Step 3

Generate a history of

For each TPI iteration we start with a set of histories:

1. a wage for each country in each period,
2. a world interest rate in each period 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.

Let the new guesses for the next iteration if needed, be: