

HOW TO HANDLE INCOME DATA IN THE ISSP

Harry BG Ganzeboom

April 28, 2026 (version 1)

Contents

INC and RINC top	1
Processing the information top	1
Why take logarithms?	2
An alternative: n-tiles (ranks) top	3
Why no currency conversion is needed top	3
Missing values top	3
TABLES	4

INC and RINC [top](#)

ISSP ask for two types of income, which are recorded in local currencies and stored in country-specific variables: AT_INC to ZA_INC measure household income, AT_RINC to ZA_RINC measure respondent's personal income. The number of categories used varies between countries and also between waves. Naturally, the income values themselves can also vary between waves within countries, as incomes distributions tend to change over time. Conveniently, the categories are recoded by ISSP to their mean value, in the local currency.

Processing the information [top](#)

While this information may seem bewilderingly complex at first sight, it is actually quite simple to harmonize between countries and between waves. The following manipulations are in SPSS syntax, but it should be quite easy to transpose these into Stata or R code.

```
desc at_inc to za_inc /miss=include.
```

** Make a list of descriptives of the incomes (**Table 1**), and check whether the missing values are correctly coded.

```
freq at_inc to za_inc .
```

** The frequencies give you a better insight in the values. Familiarize yourself with negative and zero values, and also extremely high values.

```
recode at_inc to za_inc (1 thru hi=copy) (else=sysmiss) .
```

** This statements makes sure that the missings will not be processed as true incomes. Notice that I make zero (household) incomes missing.

```
compute INC=mean(at_inc to za_inc) .
```

** This statement collects all the non-missing values into a single variable INC and adds this to the active file.

```
means INC by CENTRY .
```

** This statement displays once again (**Table 2a**) the mean household income per country. The results (both Mean and N) should be the same as before .

```
Sort cases by CENTRY .
```

```
Aggregate /break=CENTRY /xINC=mean(INC) .
```

```
Means xINC by CENTRY .
```

** These statements puts the country-specific mean into xINC and adds this as a variable to the file.

```
compute LnINC=ln(INC/xINC) .
```

```
mean LnINC by centry .
```

** This manipulation expresses each income value relative to the country-specific Mean (INC/xINC) and then takes the logarithm.

The means and SDs of the log-income distribution by country are shown in **Table 2b**. The quantity of main interest is the SD of the logged incomes: this measures income inequality, in much the same way as a Gini coefficient would do. It measures on a log scale how much individual income differ from average income.

Why take logarithms?

Expressing each income relative to the means (INC/xINC) results in a quite natural, but multiplicative metric, which leads to statements such as “I make twice the average income” or “I make only half the average income”, for the values 2 and .5, respectively. Taking logs re-expresses this multiplicative metric into an additive metric ($\ln(2) = -\ln(.5) = .69$), that brings out the symmetry of datapoints around the mean.

Taking logs also has the virtue to redress positive outliers and to make the distribution approximately normal, which has some relevance for inferential statistics.

To their disadvantage logarithms are not defined for zero and negative incomes. If you want to process these (and there are few), the best thing to do is convert them into a very small positive value.

An alternative: n-tiles (ranks) [top](#)

While log-incomes are perfectly useful to apply in correlation and regression models, a popular alternative is to convert incomes into rank scores, such as percentiles or quintiles.

```
split file by CNTRY.  
rank INC /ntiles(5).  
rank INC /percent.  
split file off.  
cross cntry by nINC /cell=row.  
means pINC by CNTRY.
```

These statements produce quintiles (nINC, **Table 3a**) and percentiles (pINC, **Table 3b**), which are also valid ways to talk about incomes: highest 20%, lowest incomes, etc. Ranking has its virtues (no outliers, and easier to communicate than logs), but also disadvantages. In particular, ranks remove the interval information from the income measure. This may make them a bit less powerful than logged incomes, but more importantly we lose the information about income inequality by country, as displayed in **Table 2b**.

Why no currency conversion is needed [top](#)

ISSP records the incomes in local currencies. While one may be tempted to harmonize the information by converting these currencies to an international standard (e.g. US dollars or Euro's), there is really no need to do so. Conversion implies that you are transforming all the values by the same constant, which is the same as changing (only) the mean income. If you are interested in the effect of mean income (in a cross-national analysis) a much better way is to add GNI (Gross National Income) to your datafile.

Missing values [top](#)

Missing values arise in incomes, just like any other variable, but they may be more of them. There are multiple reasons for this, including that many people cannot answer the question because they do not know their income. This is often true for household members who do not know the household income, or self-employed for whom monthly income is generally ill-defined.

