

MODULE 7

MULTILEVEL DISAGGREGATION ANALYSIS TO MONITOR THE SDGS FROM A LEAVE NO ONE BEHIND PERSPECTIVE

EXERCISES

Curriculum on Gender Statistics Training

This product was developed under the guidance of the Subgroup on Gender Statistics Training, within the Asia-Pacific Network of Statistical Training Institutes.

Exercise 1

Fill the gaps with the words 'microdata', 'sampling design', 'variables' or "design policies".

1. LNOB results should be used to _____ that are universal, reaching also the most disadvantaged groups of the population.
2. Accessing the _____ is the first step towards conducting the MDA-LNOB analysis. Some key features of an appropriate dataset for this analysis include large sample sizes, information at the individual level and _____ that is representative of the population groups of interest.
3. EPIC can be used to identify _____, or population groups, that are contextually relevant and can be used to disaggregate data.

Solution 1

1. design policies
2. microdata, sampling design
3. variables

Exercise 2

To conduct LNOB analysis utilizing DHS to calculate the proportion of women and girls living in overcrowded households, which recode file will you need? Select all that apply:

1. Household Recode File (HR File)
2. Birth Recode File (BR File)
3. Personal Recode File (PR File)
4. Individual Recode File (IR File)

Solution 2

1 and 4. To conduct LNOB analysis, you need to merge the women's recode file (because it contains individual sociodemographic characteristics of women) and the household recode file (because it includes information on the house and number of rooms). If you just wanted to calculate the proportion of women living in overcrowded households, without disaggregating data by ethnicity, religion, etc., you could simply use only the PR file.

Exercise 3

Based on the DHS microdata, if you wanted to calculate the proportion of women in Nepal who were victims of child marriage (e.g. married at an age younger than 18), which group of women would you exclude from your calculation?

1. Women in the age group of 15–17
2. Women ages 15 and older
3. Women over the age of 49
4. Women who are divorced

Solution 3

1. We need to exclude women who are currently under the age of 18 years (i.e. 17 and below) because we cannot know with certainty whether they will be married before the age of 18 or not.

Exercise 4

Open the DHS IR File for Bangladesh and identify what the following recode variables refer to:

1. v190: _____
2. v025: _____
3. v139: _____

Solution 4

1. v190, wealth index
2. v025, location of residence
3. v139, region of residence

Exercise 5

Calculate the proportion of women married before the age of 18 years in Bangladesh (DHS 2014).

Solution 5

To calculate the proportion of women married before the age of 18 years in Bangladesh using DHS microdata, follow these steps:

1. Open DHS Bangladesh 2014 IR File in Stata
2. Use only the sample of women whose current age is greater or equal to 18 years by typing `keep if v012>=18`
3. Generate a new variable named 'childmarriage' by typing `generate childmarriage=0`
4. Replace the value of 0 with 1 if age at first marriage is less than 18 years. This can be done by typing `replace childmarriage=1 if v511<18`
5. Generate the numerator and adjust with appropriate sample weights by typing `generate num=(v005/1000000)*childmarriage`
6. Generate the denominator and adjust with the appropriate all-women factor by typing `generate den=(v005/1000000)*(awfact/100)`
7. Divide numerator and denominator using the ratio command by typing `ratio num/den`

The result of the DHS Bangladesh 2014 will be:

```
Ratio estimation                Number of obs   =    16,951
```

```
   _ratio_1: num/den
```

	Ratio	Linearized Std. Err.	[95% Conf. Interval]	
_ratio_1	.6927203	.0040933	.684697	.7007437

Exercise 6

Using the DHS Bangladesh 2014 data, calculate the proportion of education-poor (completed 6 or less years) women and girls. Further disaggregate the data by:

