**Comparing with network-based menus**

C =

1.3147 0.6576 1.1557 1.2060 0.9387 0.7760 1.2513 1.3407 0.8517 0.5759

1.4058 1.4706 0.5357 0.5318 0.8816 1.1797 0.7551 0.7543 1.3308 0.5540

0.6270 1.4572 1.3491 0.7769 1.2655 1.1551 1.0060 1.3143 1.0853 1.0308

1.4134 0.9854 1.4340 0.5462 1.2952 0.6626 1.1991 0.7435 1.0497 1.2792

1.1324 1.3003 1.1787 0.5971 0.6869 0.6190 1.3909 1.4293 1.4172 1.4340

0.5975 0.6419 1.2577 1.3235 0.9898 0.9984 1.4593 0.8500 0.7858 0.6299

0.7785 0.9218 1.2431 1.1948 0.9456 1.4597 1.0472 0.6966 1.2572 1.0688

1.0469 1.4157 0.8922 0.8171 1.1463 0.8404 0.6386 0.7511 1.2537 0.9694

1.4575 1.2922 1.1555 1.4502 1.2094 1.0853 0.6493 1.1160 0.8804 0.5119

1.4649 1.4595 0.6712 0.5344 1.2547 0.7238 0.7575 0.9733 1.0678 0.8371

D =

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

r =

2

2

2

2

2

2

2

2

2

2

U =

-0.3378 -0.0495 -0.3933 -0.0686 0.3530 -0.0827 0.2803 -0.2652 0.0470 0.4294

0.2943 -0.4162 0.4619 0.4106 0.1221 -0.4503 -0.1103 -0.1468 -0.2037 0.2757

-0.1888 -0.2710 -0.4954 -0.3182 -0.1490 0.4027 -0.2583 0.3212 0.2447 -0.0132

0.0285 0.4133 0.2749 -0.2362 0.0132 0.4448 -0.0961 -0.4846 -0.3110 -0.0641

-0.3344 -0.3476 0.3173 -0.3545 -0.0982 -0.0091 -0.4035 -0.4570 0.1868 -0.0532

0.1020 0.3258 0.3687 -0.3639 -0.4240 -0.0107 -0.3680 -0.3310 -0.3165 -0.1937

-0.2370 0.0383 -0.4156 0.3693 -0.2601 -0.1623 0.4421 0.1491 -0.1315 0.0085

0.1541 0.4961 -0.1002 0.0797 -0.3767 0.4001 0.4561 0.2317 0.1256 0.0108

0.1892 -0.4218 -0.2401 0.0499 -0.3161 -0.1308 0.0752 0.1477 0.2802 0.3176

0.2482 -0.0573 0.3001 -0.3550 -0.2600 -0.3888 -0.4402 -0.0491 -0.4189 0.2948

yprobs =

0.1965 0.4205 0.3446 0.1416 0.1767 0.3316 0.2915 0.5533 0.3898 0.4982

0.1489 0.1854 0.1282 0.2670 0.3502 0.1879 0.0640 0.1123 0.0953 0.1369

0.2036 0.1743 0.3117 0.2185 0.5968 0.4721 0.2963 0.2754 0.3211 0.3434

0.3257 0.2244 0.5646 0.2593 0.2136 0.5694 0.3348 0.4207 0.3833 0.4941

0.2438 0.3102 0.7104 0.5105 0.4013 0.3910 0.2942 0.5388 0.2338 0.2162

0.3814 0.4247 0.3573 0.5874 0.4139 0.5093 0.7104 0.4434 0.3769 0.2272

0.2435 0.2827 0.4691 0.5209 0.2094 0.1897 0.1743 0.5113 0.3883 0.2919

0.1149 0.2121 0.2346 0.2945 0.1869 0.0756 0.0980 0.0875 0.2089 0.2119

0.1123 0.2283 0.2051 0.1974 0.2596 0.2916 0.1132 0.2464 0.1639 0.0633

0.4280 0.1728 0.2823 0.4471 0.0937 0.4099 0.2346 0.1521 0.1747 0.4534

notes =

'saa\_trial1'

