Supplementary Material

Figure S1: Histogram of propensity scores

FCS



HFIAS



HDDS



IDDS-Women



Fish consumption



Tables S1: Tables showing results from Rosenbaum Bounds Sensitivity analysis

FCS

Gamma sig+ sig- t-hat+ t-hat- CI+ CI-

----------------------------------------------------------------------

1 0 0 37.7977 37.7977 36.6121 38.9891

1.1 0 0 37.0592 38.5379 35.8813 39.7398

1.2 0 0 36.3693 39.2303 35.2279 40.3845

1.3 0 0 35.7652 39.8508 34.635 40.9982

1.4 0 0 35.2208 40.3909 34.0783 41.5523

1.5 0 0 34.7175 40.9144 33.5592 42.0676

1.6 0 0 34.2399 41.3918 33.076 42.5336

1.7 0 0 33.7916 41.838 32.6321 42.9463

1.8 0 0 33.3692 42.2487 32.2079 43.3448

1.9 0 0 32.9842 42.6265 31.803 43.7047

2 0 0 32.617 42.9623 31.4227 44.0467

2.1 0 0 32.2617 43.2943 31.0641 44.3605

2.2 0 0 31.9199 43.5973 30.7299 44.6555

2.3 0 0 31.5992 43.8829 30.4121 44.9143

2.4 0 0 31.2987 44.1472 30.1155 45.1743

2.5 0 0 31.0122 44.4082 29.8198 45.4133

2.6 0 0 30.7394 44.6453 29.5304 45.6306

2.7 0 0 30.4794 44.859 29.2403 45.8431

2.8 0 0 30.2393 45.0635 28.9609 46.0448

2.9 0 0 29.997 45.2703 28.6928 46.2383

3 0 0 29.7558 45.4559 28.4413 46.4297

HFIAS

Gamma sig+ sig- t-hat+ t-hat- CI+ CI-

----------------------------------------------------------------------

1 0 0 -.260825 -.260825 -.270473 -.250306

1.1 0 0 -.26716 -.254408 -.275423 -.243041

1.2 0 0 -.272113 -.24798 -.279615 -.236052

1.3 0 0 -.276095 -.241872 -.283465 -.229973

1.4 0 0 -.279631 -.236052 -.286555 -.223867

1.5 0 0 -.282954 -.230912 -.289637 -.217947

1.6 0 0 -.285707 -.225615 -.292762 -.212249

1.7 0 0 -.288121 -.220557 -.295353 -.207058

1.8 0 0 -.290827 -.215817 -.297607 -.202273

1.9 0 0 -.29337 -.211063 -.300098 -.197729

2 0 0 -.29544 -.206914 -.302519 -.193674

2.1 0 0 -.297282 -.203038 -.304886 -.18968

2.2 0 0 -.299333 -.19912 -.307005 -.186299

2.3 0 1.1e-16 -.301376 -.195685 -.309191 -.183372

2.4 0 2.0e-15 -.303305 -.192368 -.311391 -.180241

2.5 0 2.7e-14 -.305131 -.189155 -.313389 -.177354

2.6 0 3.0e-13 -.306872 -.186445 -.315312 -.175118

2.7 0 2.6e-12 -.308716 -.184117 -.317341 -.172817

2.8 0 2.0e-11 -.310382 -.181573 -.319011 -.170114

2.9 0 1.2e-10 -.312188 -.179225 -.320719 -.167255

3 0 6.8e-10 -.313776 -.176949 -.322232 -.164669

3.1 0 3.3e-09 -.315296 -.175157 -.323739 -.161745

3.2 0 1.4e-08 -.316886 -.173387 -.325332 -.158624

3.3 0 5.3e-08 -.318341 -.171249 -.326924 -.155938

3.4 0 1.8e-07 -.319665 -.169008 -.328443 -.153033

