## Assignment: Matching Models

### Pass

* **Martin Mohn:**
  + Very good.
* **Leonard Bartsch:**
  + Everything good. Only the interpretation of the matrix Pi relative to random matching is a bit odd. Why should all elements in Pi be equal to one under random matching?
  + PAM implies that we observe more assortative matches on education than what one would expect based on (the product of) the marginal distributions themselves, and vice versa. Random matching relates to matching patterns based on the partners’ education levels, not to being married versus singlehood itself. If being married is positively related to education, there is no reason to believe the match surplus would be one for everyone.
  + Pi equal to one will only hold for the diagonal elements under certain additional assumptions or restrictions on the marginal distributions of education in marriage versus singlehood (and between genders).
* **Alexander Andreev:**
  + Everything good. Again, interpretation of Pi relative to random matching is strange in the same sense as for the previous student. I believe they may have worked together on the assignment.
* **Reimy Liou:** 
  + Everything good. Again, interpretation relative to random matching is somewhat strange. Conjectures that, under random matching, match surplus must be one everywhere.
* **Kexin Guo:**
  + P1: Good
  + P2: Pi not correct; due to carelessness when computing number of singles of each education type (male and female not with capitals leads to zeros in vectors with number of singles). Interpretation is all right.
* **Inessa Hajek:** 
  + Very good. Code and interpretations are generally correct.
  + When copying the results of the affinity matrix it seems that you have switched the off-diagonal entries, resulting in a wrong interpretation of the coefficient asked in the question. Honest mistake, though.
* **Felicitas Strasser:** 
  + P1: very good.
  + P2: Unfortunately, Pi was not computed correctly. Estimated log(Pi), which is numerically less stable. A bit surprising, given that the correct matching function was stated in the problem description. Interpretations, even based on the wrong Pi, are good. Final question also correct.
* **Daniel Brunnabend:**
  + P1: Good. However, when trying to cleanly output the affinity matrix, it gets transposed, leading to the interpretation of the wrong coefficient.
  + P2: Surplus matrix incorrect. Square root is only over the denominator, not over the full fraction. Correct matching function stated in problem description, so this is unfortunate. Interpretations are fine, nevertheless.
* **Alina Grässlin:**
  + Generally good. Code for both problems correct and interpretations generally correct. The latter were sometimes a bit shaky or poorly written down.

### Tentative

The following students receive a “pass” grade on the basis of handing in something that did require sufficient effort. However, their code often included mistakes that could have easily been avoided and interpretations were generally incorrect or imprecise

* **Theresa-Marie Hassemer:**
  + P1: All right. Code was okay, but a bit strange. Given that, apart from the application, the code was almost copy paste from the tutorial, this is a bit disappointing. Interpretations were okay.
  + P2: It seems that there are two solutions to P2 in the code. The first one is incorrect. This is because the square root is taken over the entire fraction. It should be taken only over the denominator. This is a bit careless, given that the matching function was given. Interpretation was a bit messy. Also the answer to the final question is wrong: You cannot infer male and female preferences separately in the Choo and Siow model without observing transfers.
* **Le Thi Vo:**
  + P1: Seems all right. Interpretation of rank test results and relation to saliency analysis is a bit shaky. In general, interpretation could be a bit more precise.
  + P2: Error in matching function. Incorrectly put a negative sign in front of fraction and forgot square root over denominator. Again, this is a bit unfortunate given that the matching function was given in the problem statement. Makes interpretations weird, as in Choo and Siow model the matching surplus is necessarily non-negative (compared to affinity matrix). Answer to final question is also wrong: Cannot disentangle male and female preferences from joint surplus.