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2015-08-14

Svensson's method – **manual**

Content:

Version	Datum	Responsible	Activity
1.1.1	2006-10-24	Anders Avdic	First version
1.1.2	2010-01-26	Anders Avdic	Translation to English
1.2	2015-08-14	Anders Avdic	New host. Small bugs fixed

1 Reporting of problems

If you encounter any problems or errors when using the *Svensson's method* system, please report to anders@avdic.se
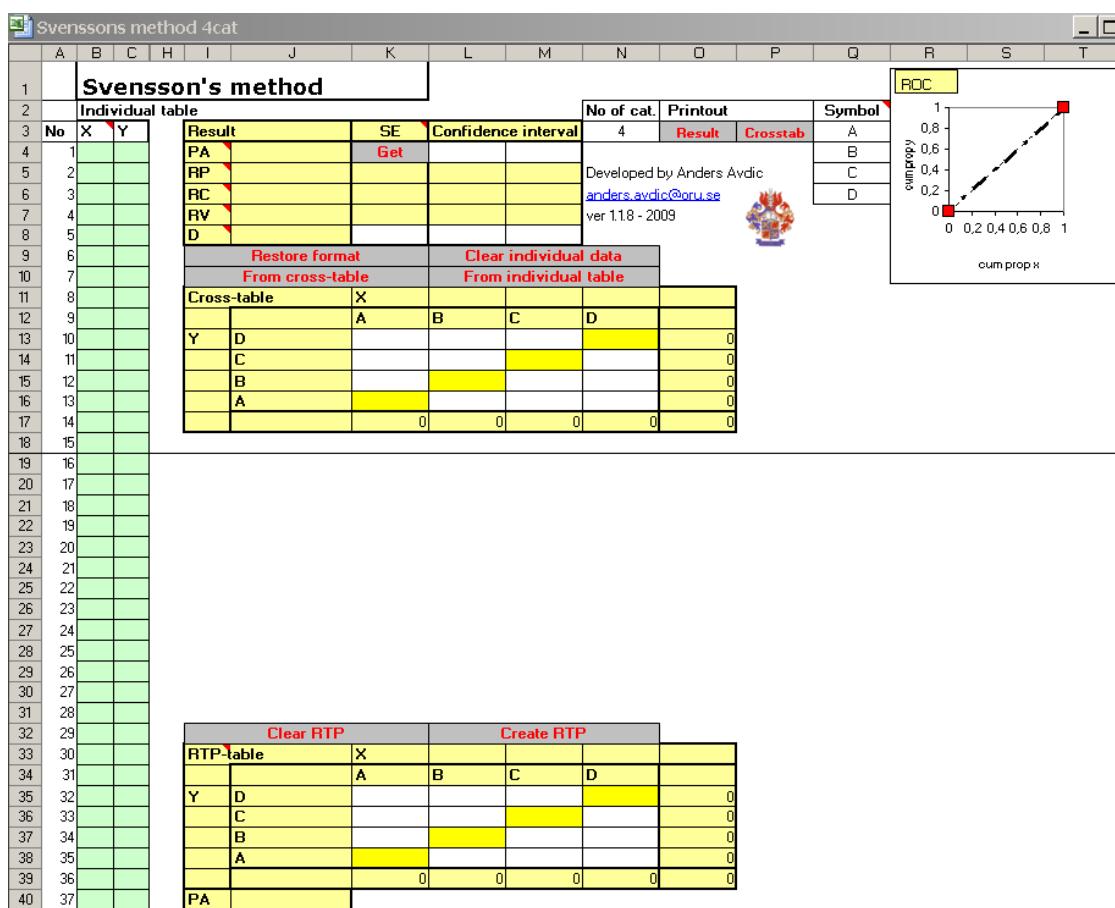

2 Before start of *Svensson's method*

A condition for using the system is that it is stored locally on the hard drive of the computer or on a server in the local network.

The system includes macro code written in MS-Excel. To execute the macro code the security level must be set to **Normal** (Office 2003).

