Subject: Multilevel GLM poisson analysis
Posted by David on Wed, 30 Oct 2024 10:45:07 GMT
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Hi,
I have followed the DHS guidelines to set the svyset via https://www.dhsprogram.com/pubs/pdf/MR27/MR27.pdf.
Yet, I still have challenges as i cannot excute the model.
Regards!

Subject: Re: Multilevel GLM poisson analysis
Posted by Bridgette-DHS on Thu, 31 Oct 2024 12:12:20 GMT
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Following is a response from Senior DHS staff member, Tom Pullum:

We may be able to help if you tell us what survey you are using, what is your svyset command, what is your estimation command, and what you mean by "cannot execute". Are you getting an error statement?

Does your estimation command work if you remove "svy: "? My general strategy to solve a problem like this is to start with something simple, and then add complexity in stages. In that way you can find what part of the svyset command is causing trouble.

Subject: Re: Multilevel GLM poisson analysis
Posted by David on Thu, 31 Oct 2024 20:20:29 GMT
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Thank Bridgette,

I am using 2022 GDHS and i have followed https://www.dhsprogram.com/pubs/pdf/MR27/MR27.pdf

However, without "svy," the model "meglm devar i.in_var||v001:, family(poisson) link(log)" works without an error.
Fortunately, adding "svy," I could now run it; the issue now at hand is "convergence not achieved.". So if there is a way to resolve that, I will be grateful.

Subject: Re: Multilevel GLM poisson analysis
Posted by Bridgette-DHS on Fri, 01 Nov 2024 15:37:45 GMT

Following is a response from Senior DHS staff member, Tom Pullum:

You can add the following option (after the comma): "iterate(50)".

Usually when there is a convergence problem it is because the estimation procedure is oscillating between two nearby values of the convergence criterion. It would be a good idea to repeat with limits other than 50, such as 51 or 100 to get a better diagnosis of what's wrong. If you don't see any difference between the coefficients for those alternatives, then you should be ok.

Subject: Re: Multilevel GLM poisson analysis
Posted by David on Fri, 01 Nov 2024 16:24:00 GMT

Thank you Tom Pullum,

Rightly, as you suggested, I have added "inter (200) and even (500)". Yet it still persist.
Then, I again added "difficult" or "technique (nr)" and the situation continue.

Infact gentle following your procedure, I thought I will rejoice but here comes the serious one. Still looking forward for any other alternatives.
Regards!

Subject: Re: Multilevel GLM poisson analysis
Posted by Bridgette-DHS on Mon, 04 Nov 2024 16:46:00 GMT

Following is a response from Senior DHS staff member, Tom Pullum:

Is there a typo in your question? I suggested "iterate(50)", not "inter (200)". In my experience this option is like putting on the brakes abruptly. It stops the iterative procedure when it is looping endlessly. Instead of 50 you could try 2.

One strategy would be to repeat the procedure with less complexity. You could reduce the svyset command by dropping the strata or the multilevel parts (the most complex components). You could reduce the number of variables on the right hand side of the model. I suspect that you have many categorical variables on the right hand side and some (many?) combinations of covariates are empty (have no observations). You may need to reduce the number of coefficients in the model.

Subject: Re: Multilevel GLM poisson analysis
Posted by David on Mon, 04 Nov 2024 17:05:01 GMT
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Reaspectfully, Sir, it's a typo error "iter" (iteration)