

Appendix A: Results from Each Simulation Run

Chart Key (simulation behaviour during growth phase):

- P) Population:** An 'X' indicates a significant population rise.
- H) Per Capita Productivity:** An 'X' indicates a sharp rise.
- G) Gini Coefficient:** an 'X' indicates a rise. (blue)
- S) Starvation:** An 'X' indicates an increase. (yellow)
- F) Food Supply:** An 'X' indicates an increase during. (green)
- L) Life Span:** An 'X' indicates a drop.
- C1) Trading Culture 1:** An 'X' indicates a single culture dominating all other cultures in both culture charts. 'D' indicates a *Trading Culture 1* cultures are dominant over *Trading Culture 2*. 'M' indicates a mixture of cultures.
- C2) Trading Culture 2:** An 'X' indicates a single culture dominating all other cultures in both culture charts. 'D' indicates that *Trading Culture 2* cultures are dominant over *Trading Culture 1*. 'M' indicates a mixture of cultures.

Best fits for the hypothesis:

Seed	Non Renewable Economy								Renewable Economy							
	P	H	G	S	F	L	C1	C2	P	H	G	S	F	L	C1	C2
2,1,0	X	X	X	X	X	X	X		X	X		X		X		D
2,1,0	X	X	X	X	X	X	X								D	

Best fits for the null hypothesis:

Seed	Non Renewable Economy								Renewable Economy							
	P	H	G	S	F	L	C1	C2	P	H	G	S	F	L	C1	C2
2,1,0								X	X	X	X	X	X	X	X	
2,1,0	X	X	X					X	X	X	X				X	

Notes:

- 1) The hypothesis predicts that C1 and C2 will be randomly distributed in renewable runs.
- 2) Seed indicates the unique random seed settings. For example, 2, 1, 0 equals Agent Set 2, Environment 1, Agents' Decision-Making 0. For the Agents' Decision-Making only, '-' means that the Agents' Decision-Making seed is turned off. This means the Agents' Decision-Making seed is random and unknown. However, the Agents' Decision-Making seed is reproducible for the purposes of simulation.
- 3) The most important column is G (blue), the Gini coefficient. A raised Gini coefficient is a strong indication of increasing aggregation forces.

Outcome for Each Individual Run

Seed	Non-Renewable							Renewable								
	P	H	G	S	F	L	C1	C2	P	H	G	S	F	L	C1	C2
1,1,-	X	X	X	X	X	X	X								M	M
2,1,-	X	X	X	X	X	X	X		X	X			X			X
3,1,-	X	X	X	X	X	X	X		X	X		X		X	M	M
4,1,-	X	X	X	X	X	X	M	M	X	X					M	M
5,1,-	X	X	X	X	X	X	X		X	X			X	X	D	
6,1,-	X	X	X	X	X	X	D		X	X			X		M	M
7,1,-	X	X	X	X	X	X	X		X	X			X			D
8,1,-	X	X	X	X	X	X	X									D
9,1,-	X	X	X	X	X	X	X			X					M	M
9,1,51	X	X	X	X	X	X	D		X	X		X	X	X	X	
9,1,52	X	X	X	X	X	X	D		X	X					D	
9,1,53	X	X	X	X	X	X	X		X	X					X	
9,1,54	X	X	X	X	X	X	X		X	X			X		M	M
9,1,55	X	X	X	X	X	X	M	M		X						D
9,1,56	X	X	X	X	X	X	X		X	X			X		M	M
9,2,-	X	X	X	X	X	X	X		X	X			X		M	M
9,3,-	X	X	X	X	X	X	X		X	X						D
9,3,2	X	X	X	X	X	X	X		X	X					D	
9,3,3	X	X	X	X	X	X	X		X	X					M	M
9,3,4	X	X	X	X	X	X	X		X	X			X		D	
9,3,5	X	X	X	X	X	X	M	M	X	X					M	M
9,3,6	X	X	X	X	X	X	X		X	X					X	
9,3,7	X	X	X	X	X	X	D		X	X					M	M
9,3,8	X	X	X	X	X	X	X		X	X					M	M
9,3,9	X	X	X	X	X	X	M	M	X	X			X		M	M
9,3,30	X	X	X	X	X	X	X		X	X			X		X	
9,3,31	X	X	X	X	X	X	D		X	X	X	X	X	X		X
9,3,32	X	X	X	X	X	X	X		X	X	X	X		X	M	M
9,3,33	X	X	X	X	X	X	X		X	X						D
9,3,34	X	X	X	X	X	X	D		X	X					D	
9,3,35	X	X	X	X	X	X	X			X						D
9,3,36	X	X	X	X	X	X	D		X	X			X		D	
9,3,37	X	X	X	X	X	X	X		X	X			X			X
9,3,38	X	X	X	X	X	X	D		X	X					D	
9,3,39	X	X	X	X	X	X	D		X	X		X		X	X	
9,3,40	X	X	X	X	X	X	X		X	X		X		X	D	