To set the security level to **Normal** (Office 2003):
1. Start MS-**Excel**
2. Select **Tools/Macro/Security…**
3. Select **Medium** on the **Security level**-tab
4. Select **OK**
5. Close **Excel**
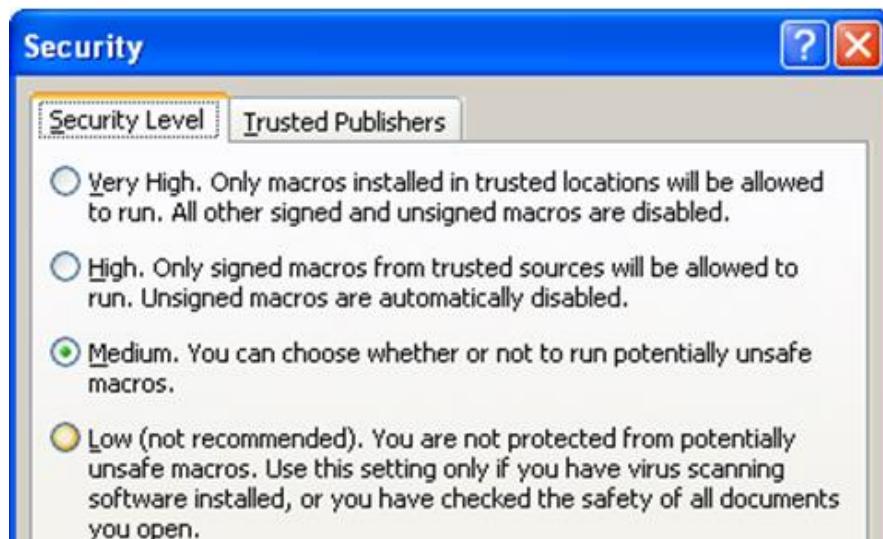
3 Select system

The *Svensson's method* system offers three alternative inputs (to cross-tables); **4cat**, **6cat** and **11cat**. **4cat** is suitable for data having at most four response categories, correspondingly **6cat** for at most 6 categories and **11cat** for at most 11 categories.

An example: If the data material includes eight response categories (A-H) enter the data in the **11cat**-system.

4 To download the system from Internet

The system can be downloaded from the following web page:
 http://www.oru.se/hh/Elisabeth-Svensson/Svenssons_metod

Select one of the systems (4 categories, 6 categories, 11 categories)

Freeware
Manual Svenssons metod
Svenssons metod
4 kategorier
6 kategorier
11 kategorier

Select **Save** when the following box is displayed. (Save the file somewhere appropriate)
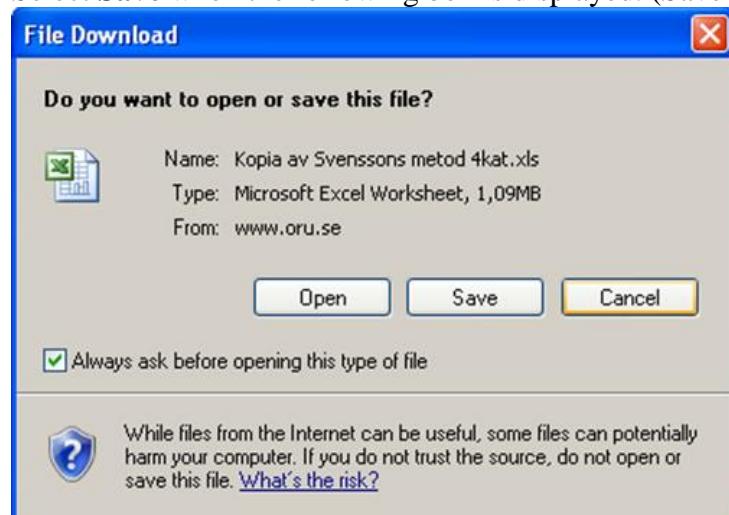
When the file is saved, open it from Excel.

Select **Enable Macros** when the following dialog box is displayed:

Now the system is ready for data entry.

5 Change symbols

Symbol	Symbol	Symbol
A	1	W
B	2	X
C	3	Y
D	4	Z

Sets of symbols are selected by entering the preferred set of symbols in the symbol range.

6 Entering data

Data can be entered in two ways, as **individual data** or as **cross-table data**.

6.1 Choosing codes

First you should choose codes for your categories. The system suggests A, B, C, etc as codes for the categories. Change this pre-specified codes to the codes used in your data (see section **Change symbols** above) if necessary.

6.2 Entering individual data

Entering data as individual data means that data is entered in the gray range in column B and C to the left of the worksheet. This area is not protected.

