CHOROPLETH MAPPING FOR SPATIAL REPRESENTATION OF BETA INDEX

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CHOROPLETH: It is simply known as line shading. The variation of any selected item (beta index in this case) is represented by spacing between lines. The lesser the value the greater is the spacing between the lines and greater the value the lesser the spacing between the lines. The shading follows the administrative boundaries. But for applying choropleth the data which is to be mapped needs to be classified and tabulated.

DATA

District	e	v	ß
Chatra	14	19	0.736842=**0.7**
Deogarh	12	16	0.75=**0.8**
Dhanbad	15	16	0.9375=**0.9**
Dumka	29	35	0.828571=**0.8**
East singhbhum	11	16	0.6875=**0.7**
Garwah	12	40	0.3=**0.3**
Giridih	32	53	0.603774=**0.6**
Godda	11	30	0.366667=**0.4**
Bokaro	7	11	0.6363636364=**0.6**

CLASSIFICATION OF DATA

Firstly, we need to classify the data. For that the highest beta index and lowest beta index needs to be noted

Step 1:

Highest Calculated Beta Index= 0.9

Lowest Calculated Beta Index= 0.3

Step 2:

Range= 0.9-0.3=0.6

Step 3:

No. of Classes (assumed)*= **3**

*If we choose to classify the 9 districts into 3 zones- low, medium and high

There is also a mathematical formula for calculating the number of classes.

The formulae is 1+3.3 log n, where n= number of observations

But anyone method can be applied for determining the number of classes

Step 4:

Class Interval= 0.6/3=0.2 taking it to be as **0.3** considering the nature of data

Step 5:

Since the lowest value is 0.3, we can start the classes either from that or below it

The classes should be selected keeping in mind that no classes remain empty

If for example the classes selected are as follows:

0.3-0.6

0.6-0.9

0.9-0.12

These are all overlapping classes, technically known as class boundaries. This has a significance such as the class **0.3-0.6** means that up to the value **0.59** it can be contained. 0.6 value should be included in the class 0.6-0.9. Suppose the value 0.9 occurs it should be included in the class 0.9-0.12. Tabulation follows in the next step.

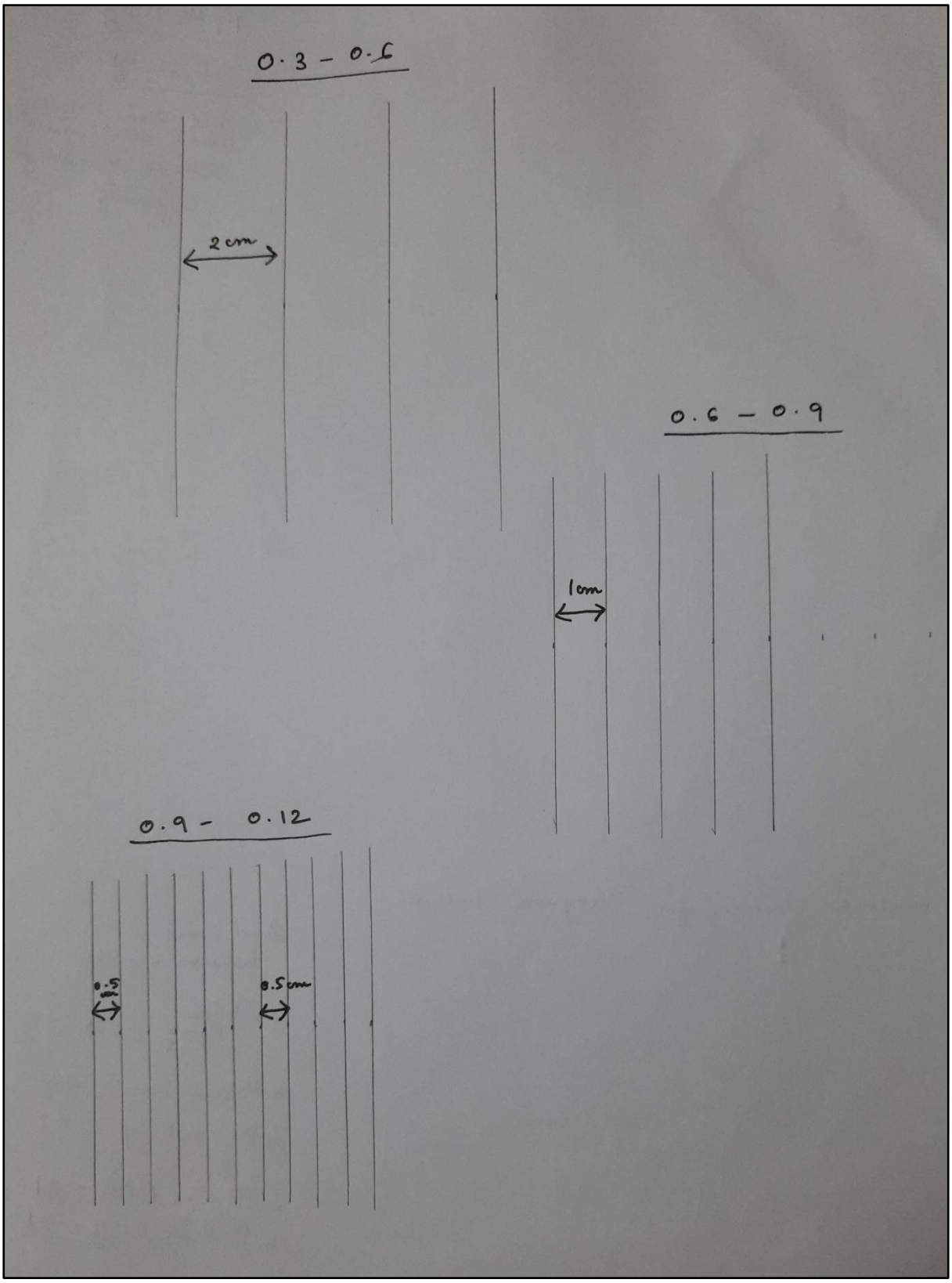
TABULATION OF DATA

Beta Index	Districts	Remarks	Shading
0.3-0.6	Garwah, Godda	Low	
0.6-0.9	Bokaro, Giridih, Chatra, Deogarh, Dumka, East Singhbhum	Medium	
0.9-0.12	Dhanbad	High	

SHADING

Line shading is used for choropleth. Gapping between the lines will indicate increase in value of beta index. Example for representing the beta indexes between 0.3-0.6 the gap between the lines is 2cm and then as the value increases the gap between the lines decreases. Example the

gap between the lines for representing the shading of 0.6-0.9 is 1cm and then for 0.9-0.12 the gap between the lines is 0.5 cm. This will be clear from the diagram below



Finally, these lines should be placed carefully on the map following the administrative boundaries to represent variation of beta index. One line should be drawn first and then using it as the reference line other straight lines should be drawn keeping in mind the spacing selected for the administrative boundaries.