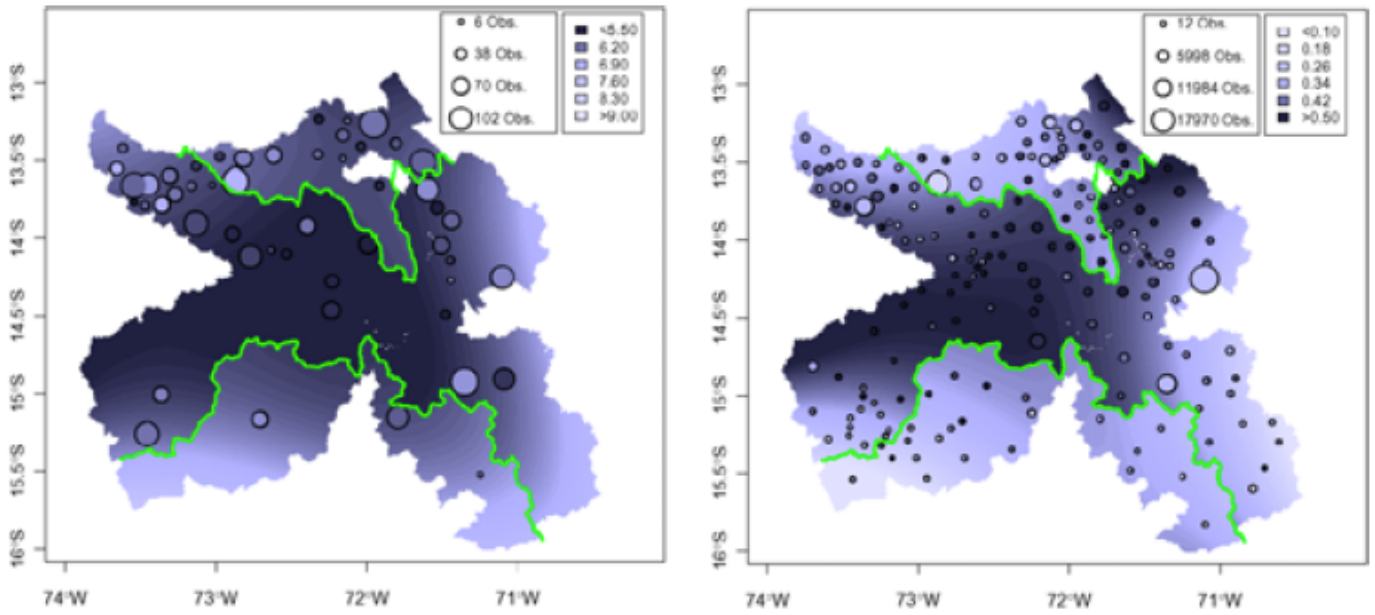
Continuing with Dell's research, she looks at the way in which more recent welfare variables look like in areas where the mita took place versus areas where it did not. The figure below shows a map zooming across the grey boundary: Panel A presents consumption levels in 2001, and Panel B the stunting rate in 2005. Take a look and some time to understand the maps and compare them to the one shown for Questions 1-3 (Figure 1).

Figure 2:



(a) Consumption (2001)

(b) Stunting (2005)

The colors on the map correspond to consumption levels and stunting rates, respectively. From map, you can see that the **darker** areas show *lower* levels of consumption in Panel A, and a *higher* stunting rate in Panel B. Taking this information into account, now answer the following questions:

Question 4

(1/1 point)

What does the green line in the maps represent?

- a. It corresponds to the black boundary in figure 1.
- b. It shows the grey boundary in figure 1. ✔
- c. It shows the frontier between Peru and Bolivia.
- d. It shows the frontier between the region where Lima is located, and the rest of Peru.

You have used 1 of 2 submissions

Question 5

(1/1 point)

What can you conclude from the maps?

- a. While the consumption level in 2001 is higher in regions were the mita took place, the stunting rate is actually lower in these places. Thus, it is not possible to conclude whether the mita has a positive or negative effect.
- b. The map shows that both consumption levels in 2001 and the stunting rate in 2005 are higher outside the boundary, showing a negative causal effect of the mita.
- c. Inside the boundary, the consumption level in 2001 is lower and the stunting rate in 2005 is higher, implying a negative effect of the mita in the long run. ✔
- d. From the maps, it is not possible to conclude whether the mita had a positive, negative, or ambiguous impact. It is necessary to collect more data.

You have used 1 of 2 submissions

In the lecture, Professor Duflo presented Michael Greenstone and coauthors' research, where the relationship between pollution and the distance to the Huai river had two different visualizations: (1) a map similar to the ones in Figure 2, (2) a two-dimensional plane of the data. The latter showed the degree to the north in the x-axis and the level of pollution in the y-axis. Suppose that we were trying to do a similar visualization here. To simplify the plot, we only take the boundary in the south. Assume that the x-axis corresponds to the degree in the north, and that we normalize the boundary to zero. It might be helpful to make some drawings for a better visualization of the plot.

Question 6

(1 point possible)

From this visual representation, are the regions that had mita presence in the negative or positive side of the x-axis?

- a. Negative
- b. Positive ✔

You have used 1 of 1 submissions

Question 7

(1 point possible)

Now think that we plot the consumption level (Panel A) in 2001 in the y-axis. Fill in the blanks for the following statement:

The plot will show: (i) In the negative side of the x-axis, a _____ relation between consumption levels and the degree of the north, (ii) a _____ jump in zero, (iii) and a _____ slope between consumption and the degree of the north in the positive side of the x-axis.

- a. negative; negative; flat ✔
- b. positive; negative; positive

c. null; positive; flat

d. negative; null; negative

e. null; negative; negative ✖

EXPLANATION

Below the boundary, as regions get closer to it they become darker. This shows that the consumption level decreases with the degree of the north, which implies there is a negative relationship in the negative side of the x-axis. As soon as we cross the boundary, the map is way darker which will show a negative jump (as the one with pollution in the lecture). Finally as we move upwards, the color in the map remains the same, which implies that the relationship is barely flat in the positive side of the x-axis.

You have used 2 of 2 submissions

Question 8

(1/1 point)

Imagine a similar plot for the stunting rate in 2005 in the y-axis. Would you expect to find a jump in the zero of the x-axis?

a. Yes, a negative jump.

b. Yes, a positive jump. ✔

c. No, there would be no jump.

d. We can't tell with the information provided.

EXPLANATION

From the map in Panel B of Figure 2, we see that as soon as we cross the boundary in the south, there is a huge change of color. It is expected, then, that in a 2-dimensional figure there is a positive jump in the x-axis zero, since darker colors show a higher stunting rate in 2005.

You have used 1 of 2 submissions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