

Applied Computational Economics

Final Project

The University of Nottingham 2020

For this task, you should read the paper *Capital Accumulation and Dynamic Gains from Trade* (Ravikumar, Santacreu & Sposi, 2019). You should then solve a simplified three country version of their model, (call them countries A, B and C). Your final output for this project should be your code and a re-production of the following in table

Country	Long-Run gain to capital	Initial NFA position
A	9.27%	-0.58
B	9.76%	0.03
C	10.20%	0.55

Table 1: Long-run capital gains

You should use the parameters in table 2 as common to the countries in the model.

Symbol	Parameter	Value
θ	Trade elasticity	4
η	Intermediate variety substitution elasticity	2
α	Capital's share in value added	0.33
β	Discount factor	0.96
σ	Inter-temporal elasticity of substitution	0.50
δ	Depreciation rate for capital	0.50
λ	Adjustment cost elasticity	0.76
q	Bond price	$1/\beta - 1$

Table 2: Common parameters

You should use the parameters in 3 for those that are country-specific.

Symbol	Parameter	A	B	C
ν_{mi}	Intermediate goods parameter	0.56	0.56	0.56
ν_{ci}	Consumption goods parameter	0.33	0.33	0.33
ν_{xi}	Investment goods parameter	0.33	0.33	0.33
NX_i	Steady state net exports	0.10	-0.10	0.00
A_i	Steady state asset position	$-1/qNX_i$	$-1/qNX_i$	$-1/qNX_i$
L_i	Workforce size	0.50	0.50	0.50
T_{mi}	Frechet distribution parameter	1.0	1.0	1.0
A_{ci}	Productivity of consumption goods sector	1.0	1.0	1.0
A_{xi}	Productivity of investment goods sector	1.0	1.0	1.0
d_i	Iceberg costs (to A,B,C)	(1.0, 1.1, 1.1)	(1.1, 1.0, 1.1)	(1.1, 1.1, 1.0)

Table 3: Country-specific parameters