Step 3

Find

For each iteration start with guesses:

1. a wage for each country,
2. a world interest rate that applies to all countries,

Using these histories solve for the optimal consumption and asset paths for each cohort in each country,

Use equation (3.18) & (3.19) to get

Use (3.22) (3.23) and (3.20) to search for initial consumption that sets final assets to zero

(3.21) gives

(3.14) gives

Sum up the assets for each cohort to get the total savings and call this domestic capital, .

Solve firms’ first-order-condition to get the amount of capital sent abroad () that is consistent with the world interest rate. Do this for all countries except country 1.

Using (3.13), (3.15) (3.24) & (3.16)

For county 1 find foreign capital by summing over all other countries (3.25):

Next calculate a new series of wages for each country using (3.17):

Finally, a new interest rate series using country 1 (3.16).

Check to see if the new series are appreciably different from the initial guess. A minimum absolute deviation metric is a good one in this context.

Take a convex combination of the new and old values and update. Iterate just like we do with TPI.

As an alternative, use fsolve to find the values of , that solve the steady state versions of (3.14) and (3.25)