3.5 0 5.7e-07 -.321004 -.166885 -.329781 -.149604

3.6 0 1.7e-06 -.322156 -.164796 -.330963 -.146601

3.7 0 4.5e-06 -.32337 -.162422 -.332188 -.142484

3.8 0 .000011 -.324563 -.160137 -.333488 -.138533

3.9 0 .000026 -.325832 -.157725 -.334763 -.13466

4 0 .000058 -.327141 -.155675 -.335972 -.1306

4.1 0 .000122 -.328226 -.153442 -.337252 -.126194

4.2 0 .000243 -.329297 -.150931 -.338339 -.121326

4.3 0 .000462 -.330261 -.148294 -.339417 -.115328

4.4 0 .00084 -.331257 -.146006 -.340549 -.109037

4.5 0 .001465 -.332154 -.142624 -.341659 -.10319

4.6 0 .002459 -.333143 -.139247 -.34293 -.096064

4.7 0 .003982 -.334183 -.136526 -.344024 -.088548

4.8 0 .006237 -.335063 -.13367 -.345305 -.082137

4.9 0 .009469 -.336039 -.130433 -.346392 -.075699

5 0 .013962 -.336981 -.127133 -.347531 -.068704

5.1 0 .020029 -.337857 -.124059 -.348515 -.061455

5.2 0 .028006 -.338661 -.119525 -.349449 -.054131

5.3 0 .038228 -.33955 -.114748 -.3503 -.03895

5.4 0 .051017 -.340379 -.110224 -.351237 .015093

5.5 0 .066657 -.341173 -.105808 -.352077 .122452

5.6 0 .085378 -.342088 -.100631 -.353096 .142974

5.7 0 .107333 -.342981 -.095459 -.353907 .156379

5.8 0 .13259 -.343824 -.089745 -.354779 .165597

5.9 0 .161118 -.344814 -.084888 -.355757 .174849

6 0 .192786 -.345589 -.07968 -.356729 .181315

6.1 0 .227364 -.346469 -.075349 -.35782 .189405

6.2 0 .264531 -.347286 -.069984 -.358841 .19519

6.3 0 .303887 -.348031 -.065226 -.359665 .201792

6.4 0 .344972 -.348749 -.059399 -.360622 .205309

6.5 0 .387284 -.349449 -.054018 -.361509 .210255

6.6 0 .430299 -.350073 -.044815 -.362351 .214947

6.7 0 .473491 -.350823 -.028143 -.363202 .218756

6.8 0 .516351 -.351451 .074562 -.364117 .222904

6.9 0 .558405 -.352005 .121003 -.364918 .227233

7 0 .599223 -.352754 .136615 -.365794 .232076

7.1 0 .638436 -.353429 .148479 -.366771 .238759

7.2 0 .675734 -.353995 .158185 -.367632 .244611

7.3 0 .710875 -.354635 .164175 -.368488 .251211

7.4 0 .743685 -.355328 .171006 -.369253 .258979

7.5 0 .774052 -.356003 .176719 -.370284 .267727

7.6 0 .801923 -.356729 .181315 -.371312 .276554

7.7 0 .827297 -.357484 .186942 -.372117 .286406

7.8 0 .850221 -.358294 .192371 -.373166 .298212

7.9 0 .870776 -.358975 .196262 -.374211 .3093

8 0 .889078 -.359517 .201203 -.375285 .317869

8.1 0 .905259 -.360179 .203926 -.376322 .324401

8.2 0 .919473 -.360852 .206564 -.377149 .332566

8.3 0 .931877 -.361509 .210203 -.377945 .343429

8.4 0 .942637 -.362143 .213651 -.378783 .36796