Also zero incomes are reported in ISSP. While it is implausible that households would have a zero income (if so, they would not survive and not take part in surveys), but for personal income zero is a perfectly reasonable answer. Depending upon your research question, I would still recommend to treat no personal income as a special situation that needs to be analyzed separately from the other values.

TABLES

Table 1: Descriptive Statistics of Original Variable - Household Income

	N	Minimum	Maximum	Mean	SD
AT_INC Country specific household income: Austria	721	0	10000	3445.3	2023.4
AU_INC Country specific household income: Australia	676	0	1000000	5525.3	41513.9
CA_INC Country specific household income: Canada	2036	0	225000	106112.5	66725.5
CH_INC Country specific household income: Switzerland	2572	2100	17500	8565.9	4230.3
DE_INC Country specific household income: Germany	1263	0	11250	3719.6	2162.8
DK_INC Country specific household income: Denmark	642	70000	1150000	725405.0	343144.6
FI_INC Country specific household income: Finland	1207	0	32000	5532.0	3862.4
FR_INC Country specific household income: France	1580	0	80000	3804.7	5055.2
GR_INC Country specific household income: Greece	900	0	85000	4750.8	9506.4
HR_INC Country specific household income: Croatia	1026	150	12000	2184.8	1188.1
HU_INC Country specific household income: Hungary	720	0	6700000	462339.0	344418.3
IL_INC Country specific household income: Israel	943	2500	36000	19925.7	9782.7
IN_INC Country specific household income: India	1508	1500	150000	24513.9	19464.8
IT_INC Country specific household income: Italy	523	0	5000	2488.6	1237.8
KR_INC Country specific household income: Korea (South)	1179	0	18000000	4845971.2	6530531.4
LT_INC Country specific household income: Lithuania	754	160	7000	1581.0	1029.8
MX_INC Country specific household income: Mexico	428	0	70000	17411.0	10797.9
NL_INC Country specific household income: Netherlands	1211	0	8000	3756.6	1832.5
NO_INC Country specific household income: Norway	993	154000	1995431	1048448.1	505879.5
NZ_INC Country specific household income: New Zealand	1034	0	150000	90759.2	48708.2
PH_INC Country specific household income: Philippines	1724	200	300000	14686.4	15679.3
RU_INC Country specific household income: Russia	1330	5000	800000	81280.4	67644.7
SE_INC Country specific household income: Sweden	1361	0	1400000	62284.0	63934.5
SI_INC Country specific household income: Slovenia	621	0	9996	2518.9	1567.3
SK_INC Country specific household income: Slovakia	862	175	5250	1728.2	1025.8
TH_INC Country specific household income: Thailand	1438	900	4000000	23519.8	108040.9
TW_INC Country specific household income: Taiwan	1352	0	1250000	92507.4	114591.9
US_INC Country specific household income: United States	1432	500	180000	75937.3	55973.8
ZA_INC Country specific household income: South Africa	2166	0	60000	10067.7	14648.1
Valid N (listwise)	0				

Source: ISSP2023

Ganzeboom – Help and Recommendations for ISSP Users

Table 2a: Means of INC by CNTRY

CNTRY	N	Mean	SD
AT	721	3445.3	2023.4
AU	676	5525.3	41513.9
CA	2036	106112.5	66725.5
CH	2572	8565.9	4230.3
DE	1263	3719.6	2162.8
DK	642	725405.0	343144.6
FI	1207	5532.0	3862.4
FR	1580	3804.7	5055.2
GR	900	4750.8	9506.4
HR	1026	2184.8	1188.1
HU	720	462339.0	344418.3
IL	943	19925.7	9782.7
IN	1508	24513.9	19464.8
IT	523	2488.6	1237.8
KR	1179	4845971.2	6530531.4
LT	754	1581.0	1029.8
MX	428	17411.0	10797.9
NL	1211	3756.6	1832.5
NO	993	1048448.1	505879.5
NZ	1034	90759.2	48708.2
PH	1724	14686.4	15679.3
RU	1330	81280.4	67644.7
SE	1361	62284.0	63934.5
SI	621	2518.9	1567.3
SK	862	1728.2	1025.8
TH	1438	23519.8	108040.9
TW	1352	92507.4	114591.9
US	1432	75937.3	55973.8
ZA	2166	10067.7	14648.1
Total	34202	248409.0	1509665.3

