner of your screen indicates a count of the rows selected. It should read 30,265\0.

Click on the HHLDNO column to highlight it. The lower left hand corner should now read 30,265\1. This means that 30,265 rows and 1 column were selected.

Select **Tables** from the menu bar.

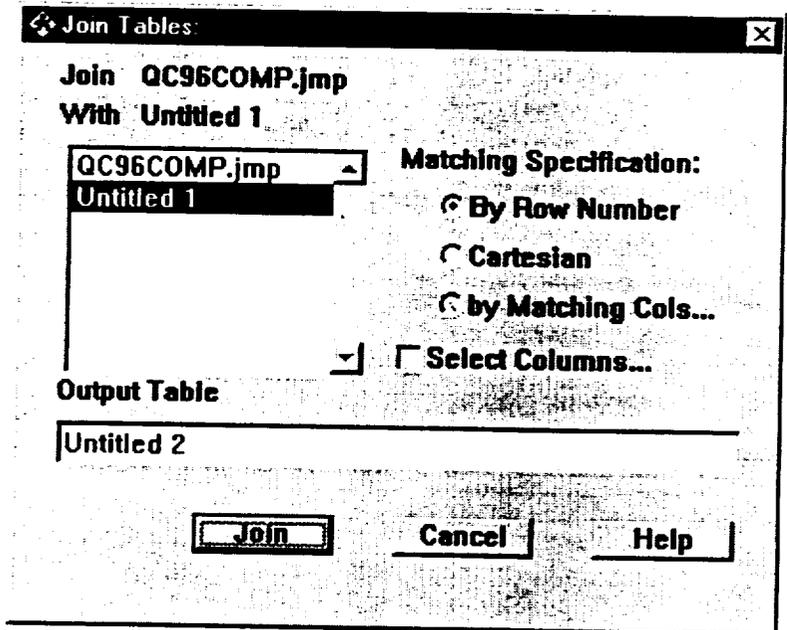
Select **Subset**. This creates a new table called Untitled #, where # is the next available table number.

Open the **QC96COMP.JMP** dataset.

Select **Tables** from the menu bar.

Select **Join**

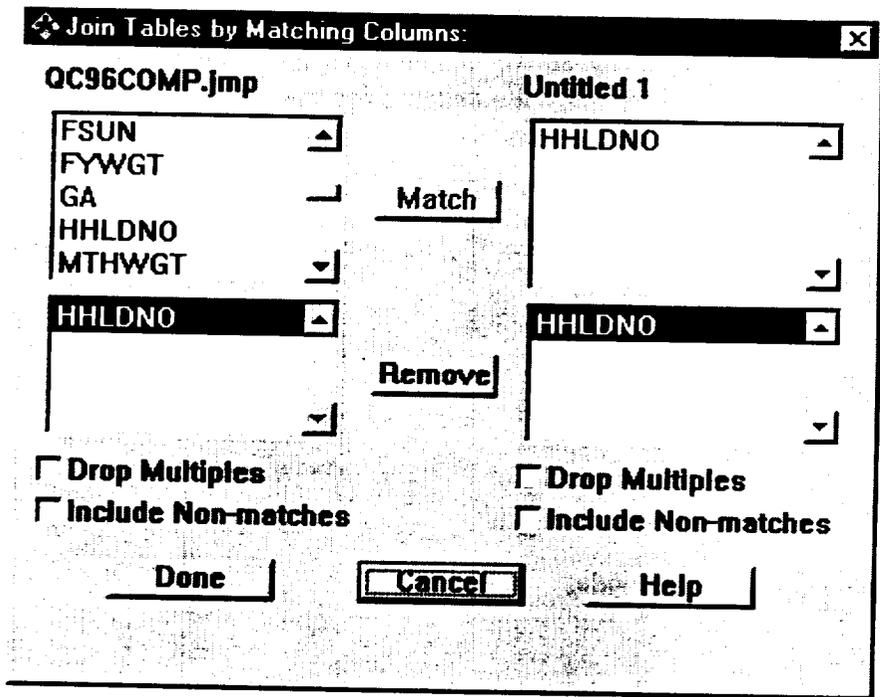
You will see the following screen:



Select Untitled 1, which is the table created from the **Subset** function.

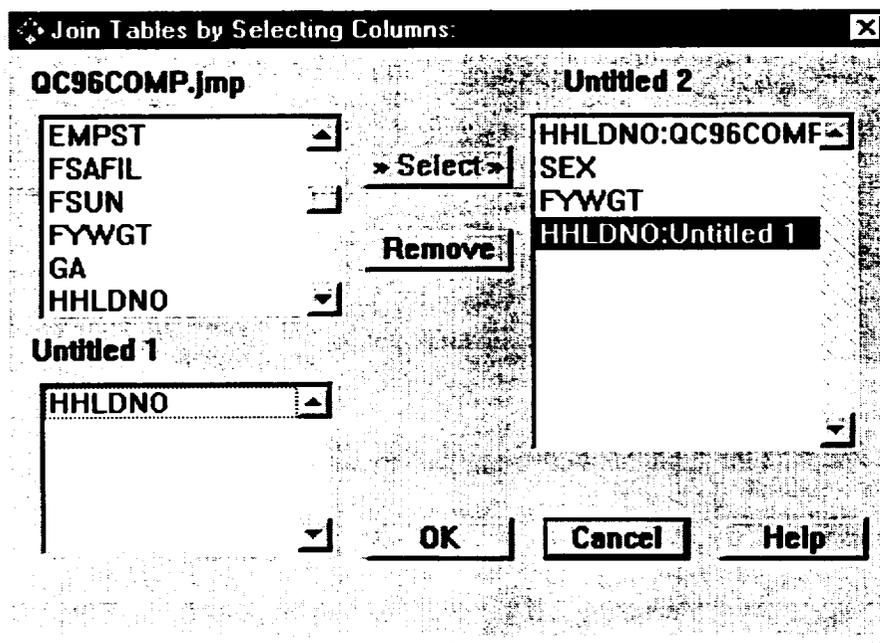
Select by **Matching Cols.**

You will then see a new screen. Select HHLDNA from the two boxes at the top and click on **Match**. This will bring up the a screen shown below.



When this screen appears, click on **Done**.

Select **Select Columns**. Then under **QC96COMP.JMP** highlight **HHLDNO** and then click **Select** and then select **SEX** and **FYWGT**. From **Untitled 1**, highlight **HHLDNO** and then click **Select**. The following screen is displayed:



Selecting the variables shown in the figure above lets you keep only those variables after the Join. The more variables selected, the slower the Join process. The Joined dataset, named **Untitled 2**, will contain the four variables selected above.

Click **OK**

Click **Join** to merge the two datasets. This will give you a dataset of all persons in households with children.

Select **Tables**.

Select **Group/Summary**.

Select **SEX** for the **Group** variable.

Select **FYWGT**, then **Stats**, and then **Sum**.

Select **OK** to produce the table.

This table will show the number of participants, Sum(FYWGT), by SEX from only households with children.

Now we want to briefly show some of JMP's graphing capabilities using this table.

Select **Graph** from the menu bar.

Select **Bar/Pie Chart**. This produces a bar chart from the previous table.

5.3 Example 9: New Column

In addition to using JMP to perform analyses and tabulations based on variables in the QC databases, you can also use JMP's New column function to create new variables. These new variables can be fixed and have hand-entered values, or they can be based on formulas you create. For example, you can create a new variable to show groupings of the FSBEN variable in order to allow a **Group/Summary** operation by JMP. The output and keystroke sequence appears in Appendix J.

Open the dataset **QC96COMH.JMP** if it is not already opened.

Select **Cols** and then **New Columns**.

The screenshot shows the 'New Columns' dialog box with the following fields and options:

- Table Name: Qc96comh.jmp
- Col Name: Column 56
- Lock:
- Validation: None, List Check, Range Check
- Data Type: Numeric
- Data Source: No Formula
- Modeling Type: Continuous
- Field Width: 8
- Format: Best
- Notes: (empty text area)
- Buttons: Next, OK, Cancel, Help

Replace Column 56 with BENGR. Give the new variable a more appropriate name.