8.5 0 .951914 -.362694 .21655 -.379744 .440174

8.6 0 .959867 -.363295 .219447 -.380591 .615874

8.7 0 .966648 -.363919 .222166 -.381513 .641159

8.8 0 .972399 -.36445 .225135 -.382428 .657172

8.9 0 .977251 -.365123 .2283 -.383694 .666591

9 0 .981323 -.365705 .231536 -.384823 .67242

9.1 0 .984726 -.366387 .236268 -.385943 .678113

9.2 0 .987555 -.366956 .24074 -.387057 .683645

9.3 0 .989898 -.367632 .244661 -.388172 .690051

9.4 0 .991828 -.368187 .248633 -.389068 .695661

9.5 0 .993413 -.368866 .254471 -.390048 .703827

9.6 0 .994708 -.36939 .259665 -.390973 .711376

9.7 0 .995762 -.370074 .265769 -.391994 .717699

9.8 0 .996617 -.370737 .271515 -.392867 .722871

9.9 0 .997308 -.371477 .278438 -.393805 .728082

10 0 .997865 -.371983 .284934 -.394742 .734559

10.1 0 .998311 -.372697 .292548 -.39561 .742193

10.2 0 .998668 -.373384 .30054 -.396525 .750787

10.3 0 .998952 -.374078 .308171 -.39734 .76704

10.4 0 .999178 -.374793 .313778 -.398101 .778872

10.5 0 .999357 -.375511 .319284 -.398936 .792208

10.6 0 .999498 -.376185 .32399 -.399965 .810377

10.7 0 .99961 -.376846 .328477 -.401191 .828719

10.8 0 .999697 -.377423 .337021 -.40233 .855242

10.9 0 .999765 -.377936 .34311 -.403363 1.07631

11 0 .999819 -.378541 .356587 -.404514 1.11262

11.1 0 .99986 -.379086 .381596 -.4057 1.13454

11.2 0 .999892 -.379736 .440174 -.406419 1.14421

11.3 0 .999917 -.380313 .600049 -.407062 1.15579

11.4 0 .999937 -.380945 .628568 -.407884 1.16719

11.5 0 .999952 -.381513 .641222 -.408655 1.17597

11.6 0 .999963 -.382154 .65061 -.409472 1.18514

11.7 0 .999972 -.382802 .66171 -.410379 1.19218

11.8 0 .999979 -.383695 .666591 -.411198 1.19871

11.9 0 .999984 -.384398 .671321 -.412137 1.2031

12 0 .999988 -.385161 .674306 -.412941 1.20852

12.1 0 .999991 -.385936 .677972 -.414138 1.21149

12.2 0 .999993 -.386609 .681302 -.415119 1.21643

12.3 0 .999995 -.38736 .685287 -.416098 1.22046

12.4 0 .999996 -.388127 .689867 -.4172 1.2232

12.5 0 .999997 -.388717 .693987 -.418264 1.22784

12.6 0 .999998 -.389365 .697887 -.419483 1.23204

12.7 0 .999998 -.390005 .703548 -.420378 1.2347

12.8 0 .999999 -.390679 .707744 -.421335 1.23993

12.9 0 .999999 -.391222 .712821 -.422433 1.24447

13 0 .999999 -.391855 .71717 -.423609 1.25033

13.1 0 .999999 -.392469 .721115 -.424775 1.25603

13.2 0 1 -.393028 .723919 -.425682 1.26615

13.3 0 1 -.393663 .727236 -.426424 1.27795

13.4 0 1 -.394386 .730996 -.427466 1.29142

13.5 0 1 -.394897 .735848 -.428602 1.3087

13.6 0 1 -.39549 .740633 -.42993 1.3205

