Assignment 9

1. Download Exercise 9.xls, open Presence. Set up a new input file and copy and paste the data from the spreadsheet.
2. This is a multi-season data set with 2 seasons and 2 seasons per occasion. After you've pasted the data into presence make sure the number of cols is correct and the number occasions per season is correct (No. Occ/season = 2). There are no site or sampling covariates for this data.
3. The data set was simulated with these parameters:

|  |  |
| --- | --- |
| Parameter | truth |
|  | 0.5 |
|  | 0.6 |
|  | 0.2 |
| *p1* | 0.1 |
| *p2* | 0.6 |
| *p3* | 0.2 |
| *p4* | 0.3 |

1. Run the null model (ψ..*p*.) for each of the 4 parameterizations of the multi-season model by Clicking Run/Analysis:multi-season and picking one of the options on the Setup Numerical Estimation Run dialogue and clicking ok to run. Be sure to name the models appropriately so you can tell them apart in the results browser.
2. Next run the model with (ψ..*pt*) under each of the 4 options. Right click in the results browser, copy the results to the clipboard, and paste them into the top of the spreadsheet on the page labeled Results. Complete the table with the parameter estimates (not the βs) for each of the models.
3. Answer the following questions:
   1. Which model is the best approximating model?
   2. Based on the Results table which model fits the data best? How can you tell? Is this consistent with a comparison of the parameter estimates and 'truth'?
   3. Why is the parameter count smaller when using Options 2-4?