x =

0 0 0 0 0 1 0 0 1 1

0 0 0 0 1 0 0 0 0 1

0 0 0 0 1 0 0 0 0 0

0 0 1 0 0 0 1 1 1 0

1 1 1 1 1 0 0 0 0 0

0 0 0 1 0 0 1 1 0 0

1 0 0 0 0 0 1 1 1 0

0 1 1 1 0 0 0 0 0 0

0 0 0 0 0 1 0 0 0 0

1 1 0 0 0 1 0 0 0 1

x =

0 0 0 0 0 0 0 1 0 1

0 1 0 0 1 0 0 0 1 0

0 0 0 0 1 1 0 0 0 0

1 0 1 0 0 1 0 0 1 1

0 0 1 0 0 0 1 1 0 0

1 0 0 0 1 1 1 0 0 0

0 0 1 1 0 0 1 1 0 0

0 1 0 0 0 0 0 0 1 0

0 1 0 1 0 0 0 0 0 0

1 0 0 1 0 0 0 0 0 1

x =

0 1 0 0 0 0 0 1 1 0

0 0 0 1 1 0 0 0 0 0

0 0 0 0 1 1 0 0 0 1

1 0 0 0 0 0 1 0 0 1

0 1 1 0 0 0 0 1 0 0

1 0 0 0 0 0 1 0 0 0

0 0 1 1 1 0 0 0 1 1

0 0 1 0 0 0 0 0 0 0

0 1 0 0 0 1 0 1 1 0

1 0 0 1 0 1 1 0 0 0

names =

'LMH'

notes =

'aLaLtrial1'

Gamma =

1.0495 1.1677 1.2654 0.8854 0.8219 1.0496 1.2071 1.7743 1.2035 1.2819

1.2216 1.3812 0.7145 1.1959 1.6605 1.2443 0.6005 0.7684 0.9972 0.7537

0.7321 1.0870 1.3154 0.8377 1.8597 1.5483 1.1122 1.2234 1.2028 1.2215

1.2992 0.9009 1.7442 0.7449 1.0361 1.3673 1.2087 1.1371 1.2222 1.5385

1.0047 1.2081 1.8671 1.2168 1.0652 1.0127 1.2246 1.6838 1.1291 1.1058

0.9197 1.0124 1.2106 1.6181 1.1688 1.3285 1.8863 1.1470 1.0066 0.6849

0.8820 1.0331 1.5710 1.6517 0.8967 1.1137 0.8764 1.3830 1.4144 1.1251

0.9138 1.4287 1.2433 1.4094 1.2084 0.6773 0.6523 0.6730 1.3369 1.2050

1.0833 1.3672 1.2254 1.3486 1.4244 1.4635 0.6822 1.3361 0.9578 0.4558

1.6976 1.1195 0.9723 1.2755 0.8387 1.2864 0.9078 0.8296 0.9278 1.4410

pen =

0.5034 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.4700 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

0.5534 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

0.5304 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

0.5593 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.4767 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

0.5307 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.4886 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

0.5404 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.4872 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aLaMtrial1'

Gamma =

1.0495 1.1677 1.2654 0.8854 0.8219 1.0496 1.2071 1.7743 1.2035 1.2819

1.2216 1.3812 0.7145 1.1959 1.6605 1.2443 0.6005 0.7684 0.9972 0.7537

0.7321 1.0870 1.3154 0.8377 1.8597 1.5483 1.1122 1.2234 1.2028 1.2215

1.2992 0.9009 1.7442 0.7449 1.0361 1.3673 1.2087 1.1371 1.2222 1.5385

1.0047 1.2081 1.8671 1.2168 1.0652 1.0127 1.2246 1.6838 1.1291 1.1058

0.9197 1.0124 1.2106 1.6181 1.1688 1.3285 1.8863 1.1470 1.0066 0.6849

0.8820 1.0331 1.5710 1.6517 0.8967 1.1137 0.8764 1.3830 1.4144 1.1251

0.9138 1.4287 1.2433 1.4094 1.2084 0.6773 0.6523 0.6730 1.3369 1.2050

1.0833 1.3672 1.2254 1.3486 1.4244 1.4635 0.6822 1.3361 0.9578 0.4558

1.6976 1.1195 0.9723 1.2755 0.8387 1.2864 0.9078 0.8296 0.9278 1.4410

pen =

1.0068 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.9399 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

1.1067 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

1.0608 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

1.1186 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.9534 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