includes zero incomes

Table 2b: Means of InINC by CNTRY

CNTRY	N	Mean	SD
AT	706	-.160	.594
AU	673	-1.004	.952
CA	2003	-.265	.834
CH	2572	-.139	.559
DE	1259	-.177	.643
DK	642	-.165	.651
FI	1202	-.234	.728
FR	1559	-.289	.740
GR	867	-.686	1.016
HR	1026	-.157	.597
HU	719	-.189	.631
IL	943	-.165	.645
IN	1508	-.282	.795
IT	518	-.137	.558
KR	1176	-.281	.760
LT	754	-.221	.698
MX	421	-.174	.605
NL	1204	-.136	.561
NO	993	-.149	.600
NZ	1028	-.201	.711
PH	1724	-.370	.884
RU	1330	-.270	.735
SE	1348	-.228	.673
SI	608	-.171	.614
SK	862	-.170	.602
TH	1438	-.501	.872
TW	1343	-.422	.956
US	1432	-.455	1.228
ZA	1974	-.809	1.329
Total	33832	-.309	.832

Only non-zero incomes

Ganzeboom – Help and Recommendations for ISSP Users

Table 3a: Quintile Distribution by CNTRY

	1	2	3	4	5	
AT	20.3%	19.5%	21.0%	18.4%	20.8%	100.0%
AU	19.9%	20.1%	20.8%	18.4%	20.8%	100.0%
CA	17.7%	22.3%	12.7%	20.7%	26.6%	100.0%
CH	16.1%	21.0%	24.4%	21.0%	17.4%	100.0%
DE	21.8%	15.8%	24.8%	15.0%	22.6%	100.0%
DK	23.4%	14.2%	24.6%	13.2%	24.6%	100.0%
FI	18.8%	22.2%	19.2%	19.1%	20.7%	100.0%
FR	20.3%	21.1%	19.9%	17.3%	21.4%	100.0%
GR	19.4%	20.3%	23.0%	16.3%	21.1%	100.0%
HR	18.9%	20.5%	21.2%	19.9%	19.6%	100.0%
HU	20.4%	19.7%	20.9%	20.2%	18.8%	100.0%
IL	20.1%	19.3%	23.3%	11.9%	25.3%	100.0%
IN	22.1%	35.1%		37.0%	5.8%	100.0%
IT	24.3%	15.6%	13.5%	27.0%	19.5%	100.0%
KR	20.5%	19.1%	17.4%	23.0%	19.9%	100.0%
LT	19.5%	20.2%	20.8%	19.5%	20.0%	100.0%
MX	20.0%	20.0%	20.9%	19.2%	20.0%	100.0%
NL	16.4%	22.7%	21.7%	16.7%	22.5%	100.0%
NO	16.2%	19.2%	26.5%	15.8%	22.3%	100.0%
NZ	21.2%	21.3%	11.8%	18.8%	26.9%	100.0%
PH	23.4%	15.8%	20.9%	21.5%	18.4%	100.0%
RU	19.9%	22.9%	17.2%	18.8%	21.1%	100.0%
SE	18.8%	19.7%	21.5%	19.9%	20.2%	100.0%
SI	20.4%	16.6%	23.5%	20.6%	18.9%	100.0%
SK	18.9%	29.6%		34.5%	17.1%	100.0%
TH	20.7%	19.5%	19.7%	18.2%	22.0%	100.0%
TW	19.3%	17.0%	21.8%	22.9%	19.1%	100.0%
US	20.5%	18.9%	17.9%	22.2%	20.5%	100.0%
ZA	15.5%	25.2%	22.5%	13.7%	23.2%	100.0%
Total	19.5%	20.9%	19.0%	20.1%	20.5%	100.0%

Table 3b: Percentiles by CNTRY

N	Mean	SD
706	50.1	28.9
673	50.1	28.9
2003	50.0	28.7
2572	50.0	28.7
1259	50.0	28.8
642	50.1	28.6
1202	50.0	28.9
1559	50.0	28.9
867	50.1	28.8
1026	50.0	28.9
719	50.1	28.9
943	50.1	28.7
1508	50.0	27.4
518	50.1	28.7
1176	50.0	28.9
754	50.1	28.9
421	50.1	28.9
1204	50.0	28.7
993	50.1	28.7
1028	50.0	28.5
1724	50.0	28.8
1330	50.0	28.9
1348	50.0	28.9
608	50.1	28.9
862	50.1	28.1
1438	50.0	28.8
1343	50.0	28.8
1432	50.0	28.8
1974	50.0	28.7
33832	50.0	28.7