Analysis of different group decision making processes

Hillary Tao

Introduction: There 67 participants in total. As well, I am only using the priorities from ahpv2,py since both ahp.py and ahpv2.py output the same priority vectors but ahpv2.py uses a more popular method.

Data Description: 67 participants altogether from both Montreal and Quebec. The median and mean age group of the participants is 25-34 years old and the age group distribution is: `{'35-44 ans': 26, '25-34 ans': 40, '18-24 ans': 1}`, as well, the median age group of the their partner is 25-34 years old and its age group distribution is `{'35-44 ans': 35, '25-34 ans': 29, 8888: 1, '45-54 ans': 1, 9999: 1}`, where one partner's age was not declared. No standard deviation was calculated due to lack of precise age number.

Category I (AIP)

We are taking the weight to be 1/67.

Results

Arithmetic: `[0.1075251  0.09434135 0.25968439 0.17567362 0.12374137 0.12712287`
` 0.11191129]`

Geometric: `[0.08822606 0.07295315 0.22846887 0.14383875 0.09609098 0.11819801`
` 0.10612507]`

Conclusion

By both AIP approaches, the third criterion looks to be the most "important". They have minimal differences at the second decimal number. The geometric method is slightly lower than the arithmetic method.