9,3,41	X	X	X	X	X	X	X		X	X						D	
9,3,42	X	X	X	X	X	X	X		X	X	X	X		X		D	
9,3,43	X	X	X	X	X	X		D	X	X			X			D	
9,3,44	X	X	X	X	X	X	X		X	X						D	
9,3,45	X	X	X	X	X	X	X		X	X						D	
9,3,46	X	X	X	X	X	X	D		X	X						D	
9,3,47	X	X	X	X	X	X	M	M	X	X						M	M
9,3,48	X	X	X	X	X	X	X			X						M	M
9,3,49	X	X	X	X	X	X	X		X	X						D	
9,3,50	X	X	X	X	X	X	X		X	X							D
9,3,51	X	X	X	X	X	X	X		X	X							D
9,3,52	X	X	X	X	X	X	X		X	X						M	M
9,3,53	X	X	X	X	X	X	X		X	X							X
9,3,54	X	X	X	X	X	X	M	M	X	X			X		X		
9,3,55	X	X	X	X	X	X	X		X	X						M	M
9,3,70	X	X	X	X	X	X	X		X	X							X
9,3,80	X	X	X	X	X	X	D		X	X		X		X	M	M	
9,3,90	X	X	X	X	X	X	X		X	X	X	X	X	X			D
9,3,110	X	X	X	X	X	X	X		X	X		X	X	X	M	M	
9,3,120	X	X	X	X	X	X	X		X	X						D	
9,3,130	X	X	X	X	X	X		D	X	X		X		X	M	M	
9,3,140	X	X	X	X	X	X	D		X	X					M	M	
9,3,150	X	X	X	X	X	X	X		X	X						D	
9,3,160	X	X	X	X	X	X	X		X	X			X				D
9,4,-	X	X	X	X	X	X	X		X	X		X		X	M	M	
9,5,-	X	X	X	X	X	X	D		X	X			X			D	
9,6,-	X	X	X	X	X	X	D		X	X			X		X		
9,7,-	X	X	X	X	X	X	X		X	X					M	M	
9,8,-	X	X	X	X	X	X	X		X	X	X	X	X	X	M	M	
9,9,-	X	X	X	X	X	X	D			X						D	
9,10,-	X	X	X	X	X	X	X		X	X		X		X	D		
9,11,-	X	X	X	X	X	X		D	X	X	X	X		X			D
9,12,-	X	X	X	X	X	X	X		X	X		X	X	X	D		
9,13,-	X	X	X	X	X	X	X		X	X	X	X			D		
9,14,-	X	X	X	X	X	X	X		X	X					M	M	
9,15,-	X	X	X	X	X	X	D		X	X	X		X		X		
9,17,-	X	X	X	X	X	X	X		X	X			X		M	M	
9,18,-	X	X	X	X	X	X	D		X	X					M	M	
9,19,-	X	X	X	X	X	X	D		X	X		X		X	M	M	
9,20,-	X	X	X	X	X	X	D		X	X			X				D
9,51,-	X	X	X	X	X	X	X		X	X		X		X	D		

9,52,-	X	X	X	X	X	X			X	X		X		X	D	
9,53,-	X	X	X	X	X	X	D			X		X		X	M	M
9,54,30	X	X	X	X	X	X	X		X	X	X	X	X	X	M	M
9,55,30	X	X	X	X	X	X	M	M	X	X						X
9,56,30	X	X	X	X	X	X	X		X	X						D
100,100,100	X	X	X	X	X	X	X		X	X					X	
110,100,100	X	X	X	X	X	X	D		X	X		X	X	X		D
120,100,100	X	X	X	X	X	X	X		X	X		X		X	X	
130,100,100	X	X	X	X	X	X	M	M	X	X		X	X	X		D
140,100,100	X	X	X	X	X	X	X		X	X			X		X	
150,100,100	X	X	X	X	X	X	X		X	X			X			X
160,100,100	X	X	X	X	X	X	D		X	X			X			D
170,100,100	X	X	X	X	X	X	X			X					M	M
180,100,100	X	X	X	X	X	X	X		X	X		X		X		X
190,100,100	X	X	X	X	X	X	X		X	X					D	
200,100,100	X	X	X	X	X	X	D		X	X						D
200,200,0	X	X	X	X	X	X	X		X	X					M	M
210,200,0	X	X	X	X	X	X	D		X	X					D	
220,210,0	X	X	X	X	X	X	X		X	X						D
220,220,0	X	X	X	X	X	X	X		X	X		X	X	X	D	
230,230,0	X	X	X	X	X	X	X		X	X					D	
240,230,0	X	X	X	X	X	X	D		X	X		X			M	M
240,240,0	X	X	X	X	X	X	X		X	X					M	M
250,240,0	X	X	X	X	X	X	D		X	X						X
520,500,0	X	X	X	X	X	X	X			X						D
520,530,0	X	X	X	X	X	X	D		X	X					M	M
540,530,0	X	X	X	X	X	X	X		X	X						D
540,550,0	X	X	X	X	X	X	X		X	X			X		M	M
550,550,0	X	X	X	X	X	X	X		X	X	X	X	X	X		X
550,560,0	X	X	X	X	X	X	M	M	X	X						D
570,560,0	X	X	X	X	X	X	X		X	X			X			D
570,570,0	X	X	X	X	X	X	D			X					D	
580,570,0	X	X	X	X	X	X	X		X	X					D	
580,580,0	X	X	X	X	X	X	D		X	X					D	
590,580,0	X	X	X	X	X	X	D		X	X			X			D
590,590,0	X	X	X	X	X	X	D		X	X	X	X	X	X	D	
600,590,0	X	X	X	X	X	X	X		X	X		X		X	D	
600,600,0	X	X	X	X	X	X	D		X	X	X	X		X	X	