



# *PX-MAKE 2000*

## *user's guide*

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## **Preface**

*PX-MAKE is a tool to create input files to PC-AXIS in an easy way. This manual describes how to use PX-MAKE, version 2000.*

*PX-MAKE is developed by Statistics Denmark. Statistics Denmark also has the Copyright on PX-MAKE, but it can be used free of charge by anyone. Statistics Denmark will be happy to advise in the use of PX-MAKE and courses can be conducted but Statistics Denmark takes no responsibility for any inconveniences, which may occur due to the use.*

*The newest version can be downloaded from the web:*

*<http://www2.dst.dk/internet/axis/pcaxis/styr3.htm>*

*Comments regarding the program are welcome.*

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## A. INTRODUCTION TO PX-MAKE

PC-AXIS<sup>1</sup> is a well-known tool for the dissemination of statistics, which are organized as big cross-tabulated tables - also called cubes or matrices.

### PC-AXIS / PX-MAKE relation

The input to PC-AXIS is a file in the '*PX-format*'. Such a file contains both metadata and data. The metadata are structured according to a set of keywords<sup>2</sup>. Some of them are mandatory; others are optional. These so called '*PC-AXIS files*' can be created by PX-MAKE.

### PX-format

The PX-format is an open format, which means that PC-AXIS files can be created in other programs or databases as well. The minimum content of metadata and the structure of the file is shown below and in annex 1.

### Steps to create a PC- AXIS file

The creation of a PC-AXIS file can be divided into three major steps:

1. Definition of metadata (the basic structure of the table, variables etc.).
2. Inclusion of the statistical data,
3. Definition of other information (footnotes etc.).

ad 1. The creation of metadata for a new PC-AXIS file can be done:

- completely from scratch,
- with Excel as input,
- with another PC-AXIS file as input,
- with an ACCESS database as input

The result will be a PC-AXIS file without data. The process is described in Section B.1-B.3.

ad 2. Data can be entered in an existing PC-AXIS file with

- new values (for instance a new time period),
- new data

This further described in Section B.4.

ad 3. PX-MAKE 2000 supports the creation of notes at all levels as well as other meta-information like copyright, description etc. This is described in Section B.5-B.10.

### 1. How a file in the PX-format may look

The metadata in a PX-format file consists of keywords. They can all be created from PX-MAKE 2000. A file that is missing a mandatory keyword will not be accepted as complete, although you can save it and work on it again another day.

See annex 3 for a list and explanation of all keywords.

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<sup>1</sup> Developed and maintained by Statistics Sweden

<sup>2</sup> See Annex 3 for a description of all keywords.

Files with only *mandatory keywords* may look like this:

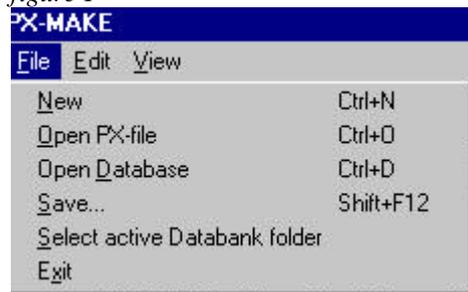
```
SUBJECT-AREA="Population in Denmark";
SUBJECT-CODE="PO";
MATRIX="BEF1ke";
TITLE="Population 1 January by sex, age, time and"
"region.";
CONTENTS="Population 1 January";
STUB="sex","age";
HEADING="time","region";
VALUES("sex")="Men","Women";
VALUES("age")="65-74 years","75 + years","Total";
VALUES("time")="1999","2000";
VALUES("region")="Denmark","Capital region","Copenhagen";
UNITS="number";
DECIMALS=0;
DATA=
191264 58737 12308 191166 58474 11925
136860 41946 11642 138039 42362 11219
2625421 870803 238783 2634122 876180 241715
223889 73386 17372 222133 72510 16485
238454 83649 28969 239064 83312 27996
2688156 915451 252299 2695898 920155 253984;
```

For the description of a more typical file containing also *optional keywords*, see *annex 1*.

## 2. Start PX-MAKE 2000

When PX-MAKE 2000 is started, the File menu displays the options: New, Open PX-File, Open Database, Save, Select active Databank folder and Exit (Figure 1).

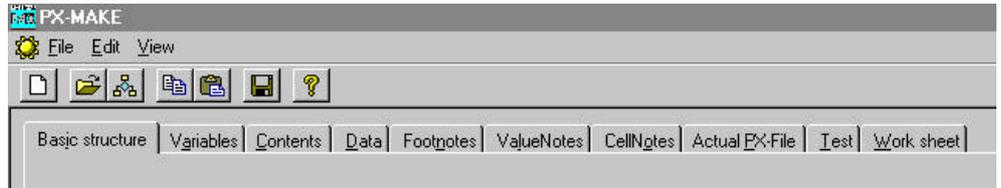
*figure 1*



Select File, New (or use the Toolbar), to start the creation of a new file. After a few seconds, the main window of PX-MAKE is shown (Figure 2).

The window contains 10 tabbed pages.

*figure 2*



A PC-AXIS file is created stepwise by opening these tabbed pages one by one and filling in the information. Only the first four pages are mandatory, although not all information on each page is mandatory.

### 3. Structuring of metadata

#### Consistence in the organization

It is always an advantage to keep consistence in the database (as well as between databases). It is therefore useful to plan the structure, terminology and coding in advance. Investigate whether a convention already exists within the organisation.

A first step is to have a list of all subject areas and connected subject codes. See an example in Figure 3.

figure 3



Try to avoid too much confusion for the users considering how to name the matrices in each subject area. A possible solution is to let the name begin with subject area code followed by some identifier, for instance PO001 for a matrix under Population.

#### Variables and values

You should be clear on what is a *variable* (the distribution dimension of the table, like sex) and what is a *value* (a value set is connected to the variable, like male and female connected to sex). This distinction is not always obvious if we look at hard copies of table prints, but essential when a database is to be built. There should be a convention within the organisation on how to name the variables with the use of a standard terminology.

Some guidelines for *variables* can be considered, for instance:

- The variable *time* could cover both year, quarter and month
- The variable *region* could cover all geographical levels
- Choose either *sex* or *gender*. Not a mix.

Similar guidelines can be given for the *variable values*:

- Choose *men/women* or *male/female* in all situations.
- It is better to use the variable name *age* for the age of persons instead of *year*.

It is important that the chosen convention of names for variables and values is known and accepted by all people that create PX-AXIS files.

## Default metadata

A file that contains such default data for different types of meta-data is associated with PX-MAKE. In this file you write the types of units used, standard variables, standard text for source etc. This file has to be created and managed by a database administrator who is responsible for the harmonization of the statistical information. In the menu bar under **V**iew you get access to create and edit the file. See figure 4 below. Annex 2 describes this file in detail.