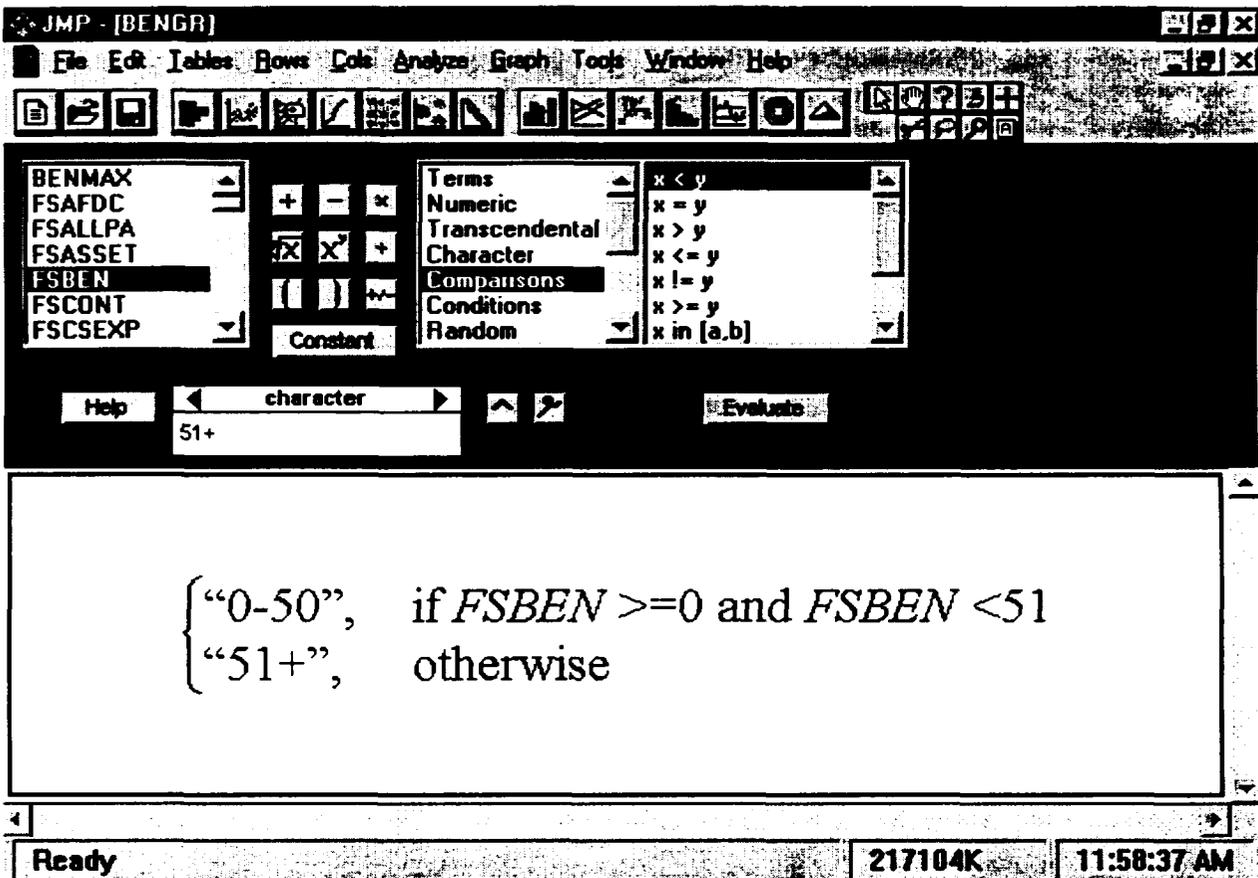
Change **Data Type** to character.

Change **Field Width** to 15.

Change **Data Source** to Formula.

Click **OK**.

You will see a window in which the formula for the new variable can be constructed. In the figure below, BENGR was created to have only two values, "0-50" or "51+".



After you enter the formula shown in the above screen, Click on **File** and then **Close**.

Select **Group/Summary**.

Select BENGR for the **Group** variable. This is the newly created variable.

Select FYWGT, then **Stats**, and then **Sum**.

Select **OK** to produce the table.

The results of this operation are displayed in a table with two rows (one for each grouping of BENGR). The Sum(FYWGT) column represents the weighted number of households having each value of BENGR. This table can be printed out or saved.

CHAPTER 6: ADDITIONAL ADVANCED EXAMPLES

The four JMP examples explained in this chapter require the skills you learned in previous chapters, but they are somewhat more complex. The keystroke sequence for each example is not included, but the output appears in the appendices.

6.1 Example 10: Cross Tabulation

In this example, the Analyze function is used to create a cross-tabulation of two variables.

Open the dataset **QC96COMH.JMP** if it is not already opened.

Select **Analyze**, then **Fit Y by X**.

Select **URBRUR** as the Y variable.

Select **FSUSIZE** as the X variable.

Click **OK**.

The results of this query are displayed in a mosaic plot and a cross-tabulation table of **FSUSIZE** by **URBRUR**. The cells show the weighted number of households. The user can obtain row, column, and cell percentages by clicking at the box on the top of the Crosstabs grid. Output appears in Appendix K.

6.2 Example 11: Calculating the Number of Persons in Households with FSGA

In this example, the Join function is used to determine the number of persons in households with positive FSGA.

Open the dataset **QC96COMH.JMP** if it is not already opened.

Select **Rows** from the menu bar.

Select **Select** and then **Where**.

Highlight **FSGA**, pull down the item for **is greater than**, and insert a 0 in the box at the far right. Then click **OK**. After a few seconds, JMP identifies the rows you have selected by blacking them out. Also, in the lower left corner, you will see the number rows selected, which should read 2,476\0.

Select **Tables** from the menu bar.

Open the dataset **QC96COMP.JMP** if it is not already opened.

Select **Rows** from the menu bar.

Select **Select** and then **Where**. Click to create $AGE \geq 60$. Then click **OK**. The number at the lower left of your screen should read 9,348 rows.

Select **Select** and then **Where**. Click to create $SEX = F$. Then click the box **Search Selected rows only**. Then click **OK**. This forces JMP to search only from rows that have already been selected. The number in the lower left of your screen should read 6,676 rows.

Select **Tables** from the menu bar.

Select **Subset** to create a new table.

Open the dataset **QC96COMH.JMP** if it is not already opened.

Select **Tables** from the menu bar.

Select **Join**.

Select **Untitled #**, which is the table created from the **Subset** function you just performed.

Select **by Matching Cols**.

You will see a new screen. Select **HHL DNO** from the two boxes at the top, click on **Match**. Make sure to check the box **Drop Multiples** under the **Untitled** window.

Then click on **Done**.

Select **Select Columns**. Then select the **HHL DNO** variable from both windows and **FYWGT** from either window.

Click **OK**.

Click **Join** to merge the two datasets. This produces a table with 6,659 rows, which is less than the number of participants we were merging with.

Select **Tables**.

Select **Group/Summary**.

Select **FYWGT**, then **Stats**, and then **Sum**.

Select **OK** to produce the table.

This table shows the number of households, Sum(FYWGT), containing at least one elderly female participant. The output appears in Appendix M.

6.4 Example 13: Calculating the Number of Persons in Households with One or More Elderly Females

In this example, the Join function is used to determine the total number of persons in households with at least one elderly female.

Open the dataset **QC96COMP.JMP** if it is not already opened.

Select **Rows** from the menu bar and then **Clear Row States**.

Select **Rows** from the menu bar.

Select **Select** and then **Where**. Click to create $AGE \geq 60$. Then click **OK**. The number in at the lower left of your screen should read 9,348 rows.

Select **Select** and then **Where**. Click to create $SEX = F$. Then click the box **Search Selected Rows Only**. Then click **OK**. This forces JMP to only search from those rows which have already been selected. The number at the lower left of the screen should read 6,676 rows.

Select **Tables** from the menu bar.

Select **Subset** to create a new table.

Open the dataset **QC96COMP.JMP** if it is not already opened.

Select **Tables** from the menu bar.

Select **Join**.

Select **Untitled #**, which is the table created from the **Subset** function you have just performed.

Select **by Matching Cols**.

You will see a new screen. Select **HHLDNA** from the two boxes at the top, and then click on **Match**. Check the box **Drop Multiples** under the **Untitled** window.

Then click on **Done**.

Select **Select Columns**. Select the **HHLDNA** variable from both windows, and then select **FYWGT** from either window.

