Statistiska centralbyrån
Statistics Sweden

Doris Carlström
Petros Likidis
Mikael Nordberg
Sven Tobrand

PM
2013

_____

Quality Information in the Nordic Data Model

This information relates to the data model version 2.3 and version 2013 of PX-Web.

Quality Information

Quality information describes the quality of the data in the database.

There are three different ways to give quality information:
1. Footnote - linked to all or part of a master table and also levels above the main table
2. NPM - linked to the data cell
3. Attribute - linked to the data cell

Furthermore, additional quality information exists in different places in the meta database e.g. information about the content is seasonally adjusted (Contents.SeasAdj).

1 - Footnote

Footnotes have been included in the data model from the start and has gradually evolved. Footnotes are meant to be used to explain the contents of a table, part of a table or a level above the table i.e. subject area.

The same note can be attached to various objects. In order not to block changes to the footnote, this should only be done within one statistical product.

A footnote may be of the following types:

Type	Included in version
1 = Footnote to Menu level 1	Previously own connection table
2 = Footnote to the content column	
3 = Footnote to variable + contents column	
4 = Footnote to value / time + contents column	
5 = Footnote to variable	
6 = Footnote to value	
7 = footnotes to the main table	2.0
8 = Footnote to attend Table	2.0
9 = Footnote to value / time + main table	2.1 (value) 2.3 (time)
A = Footnote to Menu level 2	2.0

B = Footnote to Menu level 3	2.0
C = Footnote to Menu level 4	2.0
V = Footnote to Deposit Amount	2.3
Q = Footnote to grouping	2.3

1, A, B, C are all related to the different levels in the table MenuSelection. If more levels are added to get the type D, E, etc.

Features:

MandOpt: Code of the footnote is classified as "optional" or "mandatory".

Options:
F = Optional
O = Required

ShowFootnote: Provides information about when the footnote is shown by different extraction applications, the selection of the content to the table, the table presentation, or both.

The options are:

B = Visible in both selection and presentation
P = Shown at the presentation
V = Appears in selection

Presentation of footnotes in PX-Web
Footnotes are displayed in the following order in PX-Web:
1. Mandatory footnotes at table level
2. Non mandatory footnotes at table level
3. Mandatory footnotes for variables
4. Non-mandatory footnotes for variables
5. Mandatory footnotes for values
6. Non-mandatory footnotes for values
7. Mandatory footnotes at cell level
8. Non-mandatory footnotes at cell level

If there are more than one footnote for the same object (e.g. a variable) and level they are displayed directly after each other in the footnote sort order.

Separate style sheets are used for mandatory and non-mandatory footnotes. This makes it possible to display mandatory footnotes in one color and non-mandatory footnotes in another color.

Footnotes are displayed in the presentation pages of PX-Web under the table or chart. In these pages only the footnotes of the actual selection made by the user is displayed.

Footnotes can also be displayed from the page where the user selects variables and values. On this page all the footnotes from the entire table is displayed.

Footnotes

crop
The specification of crops has changed during the years, which means that some crops does not exist for all years and some crops have been aggregated compared to the specification in the data collection. Triticale was introduced in 1993 but was in 1990-1992 included in Mixed grain and triticale. White mustard and Other oil seed crops, which during some years was collected as a separate crop, is for the whole period presented under the heading Other crops. Green fodder is for the years 1993-1995 aggregated to Temporary grass. Pasture and grass for hay or silage are aggregated for the whole period.

region
03 Uppsala county
Since 1 January 2007, Uppsala county has been expanded to include Heby municipality. Please note that the figures for the county are not comparable with earlier figures.
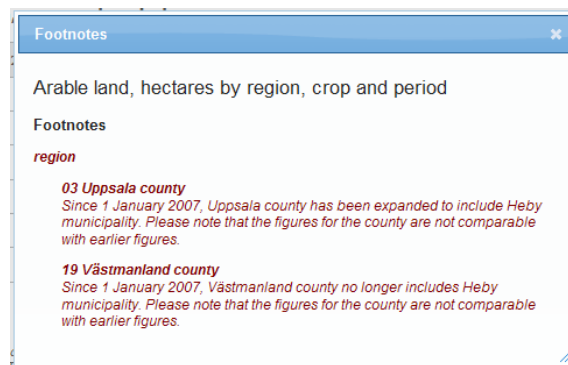
19 Västmanland county
Since 1 January 2007, Västmanland county no longer includes Heby municipality. Please note that the figures for the county are not comparable with earlier figures.