1. wealth
2. location
3. wealth and location simultaneously

Solution 6

- To calculate the proportion of education poor women and girls, follow these steps:
 1. Open DHS Bangladesh 2014 IR File in Stata
 2. Generate a new variable named 'primaryorless' by typing `generate primaryorless=0`
 3. Replace the value of 0 with 1 if single years of education is less than 7 years. This can be done by typing `replace primaryorless=1 if v133<7`
 4. Replace missing values by typing `replace primaryorless=. if v133==.`
 5. Tabulate the variable with appropriate sample weights to see the proportion of women and girls with six or less years of education `tab primaryorless [iw=v005/1000000]`

primaryorless	Freq.	Percent	Cum.
0	6,968.171	39.01	39.01
1	10,894.829	60.99	100.00
Total	17,862.9997	100.00	

- To disaggregate the data by wealth, use the following code: `tab primaryorless v190 [iw=v005/1000000], cell column row`, where v190 is the wealth index variable.

primaryorless	wealth index					Total
	poorest	poorer	middle	richer	richest	
0	443.3788	783.190081	1,395.17	1,745.724	2,600.708	6,968.171
	6.36	11.24	20.02	25.05	37.32	100.00
	13.20	22.98	39.19	46.45	68.84	39.01
	2.48	4.38	7.81	9.77	14.56	39.01
1	2,916.061	2,624.329	2,165.072	2,012.391	1,176.976	10,894.83
	26.77	24.09	19.87	18.47	10.80	100.00
	86.80	77.02	60.81	53.55	31.16	60.99
	16.32	14.69	12.12	11.27	6.59	60.99
Total	3,359.44	3,407.519	3,560.242	3,758.115	3,777.6834	17,863
	18.81	19.08	19.93	21.04	21.15	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
	18.81	19.08	19.93	21.04	21.15	100.00

- To disaggregate the data by location, use the following code: `tab primaryorless v025 [iw=v005/1000000], cell column row`, where v025 is the location of residence variable.

primaryorless	type of place of residence		Total
	urban	rural	
0	2,482.956	4,485.215	6,968.171
	35.63	64.37	100.00
	49.19	35.00	39.01
	13.90	25.11	39.01
1	2,564.3994	8,330.429	10,894.83
	23.54	76.46	100.00
	50.81	65.00	60.99
	14.36	46.64	60.99
Total	5,047.355	12,815.64	17,863
	28.26	71.74	100.00
	100.00	100.00	100.00
	28.26	71.74	100.00

- To disaggregate the data by wealth and location simultaneously, code as follows: `by v025, sort: tab primaryorless v190 [iw=v005/1000000], cell column row`

Urban location

primaryorless	wealth index					Total
	poorest	poorer	middle	richer	richest	
0	54.506854	58.091658	192.389222	498.730836	1,679.237	2,482.956
	2.20	2.34	7.75	20.09	67.63	100.00
	16.40	21.23	32.94	37.63	66.32	49.19
	1.08	1.15	3.81	9.88	33.27	49.19
1	277.880604	215.562135	391.594796	826.766673	852.595191	2,564.3994
	10.84	8.41	15.27	32.24	33.25	100.00
	83.60	78.77	67.06	62.37	33.68	50.81
	5.51	4.27	7.76	16.38	16.89	50.81
Total	332.387458	273.653793	583.984018	1,325.498	2,531.833	5,047.355
	6.59	5.42	11.57	26.26	50.16	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
	6.59	5.42	11.57	26.26	50.16	100.00

Rural location

primaryorl ess	wealth index					Total
	poorest	poorer	middle	richer	richest	
0	388.871946	725.098423	1,202.781	1,246.994	921.470127	4,485.215
	8.67	16.17	26.82	27.80	20.54	100.00
	12.85	23.14	40.41	51.26	73.96	35.00
	3.03	5.66	9.39	9.73	7.19	35.00
1	2,638.181	2,408.767	1,773.477	1,185.6239	324.380661	8,330.429
	31.67	28.92	21.29	14.23	3.89	100.00
	87.15	76.86	59.59	48.74	26.04	65.00
	20.59	18.80	13.84	9.25	2.53	65.00
Total	3,027.052	3,133.865	2,976.258	2,432.618	1,245.851	12,815.64
	23.62	24.45	23.22	18.98	9.72	100.00
	100.00	100.00	100.00	100.00	100.00	100.00
	23.62	24.45	23.22	18.98	9.72	100.00