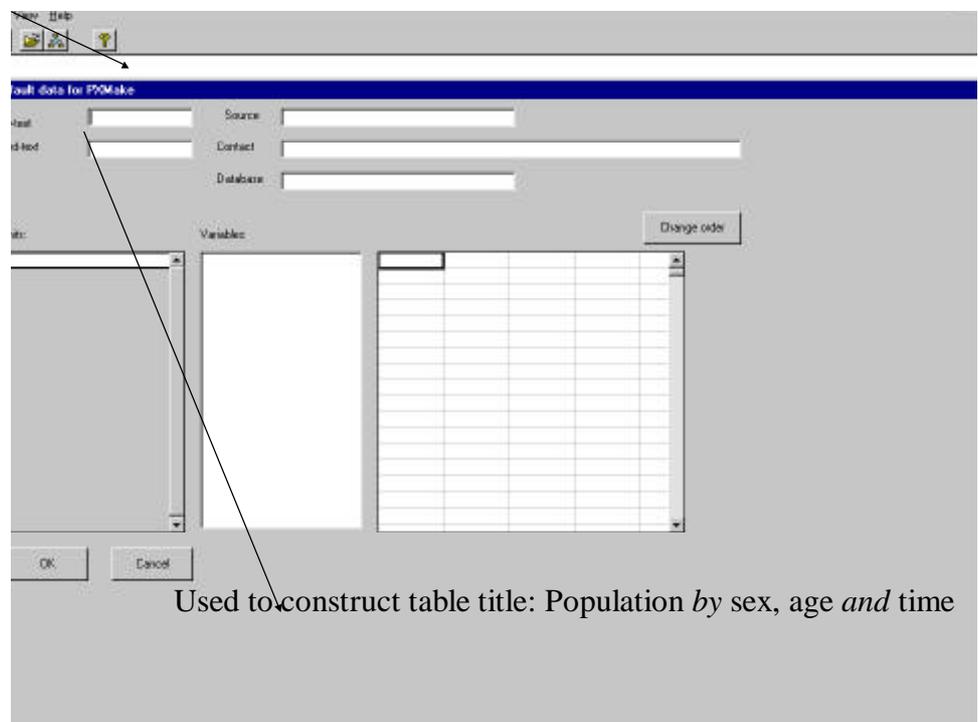


Figure 4

## B. THE TABS IN PX-MAKE

### 1. The Basic Structure Tab

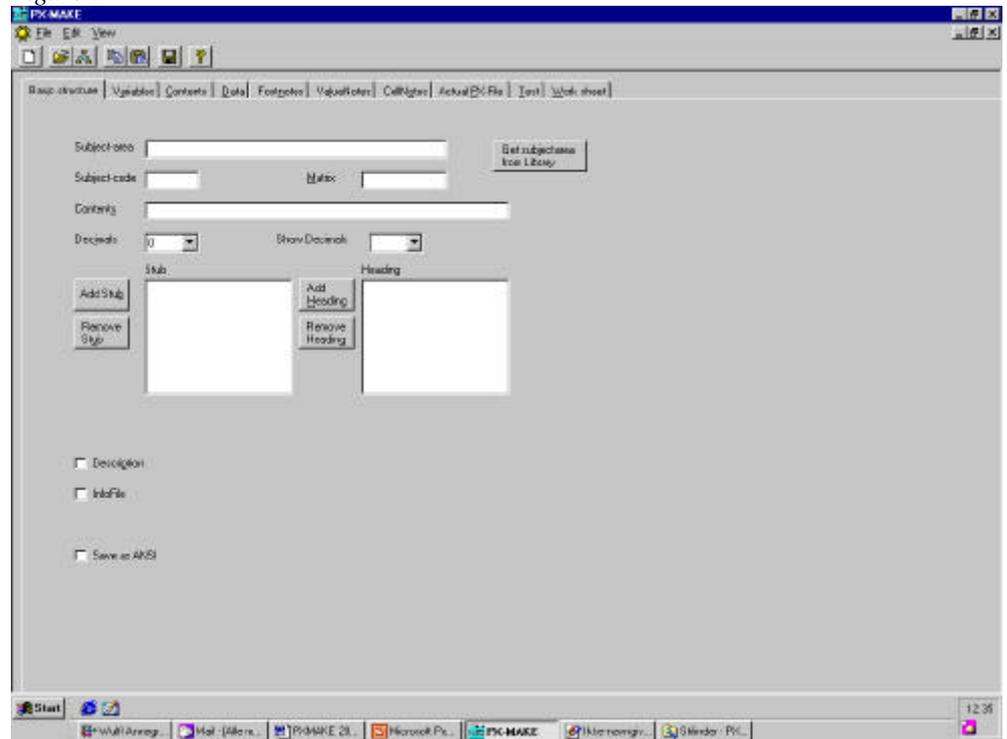
Open the PX-MAKE program. Then, select **F**ile, **N**ew in the menu bar and the Basic Structure tab opens.

The Basic Structure tab contains general metadata about the table to be created.

The upper part of the screen must always be filled in (Subject area, Subject-code, Matrix, Contents, Decimals,, Stub and Heading). These are mandatory key words (Figure 5).

The part below contains the optional keywords (Show decimals, Description, InfoFile, Save as ANSI). They do not need to be filled in.

Figure 5



**Subject area and subject code:**

Information on subject area and code must be filled in since it is used to structure the database when the PC-AXIS file is imported to a PC-AXIS Database. If the subject area (code) exists, the file will be placed under that subject area during the import. A new subject area will be created as part of the import if it does not exist.

You may fill in the subject area and code by typing the information. The button “Get subject area from Library” can be used to get a list of the subject areas defined in the current standard folder and to select one from that folder.

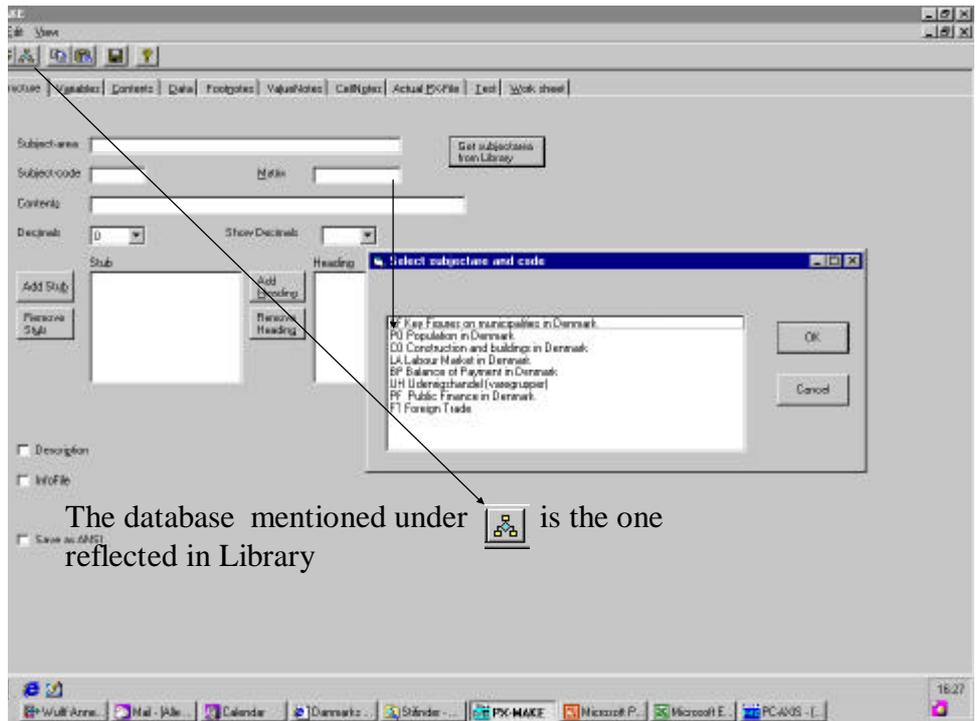


Figure 6

You may change directory from the menu, under View, Change Library. It gives you a standard Open dialog box, where you select the folder (Figure 6).

### Matrix

The name of the matrix can be from 1 to 8 characters. The matrix name will also be the suggested name of the new file.

### Contents

The text in 'Contents' will constitute the first part of the standard title of the table. This title is created as:

<contents> by <variablename1>, <variablename2> and <variablename3>...

Where the variable names are the names of the variables used for stub and heading

### Units

Select unit from a standard list of units in the default data file or enter it directly.

### Decimals

You can create a file where you store more decimals than you want to present. This influences the rounding off. Write the number of decimals stored respectively presented in the table.

See also precision on the variable tab, to see how to treat the situation where some values have a different number of decimals

### Stub and Heading

Stub and Heading are used to describe the dimensions of the table. There must be at least one variable in each dimension. The maximum number of variables is 16.

### Limits of table size

PX-MAKE 2000 has the same limits of the table size as PC-AXIS 2000. It is set by the memory of your PC. The process will however be very slow if

you exceed 65,000 columns and 65,000 rows. The number of rows is determined by multiplying the number of variable values (codes) associated with each stub variable and the number of columns equally using the heading variables. Be aware that in PC-AXIS you can limit the number of table cells presented on screen, but work on the full table anyway. This speeds up the manipulation.