Example from PX-Web showing one non-mandatory footnote for the crop variable and two mandatory footnotes for values of the region variable

It is possible to configure which footnotes shall be displayed in PX-Web. These are the options:

- Display no footnotes
- Display only mandatory footnotes
- Display all footnotes

It is also possible to configure PX-Web to display a popup dialog showing all the mandatory footnotes when the user opens up one of the presentation pages (table or chart)
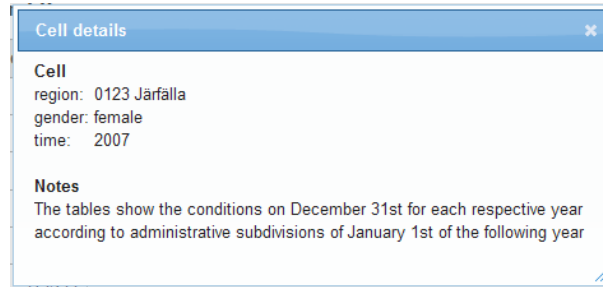
Footnotes   ✕

Arable land, hectares by region, crop and period

Footnotes

region

03 Uppsala county
Since 1 January 2007, Uppsala county has been expanded to include Heby municipality. Please note that the figures for the county are not comparable with earlier figures.

19 Västmanland county
Since 1 January 2007, Västmanland county no longer includes Heby municipality. Please note that the figures for the county are not comparable with earlier figures.

Popup dialog showing the mandatory footnotes of the table

On the table presentation page it is possible to configure display of footnotes at cell level. If this functionality is switched one all cells within the table that has one or more footnotes at cell level will be marked in the upper right corner of the cell and also be clickable:

	2006	2007
0123 Järfälla		
Male	30,841	31,463
Female	31,305	31,766
0125 Ekerö		
Male	12,117	12,293
Female	12,150	12,341
0126 Huddinge		
Male	44,694	45,564
Female	45,205	45,827

Table showing cells with footnotes at cell level

When one of the marked cells is clicked a popup dialog is displayed showing the footnotes at cell level for that cell:

Popup dialog showing footnotes at cell level for a clicked cell

2 – NPM

NPM is a way to assign a special character to each data cell. The character provides information about the cell's data. The characters are described in the table SpecialCharacter and when they are connected to cells in a data table, an additional column is added to the data table. The columns have the same name as the column they refer to with the suffix _X.

NPM is a combination of metadata and data - i.e. when data producers load tables that uses NPM, the correct values must be assigned to the columns that refer to the special characters.

If a main table use special characters it is marked by the flag SpecCharExists. The flag can have these values:

Y = Yes, special character columns exists and are used when data are presented
E = Yes, special character columns exists but they are not used when data are presented
N = No, special character column are not present

Properties on the special character table

PresCharacter: how the character is presented to the user when data are presented.

AggregPossible: if the data cell that is marked with a special character is possible to aggregate or not.

DataCellPres: with data and special characters or just with special characters.

DataCellFilled: Indicates whether the data cell must be filled in or not.

PresText: Explanation on what is in the PresCharacter.
(Used as a commentary on the character at the presentation. E.g. ".." indicates that the information is confidential).

Presentation of NPM in PX-Web

In PX-Web it is possible to configure which characters to use for each NPM value. These characters are displayed in the table when the table contains NPM values.

	2003			
	Inmigrated		**Outmigrated**	
	Men	**Women**	**Men**	**Women**
01 Stockholm county				
20	.	..	...	....
0115 Vallentuna				
20	17	20	22	30

Table showing NPM values

NPM values are not displayed in the charts, instead the value 0 is displayed.

3 - Eurostat Attributes

The attributes were added to comply with the requirements of Eurostat.

Attributes are linked to the main tables.

The attributes are handled in the tables Attributes and Attribut_eng (and other secondary languages). As for NPM the data tables will be affected by the addition of new columns. There are two possible ways to deal with the presence of several attributes that are connected to a main table. Either one attribute column for each attribute or to get a column dealing with multiple attributes separated by a colon.

The information contained in an attribute column refers to all the content in the main table. The column names are specified in the meta database.

Properties on the attributes

PresText: Presentation text used by the retrieval interface. PresText is needed because all attribute columns will not have a value set. In the value sets used for attributes the presentation text need not to be specified since it is not mandatory. However, it must always be specified for the attribute that has no value set.

