**Resource Weight Scaling:**

Similar to some the scaling we did in part one, we increase the resource weights in the resource dictionary. We tested a 50% and 75% upscale on raw materials, produced materials and waste to watch how the preferences shift from transfers to transforms and to war. Some expectations we had in part 1. These weight changes were also applied to war weights which decided the war power or deterrence score and the warfare quality score. The scaling of the war weights was on the premise that countries will show more inclination to war since their deterrence score compare to others might increase as we scaled the war weights

num\_rounds = 7  
frontier\_size = 100  
  
# Calculate solution\_limit and depth limit dynamically based on country properties ?  
use\_dynamic\_solution\_limit = True  
use\_dynamic\_depth\_limit = True  
solution\_limit = 1000  
depth = 3  
  
interventions\_on = True # Do we want interventions ?  
log\_inequality = False # Track inequality in the world  
  
seed = 123456654321  
  
# Parameters for trade selectivity, index 0 and 1 are k and x\_0 for not selective countries,  
# index 2 and 3 are are k and x\_0 for selective countries  
trade\_selectivity\_parameters = [1, 100, 2, 200]  
  
  
# Game Input Files  
initial\_state\_filename = "./input\_files/countries\_for\_test.xlsx"  
initial\_resource\_filenames = "./input\_files/ {Resources – ww prod 0.5.xlsx, Resources – ww prod 0.75.xlsx, Resources – ww raw 0.5.xlsx , Resources – ww raw 0.75.xlsx , Resources – prod 0.5.xlsx, Resources – prod 0.75.xlsx, Resources – raw 0.5.xlsx , Resources – raw 0.75.xlsx , Resources – waste 0.5.xlsx , Resources – waste 0.75.xlsx }"  
initial\_interventions\_filename = "./input\_files/Interventions\_case0.xlsx"  
  
  
# Game Output Files  
output\_schedule\_filename = "./output\_files/{raw -mat 0.5.txt, raw -mat 0.75.txt, raw -prod 0.5.txt, raw -prod 0.75.txt, raw -waste 0.5.txt, raw -waste 0.75.txt, wwp 0.5.txt, wwp 0.75.txt, wwr 0.5.txt, wwr 0.75.txt } "

game\_state\_print = True

game\_state\_filename = "./game\_output\_files/no\_inequality.csv"

Results:

After analyzing the output text files, we recognized that for a for the scaling of 0.5 and 0.75 of raw material resources for just resource weight we saw a drop in transforms compared to the control run just as we expected in the part 1. However, for 0.5 and 0.75 scaling for waste the transfers and transforms did not change in value too much in number. This was surprising because we set up the war weight to steer countries to step up for war when they can. We saw that this result may be because we do not have any resource increase apart from transfer and transforms. This means our world is in perpetual spending as a whole with no renewal of resources.