Theoretical maximum number of variables: 16

Maximum number of values to a variable depends on the memory of your PC.

### Advice

Start to make a plan of which variables should go in the stub and which in the heading. Determine after this their order, before the table is constructed. PX-MAKE 2000 does not provide any means to change the order of the variables when it is defined. This can however be done after the import of the table to PC-AXIS.

### Add Stub / Heading

Pressing one of the buttons Add Stub or Add Heading causes a dialog box to appear. Variables can be taken from a number of sources (Figure 7).

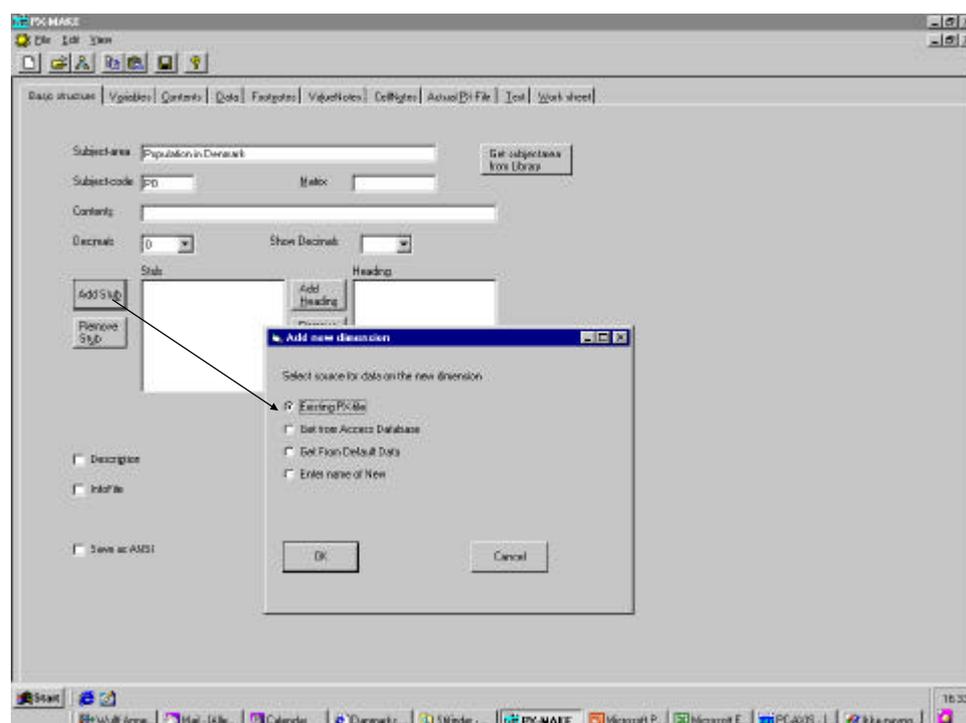


Figure 7

### Remove heading/stub

Use these buttons to remove a variable from the stub or heading if it has been misplaced.

### Description

If a description is given, it is used instead of the automatically created title (see Contents).

This alternative is optional.

### Infofile

The Infofile option is optional.

A table or a set of tables in a database may be accompanied by a document containing documentation and information useful for proper interpretation of the table(s). Such an infofile can be a simple text file written in Notepad, a Word document, an HTML-file, a PDF document etc. Be aware that users do not necessarily have the newest version of other software, for instance Word. It is therefore better to save the information in an older format, which can be read by all Word users.

In the keyword INFOFILE you write the name of the file *without* extension. You can include info-files in all the required formats as long you place them in the same directory/ folder as the PC-AXIS file they describe.

### Save as ANSI

PC-AXIS 2000 works on ANSI characters. This alternative (Save as ANSI) should therefore be ticked if the PX-MAKE created file is to be used with PC-AXIS version 2000. If it is not ticked, it will work on ASCII.

If you want to create a file to be used with an older PC-AXIS version, do not tick this option.

### 1.1 Re-use of variables

#### Select variables from an existing PX-file

A variable, which has been used in another PX-file, can be copied from that PX-file. The 'Re-use of variables' function can copy the name of the variables and all codes/values associated with that variable.

A standard open dialog box is shown from where the PX-file can be selected (default is from current directory /library). The relevant variable can then be chosen.

The variable can be selected for stub or heading regardless of its use in the original PX-file (Figure 8).

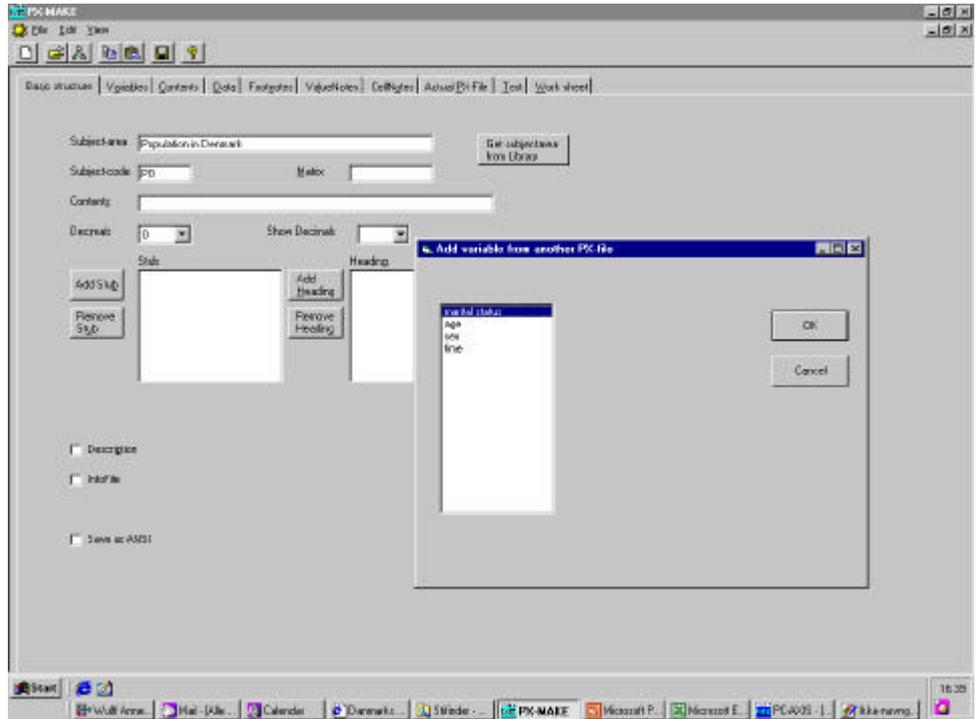


Figure 8

When one variable has been selected from a PX-file, an option to select more variables from that file is displayed in the first dialog box. This allows you to skip the open dialog box.

### Variables from an Access database

Code lists kept in a Microsoft Access database can be used as the base for the codes of a variable.

A code list is a table consisting of one row for each value a variable may have. It must have one column giving the label for the value and optionally one column giving the code. A code list normally only includes labels and codes associated with the elementary level, leaving out any hierarchy and totals. However, the code list may be edited after being imported.

*Proceed in the following way:*

1. Select the appropriate database in the standard open dialog box.
2. Select the name of the table in the database holding values and codes.
3. If the table contains codes, select the column containing the code; otherwise tick the checkbox to say that no codes are included.
4. Select the column containing the text /label/value.
5. Finally, give the variable a name.

### Variables from default data

Select the variable from the list of variables. Both the variable name and the associated codes/values are copied into the table.

### Enter variables from scratch

If none of the above sources are available, select this option and simply enter the name of the variable.

## 2. Values in the Variables Tab

Further information about each variable, which is selected for stub or heading is given in the Variable tab.

Each variable must have a value or a code list associated with at least one value or code. (Adding a code is optional).

The tree structure on the left side of the screen is used to select the variable for which data are currently shown.

### Code/value list

The code/value list is shown at the centre of the screen.

If the variable was taken from an existing source (PX-file, Acces or default data), then the list will be filled with the values obtained. It will otherwise be empty.