13.7 0 1 -.396084 .74579 -.43112 1.33167

13.8 0 1 -.396661 .751696 -.432421 1.34599

13.9 0 1 -.39719 .762602 -.433858 1.62436

14 0 1 -.397644 .771591 -.435461 1.73481

14.1 0 1 -.398149 .778991 -.436546 1.99032

14.2 0 1 -.398611 .787975 -.437962 2.09501

14.3 0 1 -.399292 .795154 -.439403 2.13632

14.4 0 1 -.399906 .809011 -.440647 2.1492

14.5 0 1 -.400619 .821269 -.442281 2.15849

14.6 0 1 -.401506 .834176 -.4436 2.1659

14.7 0 1 -.402075 .848573 -.444814 2.17159

14.8 0 1 -.402779 .952725 -.446359 2.17552

14.9 0 1 -.403552 1.08017 -.447692 2.18226

15 0 1 -.404267 1.10712 -.448818 2.1868

15.1 0 1 -.404986 1.1254 -.450019 2.18976

15.2 0 1 -.405704 1.13454 -.451135 2.19267

15.3 0 1 -.406082 1.14065 -.45265 2.19674

15.4 0 1 -.406492 1.14711 -.45398 2.19883

15.5 0 1 -.40699 1.15482 -.455606 2.20077

15.6 0 1 -.407526 1.16118 -.45726 2.20251

15.7 0 1 -.40801 1.16901 -.459052 2.20472

15.8 0 1 -.408439 1.17455 -.460702 2.2071

15.9 0 1 -.409008 1.17949 -.46182 2.20948

16 0 1 -.409537 1.18549 -.463367 2.21163

16.1 0 1 -.410116 1.1899 -.464679 2.21308

16.2 0 1 -.410582 1.19431 -.466351 2.21421

16.3 0 1 -.411139 1.19805 -.467535 2.21571

16.4 0 1 -.411734 1.20031 -.468563 2.21726

16.5 0 1 -.412168 1.20372 -.469253 2.21901

16.6 0 1 -.412763 1.20723 -.47084 2.22111

16.7 0 1 -.413413 1.20978 -.472069 2.22273

16.8 0 1 -.414123 1.21149 -.473256 2.22459

16.9 0 1 -.414786 1.21426 -.474351 2.2262

17 0 1 -.415243 1.21755 -.475322 2.22728

17.1 0 1 -.415939 1.21996 -.476387 2.22995

17.2 0 1 -.416557 1.22186 -.477571 2.23298

17.3 0 1 -.417248 1.22339 -.478507 2.23486

17.4 0 1 -.417827 1.22611 -.479112 2.23687

17.5 0 1 -.418591 1.22917 -.480314 2.23905

17.6 0 1 -.419284 1.23169 -.481355 2.24213

17.7 0 1 -.420027 1.23361 -.482509 2.24617

17.8 0 1 -.420426 1.23525 -.483363 2.24928

17.9 0 1 -.421042 1.23825 -.484093 2.25238

18 0 1 -.421699 1.24151 -.485205 2.25578

18.1 0 1 -.422388 1.24438 -.486061 2.26127

18.2 0 1 -.422935 1.24742 -.486945 2.26443

18.3 0 1 -.423721 1.25097 -.487876 2.26769

18.4 0 1 -.424362 1.25482 -.488932 2.27148

18.5 0 1 -.425178 1.25912 -.489519 2.27708

18.6 0 1 -.425643 1.26481 -.490281 2.28011

18.7 0 1 -.426189 1.27242 -.491237 2.28342

18.8 0 1 -.426574 1.27941 -.492073 2.28688

18.9 0 1 -.427162 1.28821 -.493035 2.29082

19 0 1 -.427797 1.29841 -.493785 2.29392

19.1 0 1 -.428595 1.30704 -.494832 2.29656

19.2 0 1 -.429196 1.31536 -.495789 2.29912

19.3 0 1 -.430128 1.32119 -.496937 2.30196