To enter individual data:
1. Click the **From individual table**-button From individual table
    (means that formulas will be inserted in the cross-table)
2. Copy or enter data manually to the **Individual table** range, starting row 4, column B.
    (Means that worksheet formulas calculate inserted data. Result is presented in the cross-table)

Svensson's method

Individual table

No	X	Y
1	A	A
2	A	A
3	A	B
4	B	B
5	B	B
6	B	A
7	B	A
8	C	B
9	C	B
10	C	B
11	C	C
12	D	C
13	D	C
14	D	C
15	D	D

Result		SE	Confidence interval	
PA	40%	Get		
RP	-0,2444	0,0924	-0,4256	-0,0633
RC	0,213	0,176	-0,13	0,56
RV	0,0107	0,0136	0,0000	0,0374
D	0,0208			

Restore format	Clear individual
From cross-table	From individual

Cross-table		X		
		A	B	C
Y	D			
	C			1
	B	1	2	3
	A	2	2	
		3	4	4

If the **Individual table** range has old data, it should be cleared.

To clear the Individual data range:

1. Click **Clear individual data** | Clear individual data

If problems appear while entering data, the reason could be that the original format of the Individual table has been changed. This could e.g. happen if data is pasted from a data source with a different format.

To restore the original format of the **Individual table**:

1. Click the **Restore format**-button | Restore format
   (This means adjustment of row height, cell protection, and colours. It is not affecting the content, neither in the individual table nor in the cross-table.)

6.3 Entering cross-table data

When the data set is the paired frequency distribution in a cross-table, data can be inserted directly into the cross-table (starting on row 11).

To enter data directly into the cross-table:

1. Click the **From cross-table**-button | From cross-table
2. Enter manually or copy cross-table data into the cross-table.

If the original format is changed:

3. Click **Restore format**-button | Restore format

7 Result - output

When data is entered results can be found in four places in the work sheet.

- In the **Cross-table**
- In the **Result** range above the cross-table
- As **ROC**-curve

- As **RTP**

7.1 Cross-table

The **Cross-table** shows the frequency distribution of pairs and the two sets of marginal frequencies.

7.2 Result

	I	J	K	L	M

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le

Result		SE	Confidence interval	
PA	40%	Get		
RP	-0,2444	0,0924	-0,4256	-0,0633
RC	0,213	0,176	-0,13	0,56
RV	0,0107	0,0136	0,0000	0,0374
D	0,0208			

Result in column J, contains the following measures:
- Percentage Agreement (PA)
- Relative Position[1] (RP)
- Relative Concentration[2] (RC)
- Relative rank Variance[3] (RV)
- Measure of Disorder[4] (D)

These measures are calculated continuously.

Column K contains measures for Standard Error[5] (SE). These measures are calculated when the user has clicked the **Get**-button.

To calculate **SE** for RP, RC and RV:
1. Enter data

2. Click the **Get**-button in cell K4

SE
Get

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[1] Systematic change of position on the scale of assessments.
[2] Systematic change of how the assessments are concentrated on categories of the scale.
[3] Individual variability.
[4] Proportion of unordered pairs of the possible number of different pair combinations.
[5] Error marginal.

7.3 ROC-curve
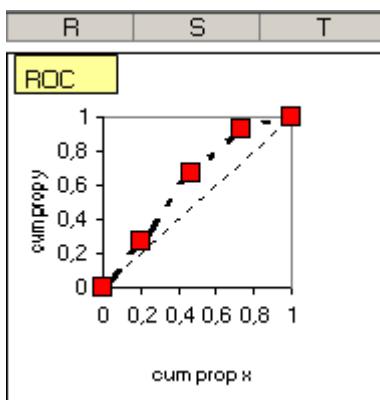
Two ROC-curves are available. One is located in the worksheet with the cross-table and the Result section. The other curve is to be found in a separate worksheet, Tab: ROC.

To copy a **ROC**-curve:
1. Insert data (see above)
2. Select the **ROC**-tab
3. Select **Edit/Copy** (Ctrl+c)
4. Activate the document where the ROC- curve is to be copied to
5. Select **Edit/Paste** (Ctrl+v)

7.4 RTP

Rank Transformable Pattern is the unique pattern (distribution of pairs) that is decided by the marginal distribution and that shows the expected pattern if everything had a systematic explanation.

The RTP-table is calculated from the content of the Cross-table at the moment of the calculation of the RTP. When the content of the Cross-table is changed, the RTP-table is not changed automatically. The user must click the **Create RTP**-button again.

To calculate RTP:
Click the Create RTP- button
Note: This can take some time!

To clear RTP-data:
Click the Clear RTP-button

7.5 Printouts

The following three printouts can be made:
- Result
- Cross-table
- ROC-chart

To print **Result:**

- Click **Result** (cell N3) under the **Print**-heading

To print **Cross-table:**

- Click **Cross-table** (cell O3) under the **Print**-heading

To print ROC- curve:

1. Select tab (4/6/11) ROC
2. Select **File/Print…**