Click **OK**.

Click **Join** to merge the two datasets. This produces a table with 8,870 rows. This is greater than the number of households we were merging with.

Select **Tables**.

Select **Group/Summary**.

Select **FYWGT**, then **Stats**, and then **Sum**.

Select **OK** to produce the table.

This table shows the number of participants, $\text{Sum}(\text{FYWGT})$, in households containing at least one elderly female participant. The output appears in Appendix N.

CHAPTER 7: ADDITIONAL FUNCTIONS

This chapter covers JMP's additional statistical and modeling functions.

Sort allows you to sort by one or more variables in ascending or descending order.

Transpose allows you to switch rows into columns or columns into rows.

For more information about the following statistical functions, please see the referenced chapters from "Statistics and Graphics Guide" of the JMP documentation.

Line and curve fits, ANOVA, regressions (Chapters 3 - 6)

General model fitting, multiple regression (Chapters 7 - 12)

Nonlinear functions, maximum likelihood (Chapter 14)

Dynamic overlay plots (Chapter 19)

3-D spin plots (Chapter 20)

Pareto charts (Chapter 21)

Quality control charts (Chapters 22)

Contour plots (Chapter 23)

Ternary plot (Chapter 24)

APPENDIX A

Attributes of QC96ALLH.jmp

Rows	Name	Type	Measure	Role
1	ACTNTYPE	Numeric	Continuous	None
2	AMTERR	Numeric	Continuous	None
3	AUTHREP	Numeric	Continuous	None
4	BENMAX	Numeric	Continuous	None
5	CASE	Numeric	Continuous	None
6	CERTHHSZ	Numeric	Continuous	None
7	CERTMTH	Numeric	Continuous	None
8	COUNTYCD	Numeric	Continuous	None
9	CTPRHH	Numeric	Continuous	None
10	EXPEDSER	Numeric	Continuous	None
11	FSAFDC	Numeric	Continuous	None
12	FSALLPA	Numeric	Continuous	None
13	FSASSET	Numeric	Continuous	None
14	FSBEN	Numeric	Continuous	None
15	FSCONT	Numeric	Continuous	None
16	FSCSEXP	Numeric	Continuous	None
17	FSCSUPRT	Numeric	Continuous	None
18	FSDEEM	Numeric	Continuous	None
19	FSDEPDE2	Numeric	Continuous	None
20	FSDEPDED	Numeric	Continuous	None
21	FSDEPEXP	Numeric	Continuous	None
22	FSEARN	Numeric	Continuous	None
23	FSEDLOAN	Numeric	Continuous	None
24	FSEITC	Numeric	Continuous	None
25	FSERNDE2	Numeric	Continuous	None
26	FSERNDED	Numeric	Continuous	None
27	FSGA	Numeric	Continuous	None
28	FSGRINC	Numeric	Continuous	None
29	FSMEDDE2	Numeric	Continuous	None
30	FSMEDDED	Numeric	Continuous	None
31	FSMEDEXP	Numeric	Continuous	None
32	FSMINBEN	Numeric	Continuous	None
33	FSNDIS	Numeric	Continuous	None
34	FSNELDER	Numeric	Continuous	None
35	FSNETINC	Numeric	Continuous	None
36	FSNGMOM	Numeric	Continuous	None
37	FSNK0T4	Numeric	Continuous	None
38	FSNK5T17	Numeric	Continuous	None
39	FSNKID	Numeric	Continuous	None
40	FOTHERN	Numeric	Continuous	None
41	FOTHGOV	Numeric	Continuous	None
42	FOTHUN	Numeric	Continuous	None
43	FSSLFEMP	Numeric	Continuous	None
44	FSSLTDE2	Numeric	Continuous	None
45	FSSLTDED	Numeric	Continuous	None
46	FSSLTEXP	Numeric	Continuous	None
47	FSSOCSEC	Numeric	Continuous	None
48	FSSSI	Numeric	Continuous	None
49	FSSTDDE2	Numeric	Continuous	None
50	FSSTDDED	Numeric	Continuous	None
51	FSTOTDE2	Numeric	Continuous	None
52	FSTOTDED	Numeric	Continuous	None
53	FSUNEMP	Numeric	Continuous	None

Attributes of QC96ALLH.jmp

Rows	Name	Type	Measure	Role
54	FSUSIZE	Numeric	Ordinal	None
55	FSVEHAST	Numeric	Continuous	None
56	FSVET	Numeric	Continuous	None
57	FSWAGES	Numeric	Continuous	None
58	FSWCOMP	Numeric	Continuous	None
59	FYWGT	Numeric	Continuous	Weight
60	HHLDNA	Numeric	Continuous	None
61	HWGT	Numeric	Continuous	None
62	LASTCERT	Numeric	Continuous	None
63	LIQRESOR	Numeric	Continuous	None
64	LOCALCOD	Numeric	Continuous	None
65	MTHWGT	Numeric	Continuous	None
66	NETSCRN	Numeric	Continuous	None
67	OTHNLRES	Numeric	Continuous	None
68	PRIOR	Numeric	Continuous	None
69	RAWBEN	Numeric	Continuous	None
70	RAWERND	Numeric	Continuous	None
71	RAWGROSS	Numeric	Continuous	None
72	RAWHSIZE	Numeric	Continuous	None
73	RAWNET	Numeric	Continuous	None
74	RCNTACTN	Numeric	Continuous	None
75	RCNTOPE	Numeric	Continuous	None
76	REALPROP	Numeric	Continuous	None
77	REGION	Numeric	Nominal	None
78	REGIONCD	Numeric	Nominal	None
79	REVNUM	Numeric	Continuous	None
80	REVTYPE	Numeric	Continuous	None
81	SHELCP	Numeric	Continuous	None
82	STATE	Numeric	Nominal	None
83	STATUS	Numeric	Continuous	None
84	STRATUM	Numeric	Continuous	None
85	TPOV	Numeric	Continuous	None
86	URBRUR	Numeric	Nominal	None
87	YRMONTH	Numeric	Nominal	None

Attributes of QC96COMH.jmp

Rows	Name	Type	Measure	Role
1	BENMAX	Numeric	Continuous	None
2	FSAFDC	Numeric	Continuous	None
3	FSALLPA	Numeric	Continuous	None
4	FSASSET	Numeric	Continuous	None
5	FSBEN	Numeric	Continuous	None
6	FSCONT	Numeric	Continuous	None
7	FSCSEXP	Numeric	Continuous	None
8	FSCSUPRT	Numeric	Continuous	None
9	FSDEEM	Numeric	Continuous	None
10	FSDEPDED	Numeric	Continuous	None
11	FSDEPEXP	Numeric	Continuous	None
12	FSEARN	Numeric	Continuous	None
13	FSEDLOAN	Numeric	Continuous	None
14	FSEITC	Numeric	Continuous	None
15	FSERNDDED	Numeric	Continuous	None
16	FSGA	Numeric	Continuous	None
17	FSGRINC	Numeric	Continuous	None
18	FSMEDDED	Numeric	Continuous	None
19	FSMEDEXP	Numeric	Continuous	None
20	FSMINBEN	Numeric	Continuous	None
21	FSNDIS	Numeric	Continuous	None
22	FSNELDER	Numeric	Continuous	None
23	FSNETINC	Numeric	Continuous	None
24	FSNGMOM	Numeric	Continuous	None
25	FSNK0T4	Numeric	Continuous	None
26	FSNK5T17	Numeric	Continuous	None
27	FSNKID	Numeric	Continuous	None
28	FSOTHERN	Numeric	Continuous	None
29	FSOTHGOV	Numeric	Continuous	None
30	FSOTHUN	Numeric	Continuous	None
31	FSSLFEMP	Numeric	Continuous	None
32	FSSLTDED	Numeric	Continuous	None
33	FSSLTEXP	Numeric	Continuous	None
34	FSSOCSEC	Numeric	Continuous	None
35	FSSSI	Numeric	Continuous	None
36	FSSTDDDED	Numeric	Continuous	None
37	FSTOTDED	Numeric	Continuous	None
38	FSUNEMP	Numeric	Continuous	None
39	FSUSIZE	Numeric	Ordinal	None
40	FSVEHAST	Numeric	Continuous	None
41	FSVET	Numeric	Continuous	None
42	FSWAGES	Numeric	Continuous	None
43	FSWCOMP	Numeric	Continuous	None
44	FYWGT	Numeric	Continuous	Weight
45	HHLDNA	Numeric	Continuous	None
46	MTHWGT	Numeric	Continuous	None
47	NETSCRN	Numeric	Continuous	None
48	REGION	Numeric	Nominal	None
49	REGIONCD	Numeric	Nominal	None
50	SHELCPAP	Numeric	Continuous	None
51	STATE	Numeric	Nominal	None
52	STATECD	Character	Nominal	None
53	TPOV	Numeric	Continuous	None