Values may be added to the list, removed from the list or the order may be changed. Code/Values are added by typing them into the blank lines at the bottom. The order is changed and values deleted by the push buttons to the right of the list (Figure9).

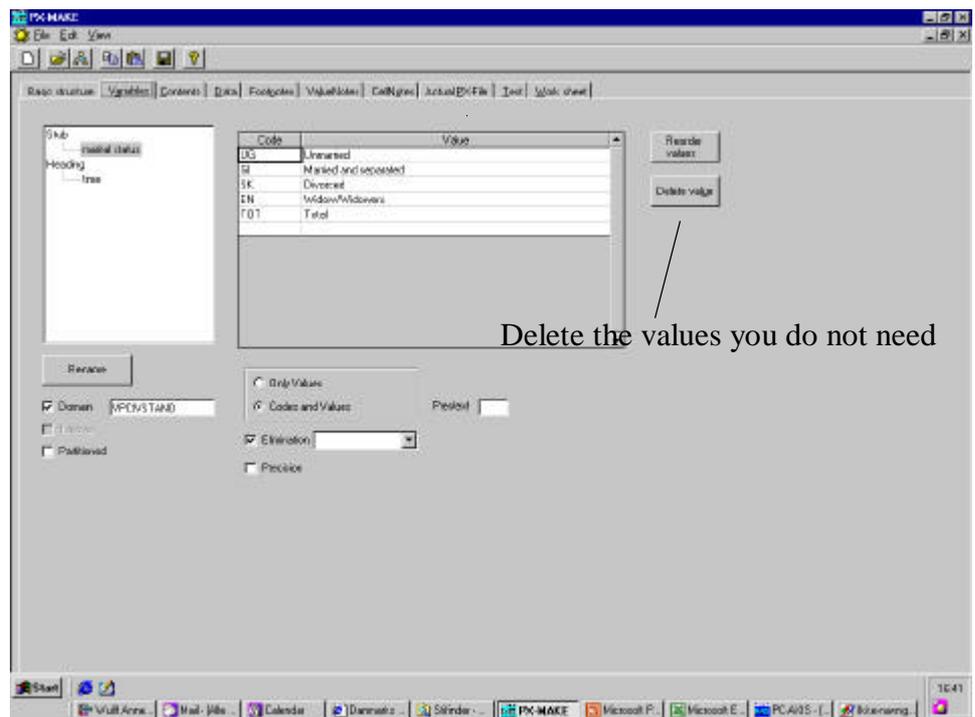


Figure 9

### Codes and values or values only

Use the options to select if the code/value list you are going to enter should contain both code and values or values (text) only. PC-AXIS supports both formats. For instance the value text Copenhagen or both Copenhagen and the code 101.

## 2.1 Copy and paste Codes and Values from an External Source

The standard windows clipboard (copy and paste) can be used if the codes and values are kept in an external file, which can be accessed in a tabular way, i.e. a spreadsheet (Lotus or Excel). (Figure 10).

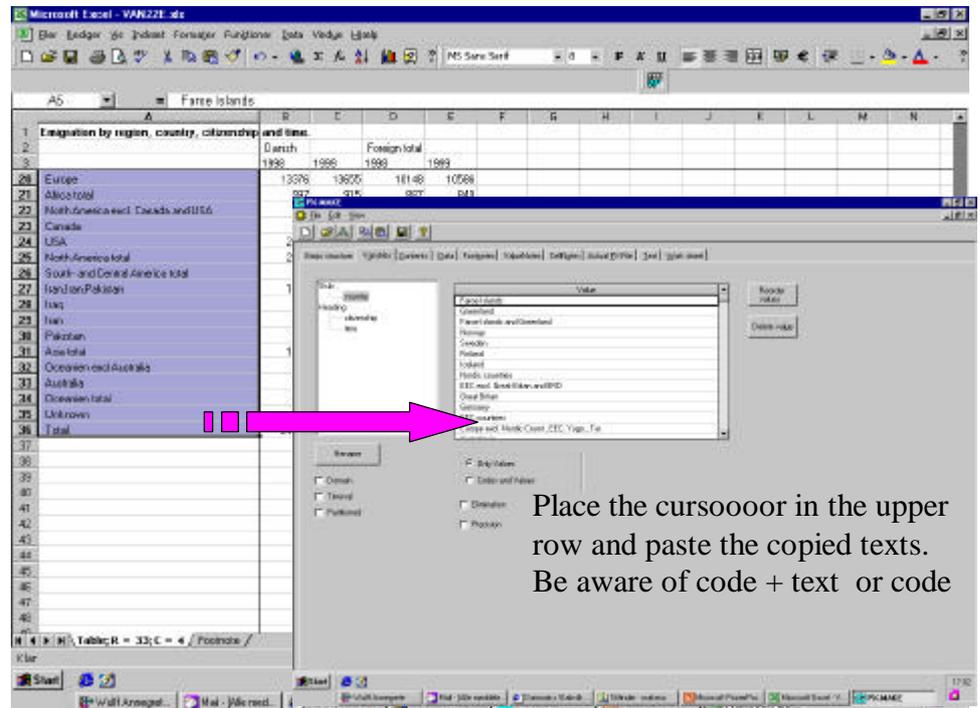


Figure 10

## 2.2 Values Entered Manually

If the list is not too long, and if there are no other alternatives, you can simply enter the values by hand. In this case you should be cautious with the spelling. Different use of abbreviations, capital letters etc. may cause the system to regard the values as different although being identical (Figure 11).

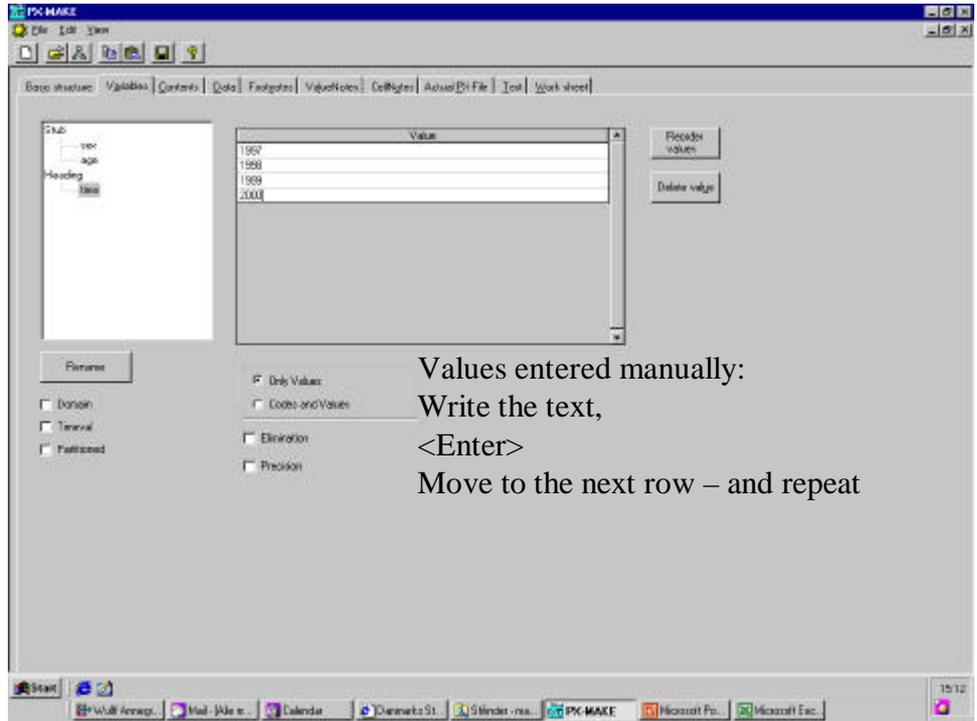


Figure 11

## Elimination

When a table is retrieved from PC-AXIS, there is an option to select among the variables and values to design the final output table.

The alternative '*Elimination*' determines if the end-user is allowed to skip a variable dimension completely or has to select at least one value from the code list.

PC-AXIS must be given a rule to handle the elimination if this is allowed. There are two basic options.