StoreColumnNo: the location of the attribute in the data table. Column or location within the column depending on the method chosen to deal with the presence of more than one attribute linked to a main table.

ValueSet: Attaches a list of approved codes of attribute. Can be omitted e.g. for an attribute that contains a comment.

ColumnLength: maximum length of the attribute. The attribute has data type varchar.

Presentation of attributes in PX-Web

In PX-Web cells with attribute values defined are displayed with a marking in the upper right corner (in the same way that footnotes at cell level is displayed within the table). If another way of marking this cell is desired it is just a matter of changing the style sheet.
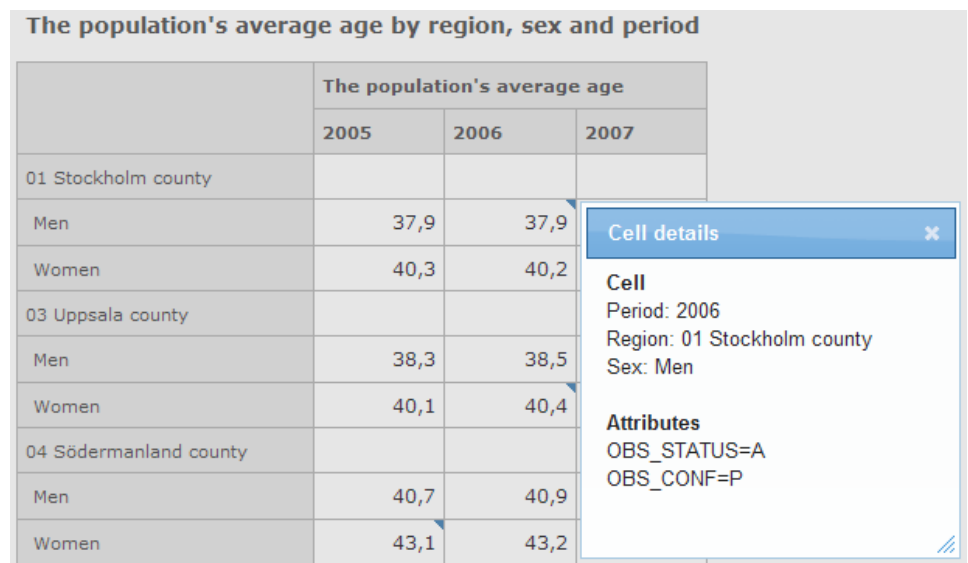
If default attribute values are defined for the table only the cells with at least one non-default attribute value are marked this way. This makes it easier for the user to identify which cells are different than the others.

The population's average age by region, sex and time

	The population's average age		
	2005	2006	2007
01 Stockholm county			
Men	37,9	37,9	37,8
Women	40,3	40,2	40,1
03 Uppsala county			
Men	38,3	38,5	38,6
Women	40,1	40,4	40,5
04 Södermanland county			
Men	40,7	40,9	41,0
Women	43,1	43,2	43,2

Table showing attributes at cell level

The marked cells are clickable. When clicked upon a popup dialog displays attribute information about that cell:

The population's average age by region, sex and period

	The population's average age		
	2005	2006	2007
01 Stockholm county			
Men	37,9	37,9	
Women	40,3	40,2	
03 Uppsala county			
Men	38,3	38,5	
Women	40,1	40,4	
04 Södermanland county			
Men	40,7	40,9	
Women	43,1	43,2	

Cell details ✕

Cell
Period: 2006
Region: 01 Stockholm county
Sex: Men

Attributes
OBS_STATUS=A
OBS_CONF=P

Popup dialog showing attribute values for the clicked cell

The Cell section of the popup dialog describes which cell was clicked.

The Attributes section of the popup dialog enumerates all the values of the attributes of the cell.

Display of default attribute values
As an option it is possible to configure PX-Web to display default attribute values. When configured this way the default attribute values will be displayed under the table:

The population's average age by region, sex and time

	The population's average age		
	2005	2006	2007
01 Stockholm county			
Men	37,9	37,9	37,8
Women	40,3	40,2	40,1
03 Uppsala county			
Men	38,3	38,5	38,6
Women	40,1	40,4	40,5
04 Södermanland county			
Men	40,7	40,9	41,0
Women	43,1	43,2	43,2

Default attribute values are:
OBS_STATUS = S
OBS_CONF = A

Default attribute values are displayed under the table