Attributes of QC96COMH.jmp

Rows	Name	Type	Measure	Role
54	URBRUR	Numeric	Nominal	None
55	YRMONTH	Numeric	Nominal	None

Attributes of QC96ALLP.jmp

vs	Name	Type	Measure	Role
1	AFDC	Numeric	Continuous	None
2	AGE	Numeric	Continuous	None
3	CONT	Numeric	Continuous	None
4	CSUPRT	Numeric	Nominal	None
5	CTZN	Numeric	Continuous	None
6	DEEM	Numeric	Nominal	None
7	DIS	Numeric	Continuous	None
8	EDLOAN	Numeric	Continuous	None
9	EITC	Numeric	Nominal	None
10	EMPRG	Numeric	Nominal	None
11	EMPST	Numeric	Nominal	None
12	FSAFIL	Numeric	Continuous	Weight
13	FSUN	Numeric	Continuous	None
14	FYWGT	Numeric	Continuous	None
15	GA	Numeric	Continuous	None
16	HHLDNA	Numeric	Continuous	None
17	MTHWGT	Numeric	Continuous	None
18	OTHERN	Numeric	Continuous	None
19	OTHGOV	Numeric	Continuous	None
20	OTHUN	Numeric	Nominal	None
21	RACETH	Numeric	Nominal	None
22	REL	Numeric	Nominal	None
23	SEX	Numeric	Continuous	None
24	SLFEMP	Numeric	Continuous	None
25	SOCSEC	Numeric	Continuous	None
26	SSI	Numeric	Nominal	None
27	STATE	Numeric	Continuous	None
28	UNEMP	Numeric	Continuous	None
29	VET	Numeric	Continuous	None
30	WAGES	Numeric	Continuous	None
31	WCOMP	Numeric	Continuous	None
32	YRSED	Numeric	Nominal	None

Attributes of QC96COMP.jmp

Rows	Name	Type	Measure	Role
1	AFDC	Numeric	Continuous	None
2	AGE	Numeric	Continuous	None
3	AGEGROUP	Character	Nominal	None
4	CSUPRT	Numeric	Continuous	None
5	CTZN	Numeric	Nominal	None
6	CTZNGRP	Character	Nominal	None
7	DEEM	Numeric	Continuous	None
8	DIS	Numeric	Nominal	None
9	EDLOAN	Numeric	Continuous	None
10	EMPRG	Numeric	Nominal	None
11	EMPST	Numeric	Nominal	None
12	FSAFIL	Numeric	Nominal	None
13	FSUN	Numeric	Continuous	None
14	FYWGT	Numeric	Continuous	Weight
15	GA	Numeric	Continuous	None
16	HILDNO	Numeric	Continuous	None
17	MTHWGT	Numeric	Continuous	None
18	OTHERN	Numeric	Continuous	None
19	OTHGOV	Numeric	Continuous	None
20	OTHUN	Numeric	Continuous	None
21	RACETH	Numeric	Nominal	None
22	RACE	Character	Nominal	None
23	REL	Numeric	Nominal	None
24	SEX	Character	Nominal	None
25	SLFEMP	Numeric	Continuous	None
26	SOCSEC	Numeric	Continuous	None
27	SSI	Numeric	Continuous	None
28	STATE	Numeric	Nominal	None
29	STATECD	Character	Nominal	None
30	UNEMP	Numeric	Continuous	None
31	VET	Numeric	Continuous	None
32	WAGES	Numeric	Continuous	None
33	WCOMP	Numeric	Continuous	None
34	YRSED	Numeric	Nominal	None

APPENDIX B



Double click on JMP icon to start program.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMH

Enter the name of the household common variables data set to be opened.

Table

Select Table from the menu.

Group/Summary

Select this option to create aggregated data.

STATE

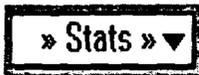
Highlight State in the list of variables on the left with a single click.



Click on Group to group data by state.

FYWGT

Highlight FYWGT in the list of variables on the left. You might need to scroll down the list of variables to find FYWGT. and then single click on the name.



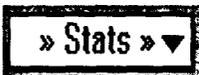
Click and hold mouse button on Stats to select the statistics to include.

Sum

Highlight Sum by moving down list while mouse button is still being held. Once Sum is highlighted, release mouse button to select.

FSBEN

Highlight FSBEN with a single click.



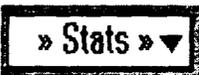
Click and hold mouse button on Stats to select the statistics to include.

Mean

Highlight Mean by moving down list while mouse button is still being held. Once Mean is highlighted, release mouse button to select.

FSGRINC

Highlight FSGRINC with a single click.



Click and hold mouse button on Stats to select the statistics to include.

Mean

Highlight Mean by moving down list while mouse button is still being held. Once Mean is highlighted, release mouse button to select.

FSNETINC

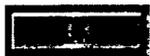
Highlight FSNETINC with a single click.



Click and hold mouse button on Stats to select the statistics to include.

Mean

Highlight Mean by moving down list while mouse button is still being held. Once Mean is highlighted, release mouse button to select.



Single click on OK to run the summary.

File

Select File from the menu.

Print

Select Print to print out the table of state-level data.

Edit

Select Edit from the menu.

Journal

Select Journal to append the results to your journal.



Close journal window.



Do not "Save changes to untitled journal."



Close the "By STATE" window.

QC96COMH.jmp By STATE

Rows	STATE	N Rows	Sum(FYWGT)	Mean(FSBEN)	Mean(FSGRINC)	Mean(FSNETINC)
1	1	1085	204196.4	186.5697	505.7204	275.5374
2	2	320	15763.12	283.5526	851.9629	548.1723
3	4	1187	158887.8	202.3837	494.0932	245.6327
4	5	1280	108867.3	167.9567	549.1519	326.4001
5	6	1160	1169084	187.3153	589.3339	335.7813
6	8	997	101394.1	174.8436	542.7021	258.0999
7	9	1007	99870.46	137.9604	598.724	333.0281
8	10	449	21421	187.6364	509.1529	246.0995
9	11	689	42351.08	168.8866	399.1458	214.6665
10	12	1168	590417.7	181.4172	500.5507	238.4013
11	13	1168	323119.7	179.3872	519.614	270.4612
12	15	1003	58538.87	273.978	591.1048	322.0546
13	16	736	30417.76	176.1815	575.6831	321.9804
14	17	1349	469571.5	173.1037	445.3053	224.8636
15	18	1039	154779.9	172.3195	539.1733	299.4802
16	19	1168	73586.21	154.4958	576.7285	317.9393
17	20	1197	71806.18	159.3391	561.6511	304.0284
18	21	1460	185980.9	166.9049	526.4501	331.7649
19	22	1199	256381.6	197.5656	487.3641	262.2926
20	23	920	60746.21	150.0606	562.8712	248.0051
21	24	973	164726.3	187.3081	442.7046	212.8351
22	25	1058	163281.6	150.0627	604.1665	304.7057
23	26	1191	409490	166.4368	523.9139	249.1655
24	27	950	127608.1	149.4522	586.4779	328.6255
25	28	1032	178667.2	167.7381	511.1116	300.3975
26	29	1238	233325.7	168.919	521.6743	283.136
27	30	530	28558.94	167.5372	591.9324	328.4383
28	31	843	42490.51	145.9323	608.204	357.0971
29	32	663	45849.16	167.5388	502.6925	244.9649
30	33	429	23388.77	134.7673	589.7773	365.3851
31	34	1168	233439.3	183.9532	480.5971	198.2728
32	35	1230	86585.66	181.4082	562.0254	338.9874
33	36	1002	984204.5	162.075	555.0991	224.0821
34	37	1023	265385.7	155.1098	553.2376	318.948
35	38	381	16436.5	162.2436	556.3144	264.8546
36	39	1212	459091.4	152.4421	513.2661	283.1111
37	40	1208	146897.4	168.2993	493.7392	271.602
38	41	914	134869	149.906	497.0917	263.6881
39	42	996	492578.9	163.2564	515.2314	249.8626
40	44	754	39219.8	161.4503	541.4111	276.6974
41	45	1131	139882.7	171.3382	517.4639	311.8872
42	46	390	18492.69	186.9348	533.6824	258.8096
43	47	1122	274033.2	156.6666	506.1105	284.6513
44	48	1270	884776.9	204.9196	487.862	263.494
45	49	741	41754.11	173.748	582.0187	323.5028
46	50	463	26033.8	137.5846	642.577	364.1821
47	51	1081	234756.4	160.7454	510.1035	278.4519
48	53	1102	206043.2	176.3215	531.3449	252.6483
49	54	1366	120789.5	162.7368	520.5239	307.1764
50	55	1812	105643.5	162.1424	660.3341	392.427
51	56	422	12714.91	184.3598	550.9631	291.9048
52	66	320	5628.484	377.8726	524.4985	225.5755
53	78	287	7830.247	333.8733	448.4871	260.9855