Elimination = YES. This instructs PC-AXIS to summarise all values along the dimension of the variable. If the variable sex has the values 'Male' and 'Female', then the elimination could be set to YES.

Elimination = ValueX, where ValueX is one of the values belonging to the variable. This instructs PC-AXIS to select the values associated with value taken from the code list when the variable is eliminated, i.e. if sex has three values 'Male', 'Female' and 'Total' then 'Elimination = Total' should be selected.

Notice that Elimination = YES is not transported to a file resulting from a PX-file. The reason is that some values might have been deselected. This means that a sum of all values might no longer be the same as in the original file. That is why PC-AXIS changes the file to Elimination = NO in these cases.

The variable *time* has normally no elimination value.

## Precision

PC-AXIS allows a table to hold information of different unit types.

One of the dimensions of the table is used to distinguish the different unit types. In the example in figure 12, the this dimension is called *subject*

	A	B
1	Key figures by subject and region.	
2		
3		Denmark
4	Inhabitants per km2 2000	123,7
5	Population per 1 January 2000	5330020
6	0-6 years, percent of population	9
7	7-16 years, percent of population	11,4
8	17-64 years, percent of population	64,7
9	65 years- , percent of population	14,8
10	Average unemployment in percent of labour force 1999	5,7

Figure 12

In such a case, it may be useful to have different precisions (number of decimals) for the different unit types, e.g. percentages with one decimal, number of persons without decimal etc.

The alternative '*Precision*' is used for this purpose.

Select the code/value in the code/value list and set precision for that code/value if it is different from *Decimals*.

Important!

The number of decimals reported under Precision can not be set *lower* than the number under Decimals, which refer to the table as such.

## Domain

PC-AXIS includes the feature to set up aggregation lists. Please, refer to the PC-AXIS manual for further information.

Some information has to be stored in the file in order to get the possibility to use aggregation *function*.

Aggregation lists can be defined in PC-AXIS, for instance to let the values 0, 1, 2, 3, 4, to be aggregated to '0-4 years'. The keyword DOMAIN determines the value set in the aggregation list.

Aggregation is a possible choice if the DOMAIN in the aggregation list corresponds to the domain in the PX-file and the name of the variable matches, too

Domain should be set to a value referring to that set of aggregation lists. In other cases, Domain has no effect.

## MAP

A keyword indicating the geographical variable I called MAP. It is needed to give the reference to the file containing the relation between the coordinates and the codes.

See figure 13a.

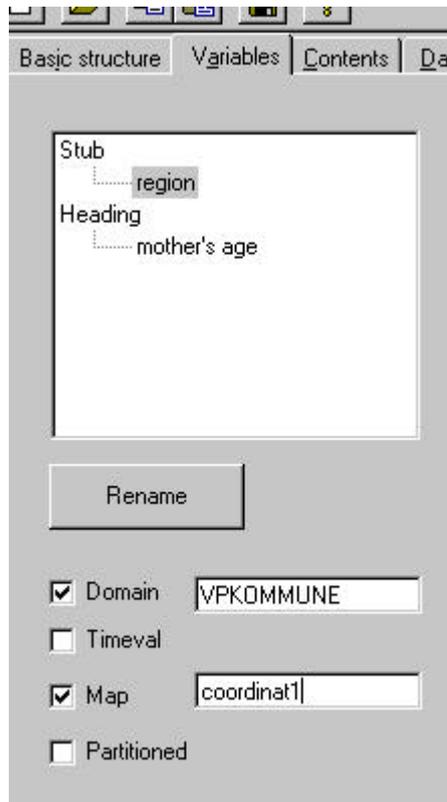


Figure 13a

In the file it might look like this example:

```
MAP("region")="coordinate1";
```

where coordinat1 is the name of the file containing coordinates/codes.

### 3. The Contents Tab

It is mandatory to write the content of your table. Examples could be *Employed 1 January* or *Car accidents* and will form the start of the title. It is written on the first tab, Basic Structure Tab see part B1 .

A table with several contents may also be constructed. The different contents may reflect different units. This is written in the Contents Tab. See figure13. The keyword is CONTVAR

# Contents

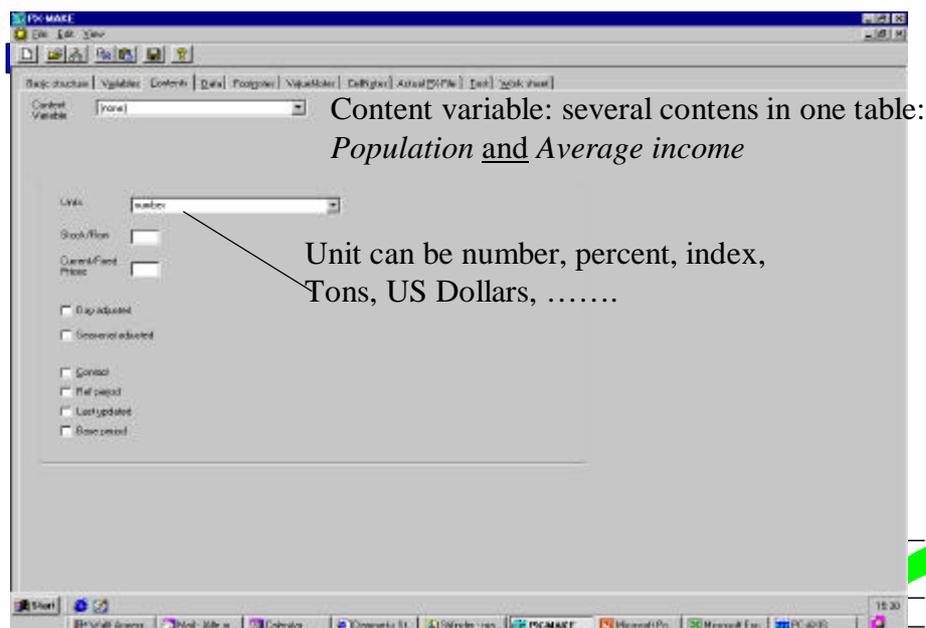


Figure 13

Other keywords can be ticked for stock, flow, seasonally adjusted etc. Check the annex 3 for more information on keywords.

## 4. Entering Figures in the Data Tab

DATA is the last keyword in the file, and it is followed by the figures (data) connected to the metadata. The "normal" case is that the number of data cells in a PC-AXIS file corresponds to the number of values in each variable multiplied by each other.

There are however exceptions. The keyword KEYS is used when not all data rows are included in the file. The values for the variables have in this case to be given in each row to identify the data. See annex 1 for a description.

**Delimiter  
decimals**

**and**

Numbers can be entered separated by a comma, a tabulator or a blank. Decimals must be indicated by *a decimal point*, not a comma.

**Missing value,  
not applicable**

**not**

As a general rule, the contents of the data cells must be numbers. There are two exceptions:.

- A single dot (.) denotes a value not included due to information not conclusive or omitted due to nondisclosure practice
- A double dot (..) denotes missing information or not applicable

These dots can of course be used according to the organisational standard.

All cells in the data area must be filled in, either with figures or with the special characters like dot and double dot. Entering a hyphen "-" will also be accepted, but PC-AXIS will convert this to 0.

The data for the table can be entered in the data tab when the table structure has been completed.

The data tab consists of a spreadsheet, in which the heading and stub are represented by one row/column for each variable in the heading/stub that contains the values from the code lists.

This allows you to verify the structure of the table. If the structure of the table is complete, data should be entered in the blank area of the table.

### Pasting data

Data may be entered cell by cell using the keyboard or data may be copied from a spreadsheet or other program holding tabular information and then pasted into the table. When pasting data into the data area, be aware, that the data copied to the clipboard fits into the area selected for pasting.

If you have selected a single cell, values from the clipboard will be pasted into as many columns and rows as needed with the selected cell as the leftmost top cell. If the number of columns or rows is too small, nothing will be pasted.

The contents of the clipboard should fit into that range if an area of cells is selected.