1.0613 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.9771 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

1.0808 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.9744 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aLaHtrial1'

Gamma =

1.0495 1.1677 1.2654 0.8854 0.8219 1.0496 1.2071 1.7743 1.2035 1.2819

1.2216 1.3812 0.7145 1.1959 1.6605 1.2443 0.6005 0.7684 0.9972 0.7537

0.7321 1.0870 1.3154 0.8377 1.8597 1.5483 1.1122 1.2234 1.2028 1.2215

1.2992 0.9009 1.7442 0.7449 1.0361 1.3673 1.2087 1.1371 1.2222 1.5385

1.0047 1.2081 1.8671 1.2168 1.0652 1.0127 1.2246 1.6838 1.1291 1.1058

0.9197 1.0124 1.2106 1.6181 1.1688 1.3285 1.8863 1.1470 1.0066 0.6849

0.8820 1.0331 1.5710 1.6517 0.8967 1.1137 0.8764 1.3830 1.4144 1.1251

0.9138 1.4287 1.2433 1.4094 1.2084 0.6773 0.6523 0.6730 1.3369 1.2050

1.0833 1.3672 1.2254 1.3486 1.4244 1.4635 0.6822 1.3361 0.9578 0.4558

1.6976 1.1195 0.9723 1.2755 0.8387 1.2864 0.9078 0.8296 0.9278 1.4410

pen =

2.0137 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

1.8799 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

2.2134 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

2.1216 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

2.2371 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

1.9068 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

2.1227 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

1.9543 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

2.1615 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

1.9489 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aMaLtrial1'

Gamma =

2.0990 2.3354 2.5308 1.7709 1.6438 2.0991 2.4143 3.5485 2.4071 2.5638

2.4432 2.7624 1.4289 2.3919 3.3210 2.4885 1.2011 1.5369 1.9944 1.5075

1.4643 2.1741 2.6307 1.6754 3.7195 3.0966 2.2244 2.4469 2.4057 2.4430

2.5985 1.8018 3.4885 1.4897 2.0723 2.7346 2.4173 2.2742 2.4443 3.0769

2.0095 2.4162 3.7342 2.4336 2.1304 2.0254 2.4492 3.3676 2.2581 2.2116

1.8395 2.0248 2.4212 3.2362 2.3376 2.6570 3.7725 2.2940 2.0132 1.3699

1.7640 2.0662 3.1420 3.3033 1.7934 2.2275 1.7528 2.7661 2.8288 2.2503

1.8276 2.8574 2.4867 2.8189 2.4167 1.3545 1.3045 1.3460 2.6738 2.4101

2.1666 2.7344 2.4509 2.6972 2.8488 2.9270 1.3644 2.6723 1.9156 0.9116

3.3953 2.2391 1.9446 2.5510 1.6774 2.5729 1.8156 1.6593 1.8556 2.8821

pen =

0.5034 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.4700 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

0.5534 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

0.5304 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

0.5593 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.4767 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

0.5307 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.4886 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

0.5404 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.4872 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aMaMtrial1'

Gamma =

2.0990 2.3354 2.5308 1.7709 1.6438 2.0991 2.4143 3.5485 2.4071 2.5638

2.4432 2.7624 1.4289 2.3919 3.3210 2.4885 1.2011 1.5369 1.9944 1.5075

1.4643 2.1741 2.6307 1.6754 3.7195 3.0966 2.2244 2.4469 2.4057 2.4430

2.5985 1.8018 3.4885 1.4897 2.0723 2.7346 2.4173 2.2742 2.4443 3.0769

2.0095 2.4162 3.7342 2.4336 2.1304 2.0254 2.4492 3.3676 2.2581 2.2116

1.8395 2.0248 2.4212 3.2362 2.3376 2.6570 3.7725 2.2940 2.0132 1.3699

1.7640 2.0662 3.1420 3.3033 1.7934 2.2275 1.7528 2.7661 2.8288 2.2503

1.8276 2.8574 2.4867 2.8189 2.4167 1.3545 1.3045 1.3460 2.6738 2.4101

2.1666 2.7344 2.4509 2.6972 2.8488 2.9270 1.3644 2.6723 1.9156 0.9116

3.3953 2.2391 1.9446 2.5510 1.6774 2.5729 1.8156 1.6593 1.8556 2.8821

pen =

1.0068 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.9399 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