APPENDIX C



Double click on JMP icon to start program.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMH

Enter the name of the household common variables data set to be opened.

Table

Select Table from the menu.

Group/Summary

Select this option to create aggregated data.

FYWGT

Highlight FYWGT in the list of variables on the left. You might need to scroll down the list of variables to find FYWGT. and then single click on the name.



Click and hold mouse button on Stats to select the statistics to include.

Sum

Highlight Sum by moving down list while mouse button is still being held. Once Sum is highlighted, release mouse button to select.

FSBEN

Highlight FSBEN with a single click.



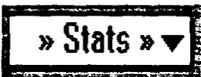
Click and hold mouse button on Stats to select the statistics to include.

Mean

Highlight Mean by moving down list while mouse button is still being held. Once Mean is highlighted, release mouse button to select.

FSGRINC

Highlight FSGRINC with a single click.



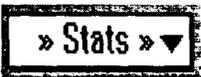
Click and hold mouse button on Stats to select the statistics to include.

Mean

Highlight Mean by moving down list while mouse button is still being held. Once Mean is highlighted, release mouse button to select.

FSNETINC

Highlight FSNETINC with a single click.



Click and hold mouse button on Stats to select the statistics to include.

Mean

Highlight Mean by moving down list while mouse button is still being held. Once Mean is highlighted, release mouse button to select.



Single click on OK to run the summary.

File

Select File from the menu.

Print

Select Print to print out the table of state-level data.



Close the "Untitled 1" window.

Untitled 1

Rows	Sum(FYWGT)	Mean(FSBEN)	Mean(FSGRINC)	Mean(FSNETINC)
1	10551656	174.4383	527.9212	275.476

APPENDIX D



Double click on JMP icon to start program.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMH

Enter the name of the household common variables data set to be opened.

Analysis

Select Analysis from the menu.

Distribution of Y

Select Distribution of Y to generation descriptive statistics.

FYWGT

Confirm the FYWGT is listed as the weight variable (as indicated by the label >>wt>>).

FSBEN

Highlight FSBEN in the list of all variables with a single click. You may need to scroll down to see this variable.



Click on add to include this variable in the analysis.

FSGRINC

Highlight FSGRINC in the list of all variables with a single click. You may need to scroll down to see this variable.



Click on add to include this variable in the analysis.

FSNETINC

Highlight FSNETINC in the list of all variables with a single click. You may need to scroll down to see this variable.



Click on add to include this variable in the analysis.

FSUSIZE

Highlight FSUSIZE in the list of all variables with a single click. You may need to scroll down to see this variable.



Click on add to include this variable in the analysis.



Single click on OK to run the descriptive statistics.

File

Select File from the menu.

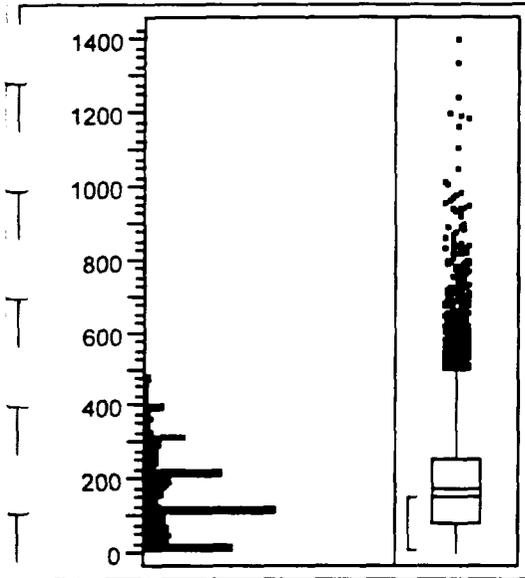
Print

Select Print to print out the table of state-level data.

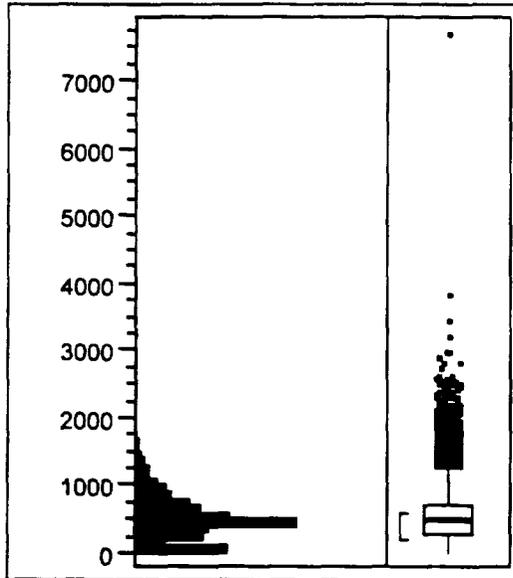


Close the "Untitled 1" window.

FSBEN



FSGRINC



Quantiles

maximum	100.0%	1408.0
	99.5%	608.0
	97.5%	467.0
	90.0%	344.0
quartile	75.0%	252.0
median	50.0%	153.0
quartile	25.0%	83.0
	10.0%	22.0
	2.5%	10.0
	0.5%	10.0
minimum	0.0%	1.0

Quantiles

maximum	100.0%	7743.0
	99.5%	1856.0
	97.5%	1434.0
	90.0%	1013.6
quartile	75.0%	708.0
median	50.0%	490.0
quartile	25.0%	305.0
	10.0%	0.0
	2.5%	0.0
	0.5%	0.0
minimum	0.0%	0.0

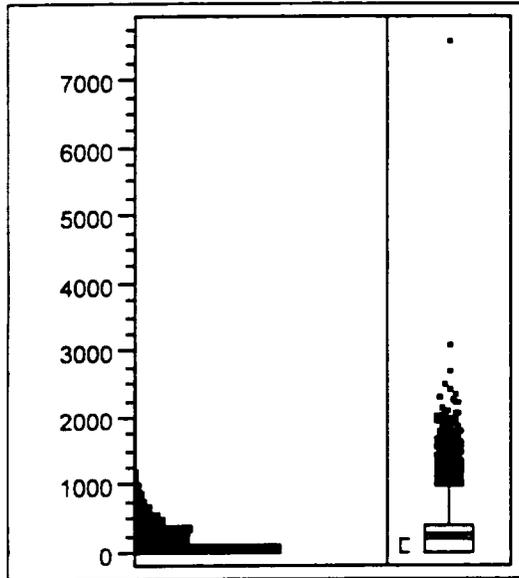
Moments

Mean	174
Std Dev	1716
Std Error Mean	1
Upper 95% Mean	175
Lower 95% Mean	173
N	50883
Sum Weights	10551656
Sum	8875942
Variance	2943163
Skewness	0
Kurtosis	-3
CV	983