19.4 0 1 -.430933 1.3295 -.497376 2.30556

19.5 0 1 -.431392 1.33644 -.497766 2.30814

19.6 0 1 -.432285 1.34345 -.498337 2.3103

19.7 0 1 -.433266 1.35443 -.49872 2.3125

19.8 0 1 -.433919 1.63718 -.499333 2.31432

19.9 0 1 -.435041 1.71042 -.500053 2.31606

20 0 1 -.435782 1.84897 -.500467 2.31777

HDDS

Gamma sig+ sig- t-hat+ t-hat- CI+ CI-

----------------------------------------------------------------------

1 0 0 1.06449 1.06449 .957915 1.41951

1.1 0 0 .974912 1.25265 .94007 1.42918

1.2 0 0 .951661 1.4239 .927203 1.44692

1.3 0 0 .937676 1.43182 .920026 1.46311

1.4 6.7e-16 0 .92719 1.44695 .716195 1.49197

1.5 1.4e-13 0 .922086 1.46008 .569608 1.56865

1.6 1.3e-11 0 .758078 1.47879 .489235 1.6816

1.7 5.9e-10 0 .637434 1.52429 .462998 1.79715

1.8 1.6e-08 0 .531183 1.61605 .449747 1.92352

1.9 2.6e-07 0 .480188 1.70461 .439617 1.92758

2 3.0e-06 0 .462522 1.80898 .430916 1.93568

2.1 .000024 0 .45107 1.9226 .426565 1.94481

2.2 .00014 0 .443145 1.92632 .423522 1.95189

2.3 .000645 0 .435624 1.93007 .409439 1.96299

2.4 .002386 0 .428934 1.93816 .248321 1.97407

2.5 .007273 0 .426014 1.94628 .150391 1.98973

2.6 .018731 0 .423709 1.95156 .064708 2.02105

2.7 .041605 0 .418674 1.96067 .013922 2.07169

2.8 .081164 0 .292263 1.96892 -.017649 2.13361

2.9 .14132 0 .212276 1.97788 -.033132 2.19576

3 .222792 0 .136973 1.99352 -.042733 2.24913

IDDS Women

Gamma sig+ sig- t-hat+ t-hat- CI+ CI-

----------------------------------------------------------------------

1 0 0 1.12241 1.12241 .903303 1.15959

1.1 0 0 1.05843 1.14306 .730752 1.19466

1.2 0 0 .841839 1.16915 .678008 1.271

1.3 0 0 .71809 1.20032 .652883 1.412

1.4 0 0 .677942 1.27123 .632535 1.6124

1.5 1.3e-14 0 .655753 1.38838 .620285 1.6224

1.6 1.5e-12 0 .637445 1.54845 .611816 1.63627

1.7 8.0e-11 0 .624902 1.61796 .427552 1.65454

1.8 2.5e-09 0 .617783 1.62653 .301019 1.67264

1.9 4.8e-08 0 .569537 1.63863 .221826 1.69295

2 6.2e-07 0 .422595 1.65478 .185693 1.71959

2.1 5.6e-06 0 .321943 1.66902 .165699 1.77281

2.2 .000038 0 .244194 1.68577 .15284 1.84792

2.3 .000195 0 .199057 1.70256 .13941 1.92216

2.4 .000807 0 .178579 1.73393 .130829 2.02622

2.5 .002737 0 .163736 1.78254 .123344 2.11365

2.6 .007806 0 .153472 1.84442 .118367 2.11872

2.7 .019113 0 .141891 1.90578 .113326 2.12416

2.8 .040908 0 .134477 1.98058 .03085 2.13189

2.9 .077765 0 .127459 2.06527 -.078571 2.1406

3 .133163 0 .122312 2.11469 -.14949 2.15276

Fish consumption per week (kg)