See also under Work sheet tab for further tips.

## 5. The Footnotes Tab

The *footnotes tab* is used for footnotes covering the whole table, while footnotes to a single cell, a value or a variable are given on the *cell note tab* respectively the *value note tab* as described there (See figure 14).

None of these fields needs to be filled in to create a valid PX-file, but using footnotes is a convenient way to give the users information needed for correct interpretation of the figures and other useful information.

PC-AXIS supports mandatory footnotes as well as optional footnotes. A mandatory footnote will be presented to the user each time a table is selected (or a subset from that table). Optional footnotes are presented on the users request.

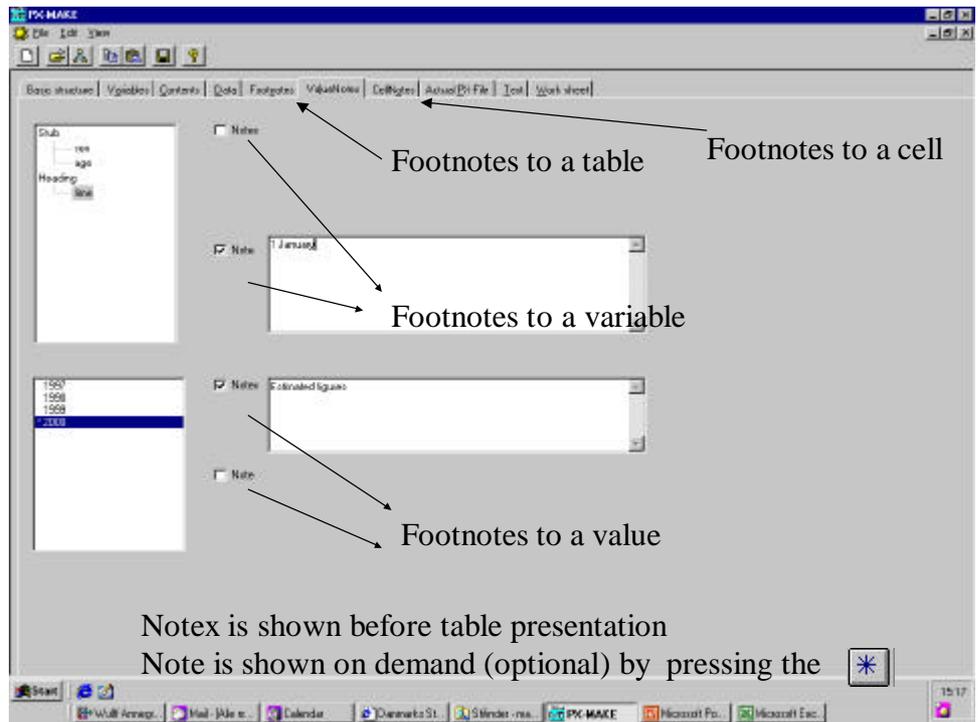


Figure 14

Text to the footnotes can be written in the open text area, or it can be copied from for instance a Word document.

Important: Footnotes should be restricted to shorter notes, while INFOFILE is the solution for more comprehensive documentation.

### Notex

Notex is used to include a mandatory footnote. A multi line text field is presented, where the note is written or copied to.

### Note

Note is used to include an optional footnote. A multi line text field is presented, where the note is written or copied to.

### Source

When Source is ticked, the file will contain information about the source. Default text for source is taken from the default data file, but may be overwritten. It is presented together with optional footnotes.

### Copyright

If the option Copyright is ticked, the word *copyright* will appear related to source in the optional footnotes.

### Contact

Information about a point of contact can be entered. Default text for *contact* is taken from the default data file, but may be overwritten.

It is presented together with the optional footnotes.

Consider carefully the use of contact. The name of a responsible person may be useful to the receiver, but can be outdated if the table will exist for a long period. A more generic contact address is more likely to be useful.

### Database

'Database' is used as a reference to a source database where applicable. It is presented together with optional footnotes. (Press the \* button in the tool bar when the table is on screen. See figure 14)

### **Ref. Period**

The references period for the table may be used to give a more precise date than given in the title/description, e.g. the exact date for a census rather than the year given in the description. It is presented together with the optional footnotes.

### **Last updated**

The latest date when the data in the table was updated;, whether revised or extended with new information. It is presented together with the optional footnotes.

### **Base period**

'Base period' is used if the table contains indexes to give the base period for your table (Year, month etc). It is presented together with the optional footnotes.

## **6. The Value Notes Tab**

Optional and mandatory footnotes can be associated with a variable or a specific value of a variable. These footnotes are presented to the user only when the user has selected the variable or value in the table.

Select the variable (alternatively a variable *and* a value) and tick whether it should be mandatory or optional and write the note.  
(See figure 13)

## **7. The CellNotes Tab**

Notes to a single data cell can be entered.

1. Identify the cell by selecting the variable and value for each.
2. Write the text connected to the cell, either in notex (mandatory) or Note (optional) se figure 15.

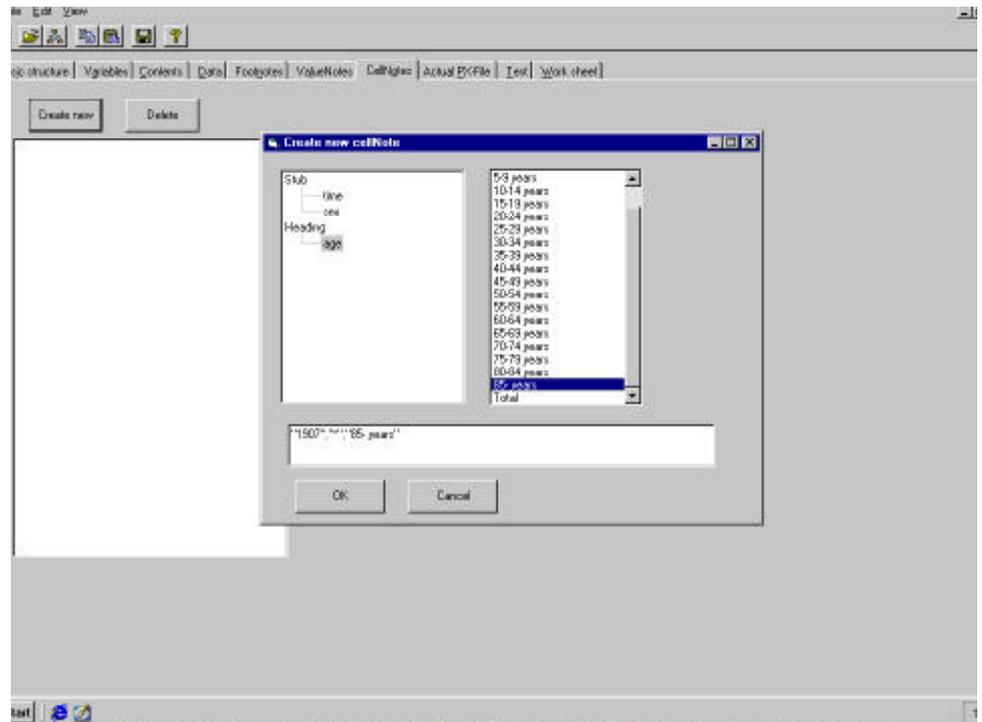


Figure 15

## 8. The Actual PX-file Tab

To check that the file looks as you expect, open the *Actual PX-file tab*. It will show the content in the PX-file format.

The actual file should be self-explanatory and may be used to check, that all options has been properly set.

## 9. The Test Tab

In the Test Tab one can check whether the creation of the PC-AXIS file has been successful or alternatively what is missing.

If the file is OK, and all data cells are filled in, it contains the message “*PX-file is complete*”.

## 10. The Work sheet Tab

The Work sheet tab is not in any way a part of the PX-file and the grid on this tab can be used for any purpose.

When copying and pasting data from other sources, the worksheet may be used as a temporary storage used to clean up data and arranging in proper format before pasting into to data tab or to a value/code list.