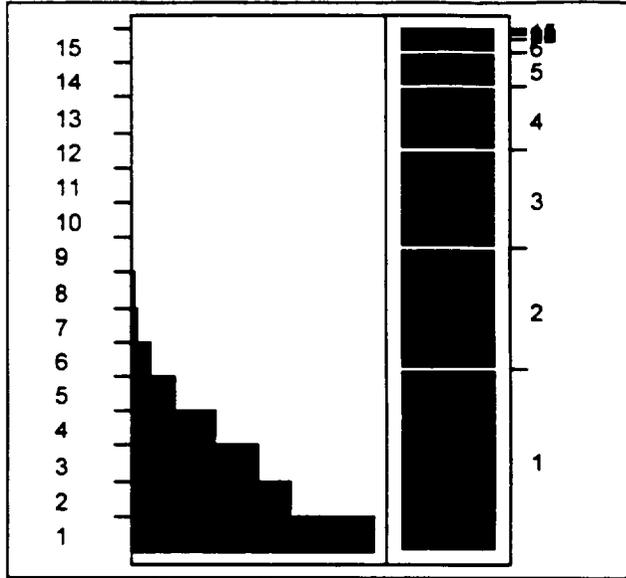
Moments

Mean	528
Std Dev	5194
Std Error Mean	2
Upper 95% Mean	531
Lower 95% Mean	525
N	50883
Sum Weights	10551656
Sum	26862217
Variance	26976998
Skewness	0
Kurtosis	-3
CV	984

FSNETINC



FSUSIZE



Quantiles

maximum	100.0%	7609.0
	99.5%	1448.6
	97.5%	1061.0
	90.0%	694.0
quartile	75.0%	424.0
median	50.0%	227.0
quartile	25.0%	20.0
	10.0%	0.0
	2.5%	0.0
	0.5%	0.0
minimum	0.0%	0.0

Frequencies

Level	Count	Probability	Cum Prob
1	17854	0.35088	0.35088
2	11863	0.23314	0.58403
3	9371	0.18417	0.76819
4	6262	0.12307	0.89126
5	3246	0.06379	0.95505
6	1397	0.02746	0.98251
7	499	0.00981	0.99232
8	220	0.00432	0.99664
9	87	0.00171	0.99835
10	43	0.00085	0.99919
11	20	0.00039	0.99959
12	10	0.00020	0.99978
13	5	0.00010	0.99988
14	3	0.00006	0.99994
15	3	0.00006	1.00000

Total 50883
15 Levels

Moments

Mean	275
Std Dev	4246
Std Error Mean	1
Upper 95% Mean	278
Lower 95% Mean	273
N	50883
Sum Weights	10551656
Sum	14017047
Variance	18026996
Skewness	0
Kurtosis	-3
CV	1541

APPENDIX E



Double click on JMP icon to start program.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMH

Enter the name of the household common variables data set to be opened.

D

Select Data from the menu.

Select

Select Select to choose specific rows.

Where...

Select Where... to conditionally specify rows.

FSNKID

Select FSNKID from list of variables. You might need to scroll down the list to find the correct variable.

equals

Confirm the operation states equals.

0

Enter a zero (0) in the space to the right of the equals.



Single click on OK to run the row selection operation.

Rows

Select Rows from the menu.

Exclude/Include

Select Exclude/Include to exclude the selected rows (ignore all household with no kids in the next analysis).

Analysis

Select Analysis from the menu.

Distribution of Y

Select Distribution of Y to generation descriptive statistics.

FYWGT

Confirm the FYWGT is listed as the weight variable (as indicated by the label >>wt>>).

FSBEN

Highlight FSBEN in the list of all variables with a single click. You may need to scroll down to see this variable.



Click on add to include this variable in the analysis.

FSGRINC

Highlight FSGRINC in the list of all variables with a single click. You may need to scroll down to see this variable.

FSNETINC

Highlight FSNETINC in the list of all variables with a single click. You may need to scroll down to see this variable.



Click on add to include this variable in the analysis.

FSUSIZE

Highlight FSUSIZE in the list of all variables with a single click. You may need to scroll down to see this variable.



Click on add to include this variable in the analysis.



Single click on OK to run the descriptive statistics.

File

Select File from the menu.

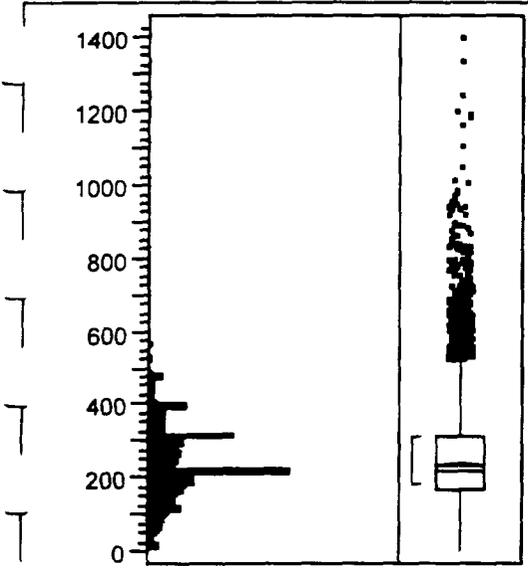
Print

Select Print to print out the table of state-level data.

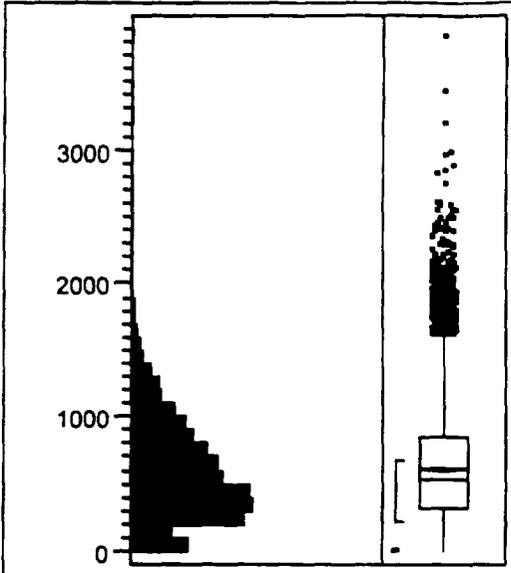


Close the "Untitled 1" window.

FSBEN



FSGRINC



Quantiles

maximum	100.0%	1408.0
	99.5%	663.0
	97.5%	500.3
	90.0%	397.0
quartile	75.0%	313.0
median	50.0%	218.0
quartile	25.0%	168.0
	10.0%	105.0
	2.5%	45.0
	0.5%	10.0
minimum	0.0%	1.0

Quantiles

maximum	100.0%	3867.0
	99.5%	1966.7
	97.5%	1576.0
	90.0%	1174.0
quartile	75.0%	854.0
median	50.0%	540.0
quartile	25.0%	326.0
	10.0%	198.0
	2.5%	0.0
	0.5%	0.0
minimum	0.0%	0.0

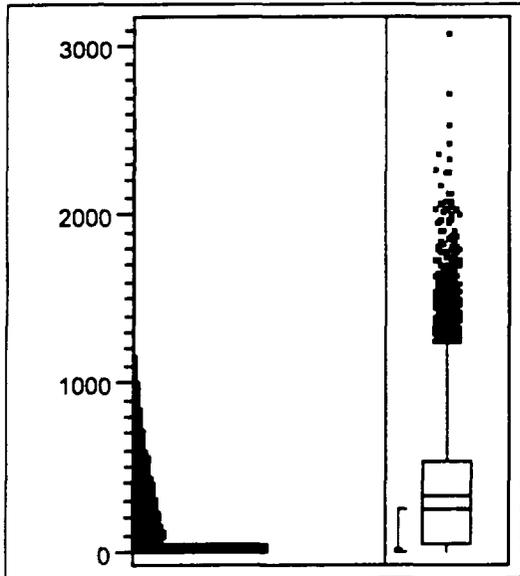
Moments

Mean	237
Std Dev	1587
Std Error Mean	1
Upper 95% Mean	238
Lower 95% Mean	236
N	30265
Sum Weights	6280049
Sum	7168618
Variance	2519055
Skewness	0
Kurtosis	-3
CV	670