Gamma sig+ sig- t-hat+ t-hat- CI+ CI-

----------------------------------------------------------------------

1 0 0 .994873 .994873 .893983 1.0427

1.1 0 0 .932606 1.02551 .824858 1.10317

1.2 0 0 .87451 1.0531 .788113 1.17467

1.3 0 0 .814764 1.1163 .761855 1.23553

1.4 0 0 .788035 1.1748 .735161 1.26434

1.5 0 0 .765772 1.22923 .689794 1.28907

1.6 0 0 .745371 1.25694 .649661 1.32396

1.7 0 0 .713504 1.27703 .609309 1.38046

1.8 0 0 .674273 1.29765 .567643 1.43022

1.9 0 0 .642309 1.33596 .546203 1.47694

2 0 0 .607579 1.38159 .532616 1.5016

2.1 0 0 .572851 1.4225 .517879 1.51824

2.2 0 0 .551604 1.46506 .50367 1.53565

2.3 0 0 .539619 1.4913 .485846 1.5539

2.4 0 0 .527764 1.50753 .461076 1.59343

2.5 0 0 .515694 1.52061 .433162 1.63579

2.6 1.1e-16 0 .504464 1.53466 .411133 1.67653

2.7 6.7e-16 0 .491078 1.54874 .389387 1.71139

2.8 6.6e-15 0 .472734 1.57246 .367577 1.73597

2.9 5.2e-14 0 .449844 1.611 .343452 1.75213

3 3.5e-13 0 .429281 1.64313 .323298 1.76466

3.1 2.1e-12 0 .411457 1.67593 .306607 1.77849

3.2 1.1e-11 0 .393932 1.70502 .296278 1.79368

3.3 5.1e-11 0 .376632 1.72724 .28906 1.81134

3.4 2.2e-10 0 .358179 1.74265 .280403 1.84476

3.5 8.3e-10 0 .340331 1.75474 .271289 1.87433

3.6 2.9e-09 0 .324228 1.76408 .262488 1.90155

3.7 9.4e-09 0 .309721 1.7746 .25534 1.9294

3.8 2.8e-08 0 .300841 1.78672 .245961 1.95692

3.9 7.9e-08 0 .293801 1.79863 .233703 1.97568

4 2.1e-07 0 .288519 1.81352 .220455 1.99093

4.1 5.1e-07 0 .28172 1.8412 .203467 2.00137

4.2 1.2e-06 0 .274315 1.8649 .188277 2.00994

4.3 2.7e-06 0 .267621 1.88585 .175659 2.01865

4.4 5.7e-06 0 .261042 1.90713 .162448 2.02855

4.5 .000012 0 .255611 1.92871 .150172 2.03903

4.6 .000023 0 .248572 1.95132 .138114 2.04944

4.7 .000043 0 .240311 1.9678 .125033 2.06419

4.8 .000079 0 .229839 1.98017 .111636 2.08945

4.9 .000138 0 .220001 1.99133 .097944 2.11339

5 .000236 0 .207148 1.99931 .087176 2.13583

5.1 .00039 0 .194598 2.00615 .076334 2.15691

5.2 .000627 0 .183939 2.01279 .065607 2.17665

5.3 .000982 0 .174331 2.01945 .058235 2.19578

5.4 .001502 0 .164391 2.02667 .052352 2.21167

5.5 .002242 0 .155276 2.03518 .047121 2.22497

5.6 .003274 0 .146737 2.04201 .042778 2.2358

5.7 .004683 0 .137001 2.05059 .039228 2.24588

5.8 .006567 0 .127968 2.06072 .036134 2.25333

5.9 .009038 0 .117239 2.07752 .031004 2.26003

6 .012222 0 .106725 2.0971 .02648 2.26692

6.1 .016252 0 .097187 2.11481 .021677 2.27441

6.2 .021269 0 .089606 2.13093 .017107 2.28433

6.3 .02742 0 .081297 2.14581 .011813 2.29322

6.4 .034847 0 .073817 2.16275 .008302 2.30503

6.5 .043688 0 .065513 2.1768 .004078 2.32418

6.6 .054069 0 .059881 2.19063 -.001743 2.34379

6.7 .066103 0 .055579 2.20371 -.007565 2.36106

6.8 .079879 0 .051028 2.2147 -.014447 2.3751

6.9 .095463 0 .047361 2.22428 -.021274 2.39144

7 .112894 0 .044206 2.23216 -.029353 2.40751

\* gamma - log odds of differential assignment due to unobserved factors

sig+ - upper bound significance level

sig- - lower bound significance level

t-hat+ - upper bound Hodges-Lehmann point estimate

t-hat- - lower bound Hodges-Lehmann point estimate

CI+ - upper bound confidence interval (a= .9)

CI- - lower bound confidence interval (a= .9)