## Annex 1: A typical PX-file containing both mandatory and optional keywords

```
AXIS-VERSION="99";
CREATION-DATE="19960701 17:41";
SUBJECT-AREA="Population";
SUBJECT-CODE="BE";
MATRIX="BE0001";
TITLE="Population by marital status, sex, region and time.";
CONTENTS="Population";
UNITS="number of persons";
STUB="marital status","sex","region";
HEADING="time";
VALUES("marital
status")="married","unmarried","divorced","widows/widowers";
VALUES("sex")="male","female";
VALUES("region")="Sweden","Stockholm","Örebro";
VALUES("time")="1990","1991","1992";
TIMEVAL("time")=TLIST(A1),"1990","1991","1992";
CODES("marital status")="M","UM","D","W";
CODES("sex")="1","2";
CODES("region")="00","0180","1880";
DOMAIN("marital status")="Marital";
DOMAIN("sex")="Sex";
DOMAIN("region")="Region";
ELIMINATION("marital status")=YES;
ELIMINATION("sex")=YES;
ELIMINATION("region")="Sweden";
DECIMALS=0;
LAST-UPDATED="19950209 14:27";
STOCKFA="S";
DAYADJ=NO;
SEASADJ=NO;
SOURCE="SCB";
CONTACT="Ingrid Melin, Statistics Sweden, tel 019-17 65 96, fax 019-17
69 42, e-mail i.me"
"lin@scb.se";
COPYRIGHT=NO;
DATABASE="SDB";
REFPERIOD="Reference time is 31 december each year";
NOTE("marital status")="Marital status is dependant on the registration in"
"the census. Married persons living together are rendered as married."
"Other persons living together are regarded as single.";
VALUENOTE("region","Örebro")=
"Data for 1994-12-31 are rendered according to the classification of 1995-
01-01."
"#As from 1995-01-01 Lekebergs kommun has been excluded from Örebro
kommun.";
```

DATA=  
1710484 1697401 1682448  
110463 109303 108283  
etc

If the table is made up of two or more contents, the keyword for contents variable CONTVARIABLE is used and some information is indexed:

```
AXIS-VERSION="99";
CREATION-DATE="19990510 12:38";
SUBJECT-AREA="Trade";
SUBJECT-CODE="HA";
MATRIX="HA0201A8";
TITLE="Import and export by Trading partner, Commodity SITCrev3,
Time and Type.";
CONTENTS="Import and export";
UNITS="tkr";
STUB="Trading partner", "Commodity SITCrev3";
HEADING="Time", "Type";
CONTVARIABLE="Type";
VALUES("Trading partner")="total", "Denmark";
VALUES("Commodity SITCrev3")="7 machinery, apparatus and
transports";
VALUES("Time")="1997", "1998";
VALUES("Type")="Export, tkr", "Export, ton";
TIMEVAL("Time")=TLIST(A1), "1997", "1998";
CODES("Trading partner")="TOT", "DK";
CODES("Commodity SITCrev3")="7";
DOMAIN("Trading partner")="LandISO2Alfa";
DOMAIN("Commodity SITCrev3")="VarugruppSITCrev3";
DECIMALS=0;
SHOWDECIMALS=0;
LAST-UPDATED("Export, tkr")="19990319 18:12";
LAST-UPDATED("Export, ton")="19990319 18:12";
STOCKFA("Export, tkr")="F";
STOCKFA("Export, ton")="F";
UNITS("Export, tkr")="tkr";
UNITS("Export, ton")="ton";
SOURCE="Statistiska centralbyrån (SCB)";
CONTACT("Export, tkr")="Hans Jonsson, SCB#Tel: 08-783 46 25";
CONTACT("Export, ton")="Hans Jonsson, SCB#Tel: 08-783 46 25";
DATABASE="SDB";
INFOFILE="HA0201";
DATA=
300990070.783 2318315.775 331767545.855 2539331.071
10118934.528 86748.336 11768696.832 96724.303
```

The keyword KEYS is used when not all data rows are included in the file, instead the values for the variables are given in each row to identify the data. In this example the ages 0-6, 30-33 is extracted but there are no employed 0-6 years old:

```

AXIS-VERSION="2000";
CHARSET="ANSI";
CREATION-DATE="20000209 12:52";
SUBJECT-AREA="Population";
SUBJECT-CODE="PO";
MATRIX="POV0100";
TITLE="Population by county, municipality, sex, age and work status.";
CONTENTS="Population";
UNITS="numper of persons";
STUB="county","municipality","sex","age";
HEADING="work status";
VALUES("county")="Västmanland";
VALUES("municipality")="Västerås";
VALUES("sex")="Male","Female";
VALUES("age")="0 year","1 year","2 years","3 years","4 years","5
years","6 years","30 years","31 years",
"32 years","33 years";
VALUES("work status")="Employed","Not employed, A","Not employed,
B";
CODES("county")="19";
CODES("municipality")="1980";
CODES("sex")="1","2";
CODES("age")="0","1","2","3","4","5","6","30","31","32","33";
CODES("work status")="1","5","6";
DOMAIN("county")="Lan19970101";
DOMAIN("municipality")="Kommun19970101";
DOMAIN("sex")="kon";
DOMAIN("age")="alder296";
DOMAIN("work status")="sysstat96";
ELIMINATION("sex")=YES;
DECIMALS=0;
SHOWDECIMALS=0;
SOURCE="Statistics Sweden";
CONTACT="Britt-Marie Johansson, SCB....e";
COPYRIGHT=NO;
KEYS("county")=CODES;
KEYS("municipality")=CODES;
KEYS("sex")=CODES;
KEYS("age")=CODES;
DATA=
"19","1980","1","30",809 104 140
"19","1980","1","31",820 98 144
"19","1980","1","32",786 90 137
"19","1980","1","33",786 86 133
"19","1980","2","30",640 123 198
"19","1980","2","31",641 127 163
"19","1980","2","32",658 113 166
"19","1980","2","33",581 124 165;

```

## Annex 2: Default metadata file, an example.

The file pcapxm.txt

[Constants]

and=and

by=by

source=Statistics Denmark

contact=Databanks,Statistics Denmark,+45-39173150,dst@dst.dk

copyright=YES

dayadj=NO

seasadj=NO

[Varreg]

Var1=sex

Var2=time

Var3=age5

[Units]

U1=?

U2=number

U3=persons

U4=Tons

U5=Kilogram

U6=Euro

U7=1000 kr.

U8=US Dollar

U9=Units.

U10=1000 units

U11=Celsius

U12=Percent

[sex]

sex1=000,Total

sex2=M,Males

sex3=K,Females

sex4=3,Boys

sex5=4,Girls

[time]

time1=1998,1998

time2=1997,1997

time3=1996,1996

time4=1995,1995

time5=1994,1994

time6=1993,1993

time7=1992,1992

time8=1991,1991

time9=1990,1990

time10=1989,1989

time11=1988,1988

time12=1987,1987  
time13=1986,1986  
time14=1985,1985  
time15=1984,1984  
time16=1983,1983  
time17=1982,1982  
time18=1981,1981  
time19=1980,1980  
time20=1979,1979  
time21=1978,1978  
time22=1977,1977  
time23=1976,1976

[age5]

age51=0,0 - 4 years  
age52=1,5 - 9 years  
age53=2,10 - 14 years  
age54=3,15 - 19 years  
age55=4,20 - 24 years  
age56=5,25 - 29 years  
age57=6,30 - 34 years  
age58=7,35 - 39 years  
age59=8,40 - 44 years  
age510=9,45 - 49 years  
age511=10,50 - 54 years  
age512=11,55 - 59 years  
age513=12,60 - 64 years  
age514=13,65 - 69 years  
age515=14,70 - 74 years  
age516=15,75 - 79 years  
age517=16,80 - 84 years  
age518=17,85 - 89 years  
age519=18,90 - 94 years  
age520=19,95 - 99 years  
age521=20,100 - years  
age522=21,Total

## Annex 3 Keywords in PC-AXIS

Metadata in PC-AXIS files are structured according to keywords some mandatory others optional.