1.1067 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

1.0608 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

1.1186 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.9534 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

1.0613 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.9771 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

1.0808 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.9744 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aMaHtrial1'

Gamma =

2.0990 2.3354 2.5308 1.7709 1.6438 2.0991 2.4143 3.5485 2.4071 2.5638

2.4432 2.7624 1.4289 2.3919 3.3210 2.4885 1.2011 1.5369 1.9944 1.5075

1.4643 2.1741 2.6307 1.6754 3.7195 3.0966 2.2244 2.4469 2.4057 2.4430

2.5985 1.8018 3.4885 1.4897 2.0723 2.7346 2.4173 2.2742 2.4443 3.0769

2.0095 2.4162 3.7342 2.4336 2.1304 2.0254 2.4492 3.3676 2.2581 2.2116

1.8395 2.0248 2.4212 3.2362 2.3376 2.6570 3.7725 2.2940 2.0132 1.3699

1.7640 2.0662 3.1420 3.3033 1.7934 2.2275 1.7528 2.7661 2.8288 2.2503

1.8276 2.8574 2.4867 2.8189 2.4167 1.3545 1.3045 1.3460 2.6738 2.4101

2.1666 2.7344 2.4509 2.6972 2.8488 2.9270 1.3644 2.6723 1.9156 0.9116

3.3953 2.2391 1.9446 2.5510 1.6774 2.5729 1.8156 1.6593 1.8556 2.8821

pen =

2.0137 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

1.8799 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

2.2134 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

2.1216 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

2.2371 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

1.9068 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

2.1227 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

1.9543 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

2.1615 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

1.9489 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aHaLtrial1'

Gamma =

4.1979 4.6708 5.0616 3.5417 3.2876 4.1983 4.8286 7.0971 4.8142 5.1275

4.8863 5.5247 2.8579 4.7838 6.6419 4.9770 2.4021 3.0737 3.9887 3.0149

2.9285 4.3482 5.2615 3.3508 7.4390 6.1932 4.4489 4.8937 4.8113 4.8860

5.1970 3.6037 6.9769 2.9794 4.1446 5.4691 4.8347 4.5483 4.8886 6.1539

4.0189 4.8324 7.4684 4.8673 4.2609 4.0508 4.8984 6.7352 4.5162 4.4232

3.6789 4.0496 4.8423 6.4723 4.6752 5.3140 7.5450 4.5879 4.0264 2.7398

3.5279 4.1325 6.2840 6.6067 3.5868 4.4549 3.5057 5.5322 5.6576 4.5006

3.6553 5.7148 4.9734 5.6378 4.8335 2.7090 2.6091 2.6920 5.3476 4.8202

4.3333 5.4687 4.9017 5.3943 5.6977 5.8541 2.7289 5.3445 3.8312 1.8232

6.7905 4.4781 3.8892 5.1019 3.3548 5.1458 3.6312 3.3186 3.7112 5.7642

pen =

0.5034 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.4700 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

0.5534 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

0.5304 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

0.5593 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.4767 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

0.5307 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.4886 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

0.5404 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.4872 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

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0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aHaMtrial1'

Gamma =

4.1979 4.6708 5.0616 3.5417 3.2876 4.1983 4.8286 7.0971 4.8142 5.1275

4.8863 5.5247 2.8579 4.7838 6.6419 4.9770 2.4021 3.0737 3.9887 3.0149

2.9285 4.3482 5.2615 3.3508 7.4390 6.1932 4.4489 4.8937 4.8113 4.8860

5.1970 3.6037 6.9769 2.9794 4.1446 5.4691 4.8347 4.5483 4.8886 6.1539

4.0189 4.8324 7.4684 4.8673 4.2609 4.0508 4.8984 6.7352 4.5162 4.4232

3.6789 4.0496 4.8423 6.4723 4.6752 5.3140 7.5450 4.5879 4.0264 2.7398

3.5279 4.1325 6.2840 6.6067 3.5868 4.4549 3.5057 5.5322 5.6576 4.5006

3.6553 5.7148 4.9734 5.6378 4.8335 2.7090 2.6091 2.6920 5.3476 4.8202

4.3333 5.4687 4.9017 5.3943 5.6977 5.8541 2.7289 5.3445 3.8312 1.8232

6.7905 4.4781 3.8892 5.1019 3.3548 5.1458 3.6312 3.3186 3.7112 5.7642

pen =

1.0068 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.9399 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