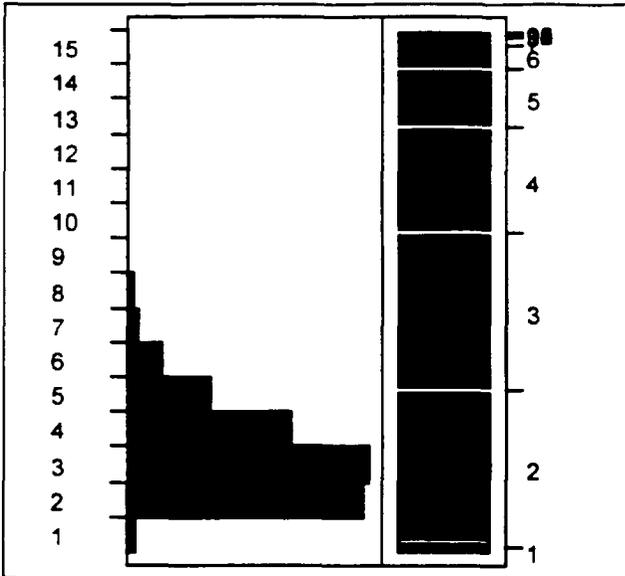
Moments

Mean	613
Std Dev	5687
Std Error Mean	2
Upper 95% Mean	618
Lower 95% Mean	609
N	30265
Sum Weights	6280049
Sum	18555794
Variance	32345568
Skewness	0
Kurtosis	-3
CV	928

FSNETINC



FSUSIZE



Quantiles

maximum	100.0%	3096.0
	99.5%	1564.0
	97.5%	1184.0
	90.0%	830.0
quartile	75.0%	535.5
median	50.0%	253.0
quartile	25.0%	57.0
	10.0%	0.0
	2.5%	0.0
	0.5%	0.0
minimum	0.0%	0.0

Frequencies

Level	Count	Probability	Cum Prob
1	377	0.01246	0.01246
2	9009	0.29767	0.31013
3	9125	0.30150	0.61163
4	6228	0.20578	0.81741
5	3242	0.10712	0.92453
6	1394	0.04606	0.97059
7	499	0.01649	0.98708
8	220	0.00727	0.99435
9	87	0.00287	0.99722
10	43	0.00142	0.99865
11	20	0.00066	0.99931
12	10	0.00033	0.99964
13	5	0.00017	0.99980
14	3	0.00010	0.99990
15	3	0.00010	1.00000

Total 30265

15 Levels

Moments

Mean	335
Std Dev	4803
Std Error Mean	2
Upper 95% Mean	339
Lower 95% Mean	331
N	30265
Sum Weights	6280049
Sum	10142263
Variance	23065678
Skewness	0
Kurtosis	-3
CV	1433

APPENDIX F



Double click on JMP icon to start program.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMP

Enter the name of the person-level common variables data set to be opened.

Table

Select Table from the menu.

Group/Summary

Select this option to create aggregated data.

SEX

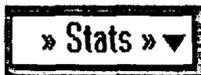
Highlight SEX in the list of variables on the left with a single click.



Click on Group to group data by SEX.

FYWGT

Highlight FYWGT in the list of variables on the left. You might need to scroll down the list of variables to find FYWGT. and then single click on the name.



Click and hold mouse button on Stats to select the statistics to include.

Sum

Highlight Sum by moving down list while mouse button is still being held. Once Sum is highlighted, release mouse button to select.



Single click on OK to run the summary.

File

Select File from the menu.

Print

Select Print to print out the table of state-level data.



Close the "Untitled 1" window.

Qc96comp.jmp By SEX

Rows	SEX	N Rows	Sum(FYWGT)
1	F	75221	15373000
2	M	51061	10549157
3	U	29	3558.091

APPENDIX G



Double click on JMP icon to start program.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMP

Enter the name of the person-level common variables data set to be opened.

Table

Select Table from the menu.

Group/Summary

Select this option to create aggregated data.

RACETH

Highlight RACETH in the list of variables on the left with a single click.



Click on Group to group data by RACETH.

FYWGT

Highlight FYWGT in the list of variables on the left. You might need to scroll down the list of variables to find FYWGT. and then single click on the name.



Click and hold mouse button on Stats to select the statistics to include.

Sum

Highlight Sum by moving down list while mouse button is still being held. Once Sum is highlighted, release mouse button to select.

AGE

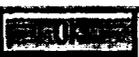
Highlight AGE in the list of variables on the left. You might need to scroll down the list of variables to find AGE. and then single click on the name.



Click and hold mouse button on Stats to select the statistics to include.

Mean

Highlight Sum by moving down list while mouse button is still being held. Once Sum is highlighted, release mouse button to select.



Single click on OK to run the summary.

File

Select File from the menu.

Print

Select Print to print out the table of state-level data.

QC96COMP.jmp By RACETH

Rows	RACETH	N Rows	Sum(FYWGT)	Mean(AGE)
1	?	1697	432860.5	20.93266
2	1	61327	10604032	25.72801
3	2	39342	8758586	21.54006
4	3	15311	5007150	19.97568
5	4	4876	767330.4	25.56707
6	5	3758	355755.8	20.59316

APPENDIX H



Double click on JMP icon to start program.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMH

Enter the name of the household common variables data set to be opened.

Rows

Select Rows from the menu.

Select

Select Select to choose specific rows.

Where...

Select Where... to conditionally specify rows.

FSNKID

Select FSNKID from list of variables. You might need to scroll down the list to find the correct variable.

is greater than

Change the equals to is greater than by using the drop menu (the upside down triangle)

0

Enter a zero (0) in the space to the right of the equals.



Single click on OK to run the row selection operation.

Tables

Select Tables from the menu.

Subset

Select the Subset option to make a new table with only the selected rows.

APPENDIX I



Double click on JMP icon to start program.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMH

Enter the name of the household common variables data set to be opened.

Rows

Select Rows from the menu.

Select

Select Select to choose specific rows.

Where...

Select Where... to conditionally specify rows.

FSNKID

Select FSNKID from list of variables. You might need to scroll down the list to find the correct variable.

is greater than

Change the equals to is greater than by using the drop menu (the upside down triangle)

0

Enter a zero (0) in the space to the right of the equals.



Single click on OK to run the row selection operation.

HHLDNO

Highlight the column HHLDNO. You might need to use the scroll bar at the bottom of the window to display the correct column. Once you have the HHLDNO column on the screen, single click on the word HHLDNO.

Tables

Select Tables from the menu.

Subset

Select the Subset option to make a new table with only the selected rows.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMP

Enter the name of the person-level common variables dataset to be opened.

Tables

Select Tables from the menu.

Join

Select Join to merge the two datasets.

UNTITLED 1 Select Untitled 1 which is the table created from the Subset function above.

by Matching Cols... Select Matching Cols to match the two data sets based on a common variable in each data set.

HHLDNA Select HHLDNA from the list of variables under Untitled 1.

HHLDNA Select HHLDNA from the list of variables under QC96COMP.jmp. You might need to use the scroll bar to the left of this box to display the correct variable.



Select Match to use the HHLDNA column from each data set to merge the two files. Match will only be available if you have selected a variable from each file.



Select Done to proceed to the next step.

Select Columns... Mark Select Columns... to choose which variables to include in the new data set.

FYWGT Select FYWGT under the QC96COMP.jmp box by single clicking on it. You might need to use the scroll bar to the left of the box to display this variable.

[Ctrl] Hold down the Control key on your keyboard. This allows you to select multiple items.

HHLDNA Select HHLDNA under the QC96COMP.jmp box by single clicking on it while continuing to hold down the Control key. You might need to use the scroll bar to the left of the box to display this variable.

SEX Select SEX under the QC96COMP.jmp box by single clicking on it while continuing to hold down the Control key. You might need to use the scroll bar to the left of the box to display this variable. After you have highlighted this third variable, you may release the Control key.

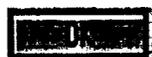


Choose select to add these three variables to the new data set.

HHLDNA Select HHLDNA under the Untitled 1 box by single clicking on it.



Choose select to add this variable to the new data set.



Select OK to include all these variables in the new data set.



Select Join to merge the two data sets.

Table

Select Table from the menu.

Group/Summary

Select this option to create aggregated data.

SEX

Highlight SEX in the list of variables on the left with a single click.



Click on Group to group data by SEX.

FYWGT

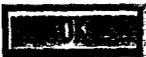
Highlight FYWGT in the list of variables on the left. You might need to scroll down the list of variables to find FYWGT. and then single click on the name.



Click and hold mouse button on Stats to select the statistics to include.