The description beneath is not of crucial importance if you create your file with PX-MAKE, as PX-MAKE automatically fills in quotation marks, commas etc.

Nevertheless it gives an idea of how a correct file should look like.

The PC-AXIS file can be written in a simple editor like Notepad or more sophisticated via programs like, SPSS, SAS, ....

### Mandatory keywords

The following mandatory keywords have either to be written on the same line as the keyword or on separate line surrounded by quotations marks.

**The text should not be written over several lines!**

#### MATRIX

The name of the matrix is also suggested as file name.

Max 8 characters.

#### SUBJECT-CODE

The matrices are grouped in subject areas. This is the code for the subject area.

Max 4 characters.

#### SUBJECT-AREA

The name of the subject area written in full text. In PC-AXIS 2000 this name will also be the name of the directory, where the belonging files are stored.

Max 80 characters.

#### CONTENTS

Information regarding the contents, for instance *Population 1 January*. The keyword is used by PC-AXIS for construction of the title.

Max 80 characters.

#### UNITS

A text describing the unit of the contents, for instance Percent, Tons, Number, US Dollars.

#### DECIMALS

The number of decimals stored in the table. 0 – 15 decimals. To be written without quotation marks. (Number of decimals on single values can be higher. This is marked in the keyword precision.)

The mandatory keywords mentioned below may be written over several lines. Every text line should start and end with quotations marks. The last text line in the keyword end with semicolon.

#### TITLE

Table title constructed from the contents and the variables in stub and heading. The title is constructed according to the selection of variables which are retrieved .

If the file contains the keyword DESCRIPTION this will be used for text in TITLE as well.

Max 98 characters in a line.

## DESCRIPTION

If the file contains the keyword, this will be used to present the table in the directory tree of the database.

## STUB and HEADING

At least one of the keywords STUB or HEADING are mandatory, usually both. The keywords are followed by the names of the variables surrounded by quotation marks and separated by comma

If the variables are written over several lines, they should be divided after a comma and not in the middle of the text.

Max number of variables 13.

Max length for each variable 75 characters.

## VALUES

The keyword appears once for each variable and is followed by the variable name surrounded by quotation marks and with in parentheses. The values are written as presented in each line of the stub. They are surrounded by quotation marks and separated by comma.

If the values are written over several lines, they should be divided after a comma and not in the middle of the text. (See also the keyword TIMEVAL)

Max length for each value 100 characters.

## DATA

The last keyword in the file is DATA, it is followed by the all cells belonging to the data.

## Order of keywords

STUB and HEADING should be written before VALUES.

DATA must be the last keyword in the file.

### Optional keywords

The following optional keywords have either to be written on the same line as the keyword or on separate line surrounded by quotations marks.

**The text should not be written over several lines!**

## CODES

Variables may have both text and a code.

Max length 75 characters.

## ELIMINATION

Elimination determines if the user is allowed to skip a variable dimension completely or has to select at least one value from the code list.

Elimination = YES. This instructs PC-AXIS to summarise all values along the dimension of the variable if the variable is eliminated, i.e. if the variable sex has the values 'Male' and 'Female', elimination could be set to YES.

Elimination = Value. This instructs PC-AXIS to select the values associated with value taken from the code list, when the variable is eliminated, i.e. if sex has three values 'Male', 'Female' and 'Total' then Elimination = Total should be selected.

Max length

## DOMAIN

For each variable a DOMAIN may exist. It should match the domain mentioned in the corresponding aggregation list.

Max 80 characters.

<b>MAP</b>	A keyword indicating the geographical variable I called MAP. It is needed to give the reference to the file containing the relation between the coordinates and the codes.
<b>CONTVAR</b>	A table with several contents may also be constructed. The different contents may reflect different units. For instance Population and Average income.
<b>PRECISION</b>	Precision is connected to single values to indicate a higher number of decimals than the one stated in the keyword DECIMALS. Is written in the form: PRECISION("variable name", "value name")=n, where n is a number between 0 end 6.
<b>PARTIONED</b>	Indicates that the variable has more levels, For instance: PARTIONED("region")="county",1; PARTIONED("region")="municipality",2,3;  The first position of the code for region gives the county code, while the last two state the municipality.
<b>Order of keywords</b>	The keywords mentioned above should be entered after STUB, HEADING and VALUES.
<b>AXIS-VERSION</b>	Version number. Max 80 characters.
<b>CHARSET</b>	Determines either ANSI or ASCII. Default is ANSI
<b>CREATION-DATE</b>	Date for creation of the file: CCYYMMDD, for instance "200000708".
<b>LAST-UPDATED</b>	Date and time for last updating of the file: CCYYMMDD hh:mm. For instance "19991122 15:45". The information is displayed together with footnotes. Used by the Aremos program.
<b>STOCKFA</b>	Indicated with "S" for stock, "F" for flow and "A" for average.
<b>CFPRICES</b>	Indicated with "C" for current prices, "F" for fixed prices.
<b>COPYRIGHT</b>	If COPYRIGHT=YES a reference is made to the organisation referred in SOURCE.
<b>DAYADJ</b>	DAYADJ=YES means data is adjusted according to number of workdays. Default is NO.
<b>SEAADJ</b>	SEAADJ=YES means data is seasonal adjusted. Default is NO.
	<b>The following keywords may be written over several lines, each line of a maximum of 100 characters.</b>
<b>TIMEVAL</b>	Is connected to the time variable. TLIST holds information on time scale and period. The time periode should be an unbroken sequence.

Alternative 1: TIMEVAL("time")=TLIST(A1,"1998"- "2000");  
 Alternative 2: TIMEVAL("time")=TLIST(A1, , "1998", "1999", "2000");  
 Different time scales can be presented in the same table:  
 Alternative 3: TIMEVAL("time")=TLIST(A1, "1999", "2000"), TLIST(M1, "199909"- "200006");  
 A1            annual CCYY  
 H1            half annual CCYYHH, where H is 1 or 2  
 Q1            quarterly CCYYQ, where Q is 1-4  
 M1            monthly CCYYMM, where MM is 01-12  
 W1            weekly CCYYWW, where WW is 01-52

TIMEVAL should be placed after the VALUES("time"), if this exists.

## DATABASE

Used as a reference to a source database where applicable. Presented together with optional footnotes.

## REFPERIOD

The references period for the table may be used to give a more precise date than what is given in the title/description, i.e. the exact date for a census rather than the year given in the description. Presented together with optional footnotes.

## BASEPERIOD

Used if the table contains indexes to give the base period for your table. (Year, month etc)  
 Presented together with optional footnotes

## INFOFILE

A documentation file can be connected to the table through the keyword INFOFILE.  
 In the keyword INFOFILE you write the name of the file *without* extension. You can include info-files in all the wanted formats as long you place them in the same directory/ folder as the file they describe and belong to.

## NOTEX

Mandatory table footnote displayed before the table is on screen. Is the note connected to a single variable only, the variable name should be written in parentheses after the keyword.

## NOTE

Table footnote displayed on demand from the user. Is the note connected to a single variable only, the variable name should be written in parentheses after the keyword.

## VALUENOTEX

Mandatory footnote connected to a single value.

## VALUENOTE

Footnote connected to a single value. Shown on demand from the user.

## CELLNOTE

Footnote connected to a single cell. If a variable is marked with \* the note is valid for all values in that variable.

Example:

CELLNOTE(\*,\*, "Hvidovre", "1974")="Municipality changes 1 April 1974 resulted in 7756 people were transferred from of Glostrup transferred to Hvidovre.";

## SHOWDECIMALS

Number of decimals that shall be presented.  
 Can be 0-6. Different from DECIMAL, giving the stored number (0-15)

### Keywords in future versions

#### DECIMALPOINT

Default is decimal point. Can be changed to comma: DECIMALPOINT=","

#### LANGUAGE

The language of the menu should change according to the information connected to the keyword LANGUAGE indicating the language in the actual PC-AXIS file. For instance *en* for English,

#### ITEMSEPARATOR

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