Chi-square Test for Cross-tabs*

Methodology

The data generated for this assignment has been taken from an earlier survey** on detergents (Surf). In this report, we have attempted to inter-relate two demographic details of our respondents, which formed a part of our survey. The basic objective of this assignment is to find out whether or not, the income of the household plays a determining factor in deciding the person responsible for washing clothes, that is, whether the clothes are washed by:

- themselves
- maids
- any other (e.g.: a combination of the above, launderettes etc.)

The following steps were followed while formulating this report:

- The data for the assignment was collected as stated above.
- The various categories under each variable (dependent and independent) were coded. This data was incorporated from SPSS (Statistical Package for Social Sciences) software, which was used by our group in our earlier report.
- A cross-tabulation was done taking the two variables as stated above. This was done with the help of SPSS. The cross-tab generated the output that showed the number and percentage of respondents in each category.
- This was followed by a Pearson's Chi-square test, which showed the significance of the inter-relationship between the two variables.
- The relationship thus obtained was analysed and the relevant conclusions were noted.

Input Data

We are attempting to find out if there is any significant relationship between two variables, namely income and person(s) washing the clothes at home. This is in reference to an earlier suvey on detergents (Surf) conducted by our group. The following data has been taken from the same.

S. No.	A	B	S. No.	A	B
1	2	1	21	4	3
2	4	2	22	4	2
3	3	1	23	3	2
4	2	1	24	2	2
5	2	1	25	4	2
6	4	2	26	2	2
7	1	2	27	1	2
8	1	1	28	2	2
9	2	2	29	2	1
10	3	1	30	1	1
11	4	3	31	3	2
12	4	2	32	3	3
13	3	1	33	4	2
14	2	2	34	2	2
15	2	2	35	4	3
16	3	2	36	1	1
17	2	1	37	4	2
18	1	1	38	4	2
19	2	2	39	3	3
20	3	2	40	3	3

A→Income Code
1: < than 5,000
2: 5,001−10,000
3: 10,001−15,000
4: > than 15,000.

B→Person washing clothes at home
1: Yourself
2: Maid
3: Any other