Sum

Highlight Sum by moving down list while mouse button is still being held. Once Sum is highlighted, release mouse button to select.



Single click on OK to run the summary.

Graph

Select Graph from the menu.

Bar/Pie Chart

Select Bar/Pie Chart to produce a graph.

Untitled 2 By SEX

Rows	SEX	N Rows	Sum(FYWGT:Qc96comp.jsp)
1	F	61194	12511403
2	M	40996	8430086
3	U	24	2283.843

Chart



SEX Levels Options

Sum(FYWGT:Qc96comp.jmp)

APPENDIX J



Double click on JMP icon to start program.

File

Select File from the menu.

Open

Select Open to open a JMP data set.

QC96COMH

Enter the name of the household common variables data set to be opened.

Cols

Select Cols from the menu.

New Columns

Select New Column to add a new column.

BENGR

Enter the name of the new column in the Column Name box.

Character

Change the Data Type box to Character by selecting it from the drop menu (after you click on Numeric you will see Character as one of the choices).

15

Change the Field Width box to 15 (by deleting the 8 and entering a 15).

Formula

Change the Data Source box to Formula by selecting it from the drop menu (after you click on No Formula you will see Formula as one of the choices).



Select OK to accept these changes.

Condition

Click on Condition in middle box at the top of the window.

If

Click on If in the right-hand box at the top of the window.



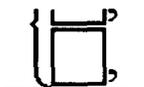
Click on the top, left, small box in the middle of the screen.

'0-50

Type '0-50. This will appear in the box beside HELP labeled . This quote insures that what you enter is accepted as a character field.

[Enter]

Press [Enter] to accept this value.



Click on the bottom, left, small box in the middle of the screen.

'51+

Type '51+. This will appear in the box beside HELP. This quote insures that what you enter is accepted as a character field.

[Enter]

Press [Enter] to accept this value.

if

Click on the box beside If in the middle of the screen.

FSBEN

Click on FSBEN in the left-hand box at the top of the window.

Comparison

Click on Comparison in the middle box at the top of the window.

$x \geq y$

Click on $x \geq y$ in the right-hand box at the top of the window.

\geq

Single click in new box beside \geq on the right-hand side of the middle of the window.

0

Type 0 as the value to be compared.

[Enter]

Press [Enter] to accept this value.

Condition

Click on Condition in the middle box at the top of the window.

And

Click on And in the right-hand box at the top of the window.

and

Single click in new box to the right of the and on the right-hand side of the middle of the window.

FSBEN

Click on FSBEN in the left-hand box at the top of the window.

Comparison

Click on Comparison in the middle box at the top of the window.

$x < y$

Click on $x < y$ in the right-hand box at the top of the window.

Single click in new box to the right of the $<$ on the right-hand side of the middle of the window.

51

Type 51 as the value to be compared.

[Enter]

Press [Enter] to accept this value.



Click on Evaluate to calculate the results of this equation.



Click on X to close the equation box.

Table

Select Table from the menu.

Group/Summary

Select this option to create aggregated data.

BENGR

Highlight BENGR in the list of variables on the left with a single click.



Click on Group to group data by BENGR.

FYWGT

Highlight FYWGT in the list of variables on the left. You might need to scroll down the list of variables to find FYWGT. and then single click on the name.



Click and hold mouse button on Stats to select the statistics to include.

Sum

Highlight Sum by moving down list while mouse button is still being held. Once Sum is highlighted, release mouse button to select.



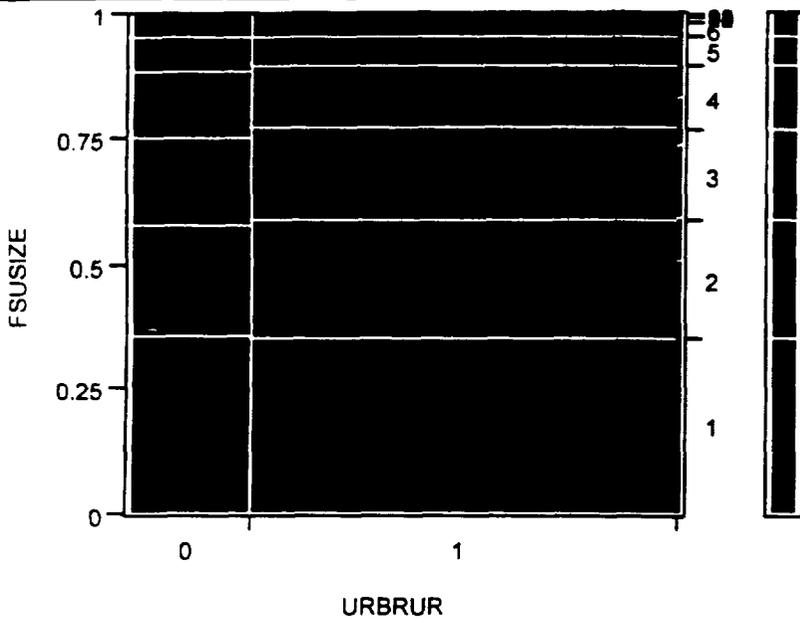
Single click on OK to run the summary.

QC96COMH.jmp By BENGGR.jmp

Rows	BENGR	N Rows	Sum(FYWGT)
1	0-50	8806	1640755
2	51+	42077	8910901

APPENDIX K

FSUSIZE By URBRUR



Crosstabs

URBRUR

Count	0	1	3	
Total %				
Row %				
Col %				
1	843335	2926470	3192	3772997
	7.99	27.73	0.03	35.76
	22.35	77.56	0.08	
	35.80	35.73	51.45	
2	524661	1929688	507	2454855
	4.97	18.29	0.00	23.27
	21.37	78.61	0.02	
	22.27	23.56	8.18	
3	412514	1513192	899	1926605
	3.91	14.34	0.01	18.26
	21.41	78.54	0.05	
	17.51	18.48	14.49	
4	310763	975558	568	1286889
	2.95	9.25	0.01	12.20
	24.15	75.81	0.04	
	13.19	11.91	9.15	
5	155950	497013	865	653828
	1.48	4.71	0.01	6.20
	23.85	76.02	0.13	
	6.62	6.07	13.94	
6	69760	203621	0	273380
	0.66	1.93	0.00	2.59
	25.52	74.48	0.00	
	2.96	2.49	0.00	
7	22721	85362	173	108256
	0.22	0.81	0.00	1.03
	20.99	78.85	0.16	
	0.96	1.04	2.79	
8	7755	38727	0	46482
	0.07	0.37	0.00	0.44
	16.68	83.32	0.00	
	0.33	0.47	0.00	
9	3707	13235	0	16942
	0.04	0.13	0.00	0.16
	21.88	78.12	0.00	
	0.16	0.16	0.00	
10	2182	4082	0	6263
	0.02	0.04	0.00	0.06
	34.83	65.17	0.00	
	0.09	0.05	0.00	
11	1318	1081	0	2399
	0.01	0.01	0.00	0.02
	54.92	45.08	0.00	
	0.06	0.01	0.00	
12	808	968	0	1777
	0.01	0.01	0.00	0.02

FSUSIZE

	45.49	34.51	0.00	
	0.03	0.01	0.00	
13	225	209	0	434
	0.00	0.00	0.00	0.00
	51.92	48.08	0.00	
	0.01	0.00	0.00	
14	84	43	0	127
	0.00	0.00	0.00	0.00
	65.86	34.14	0.00	
	0.00	0.00	0.00	
15	0	422	0	422
	0.00	0.00	0.00	0.00
	0.00	100.00	0.00	
	0.00	0.01	0.00	
	2355781	8189672	6203	1.055e7
	22.33	77.62	0.06	

Tests

Source	DF	-LogLikelihood	RSquare (U)
Model	28	6536	0.0004
Error	50841	17203545	
C Total	50869	17210081	
Total Count	...		

Test	ChiSquare	Prob>ChiSq
Likelihood Ratio	13072.16	0.0000
Pearson	13346.19	0.0000

APPENDIX L

Untitled 3

Rows	Sum(FYWGT:QC96COMP.jmp)
1	1042272

APPENDIX M

Untitled 3

Rows	Sum(FYWGT:QC96COMH.jsp)
1	1350692

APPENDIX N

Untitled 5

Rows	Sum(FYWGT:Untitled 1)
1	1817520