1.1067 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

1.0608 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

1.1186 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.9534 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

1.0613 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.9771 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

1.0808 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.9744 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aHaHtrial1'

Gamma =

4.1979 4.6708 5.0616 3.5417 3.2876 4.1983 4.8286 7.0971 4.8142 5.1275

4.8863 5.5247 2.8579 4.7838 6.6419 4.9770 2.4021 3.0737 3.9887 3.0149

2.9285 4.3482 5.2615 3.3508 7.4390 6.1932 4.4489 4.8937 4.8113 4.8860

5.1970 3.6037 6.9769 2.9794 4.1446 5.4691 4.8347 4.5483 4.8886 6.1539

4.0189 4.8324 7.4684 4.8673 4.2609 4.0508 4.8984 6.7352 4.5162 4.4232

3.6789 4.0496 4.8423 6.4723 4.6752 5.3140 7.5450 4.5879 4.0264 2.7398

3.5279 4.1325 6.2840 6.6067 3.5868 4.4549 3.5057 5.5322 5.6576 4.5006

3.6553 5.7148 4.9734 5.6378 4.8335 2.7090 2.6091 2.6920 5.3476 4.8202

4.3333 5.4687 4.9017 5.3943 5.6977 5.8541 2.7289 5.3445 3.8312 1.8232

6.7905 4.4781 3.8892 5.1019 3.3548 5.1458 3.6312 3.3186 3.7112 5.7642

pen =

2.0137 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

1.8799 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

2.2134 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

2.1216 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

2.2371 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

1.9068 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

2.1227 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

1.9543 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

2.1615 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

1.9489 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

**Trial 2**

>> main

C =

1.3147 0.6576 1.1557 1.2060 0.9387 0.7760 1.2513 1.3407 0.8517 0.5759

1.4058 1.4706 0.5357 0.5318 0.8816 1.1797 0.7551 0.7543 1.3308 0.5540

0.6270 1.4572 1.3491 0.7769 1.2655 1.1551 1.0060 1.3143 1.0853 1.0308

1.4134 0.9854 1.4340 0.5462 1.2952 0.6626 1.1991 0.7435 1.0497 1.2792

1.1324 1.3003 1.1787 0.5971 0.6869 0.6190 1.3909 1.4293 1.4172 1.4340

0.5975 0.6419 1.2577 1.3235 0.9898 0.9984 1.4593 0.8500 0.7858 0.6299

0.7785 0.9218 1.2431 1.1948 0.9456 1.4597 1.0472 0.6966 1.2572 1.0688

1.0469 1.4157 0.8922 0.8171 1.1463 0.8404 0.6386 0.7511 1.2537 0.9694

1.4575 1.2922 1.1555 1.4502 1.2094 1.0853 0.6493 1.1160 0.8804 0.5119

1.4649 1.4595 0.6712 0.5344 1.2547 0.7238 0.7575 0.9733 1.0678 0.8371

D =

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

r =

2

2

2

2

2

2

2

2

2

2

U =

-0.3378 -0.0495 -0.3933 -0.0686 0.3530 -0.0827 0.2803 -0.2652 0.0470 0.4294

0.2943 -0.4162 0.4619 0.4106 0.1221 -0.4503 -0.1103 -0.1468 -0.2037 0.2757

-0.1888 -0.2710 -0.4954 -0.3182 -0.1490 0.4027 -0.2583 0.3212 0.2447 -0.0132

0.0285 0.4133 0.2749 -0.2362 0.0132 0.4448 -0.0961 -0.4846 -0.3110 -0.0641

-0.3344 -0.3476 0.3173 -0.3545 -0.0982 -0.0091 -0.4035 -0.4570 0.1868 -0.0532

0.1020 0.3258 0.3687 -0.3639 -0.4240 -0.0107 -0.3680 -0.3310 -0.3165 -0.1937

-0.2370 0.0383 -0.4156 0.3693 -0.2601 -0.1623 0.4421 0.1491 -0.1315 0.0085

0.1541 0.4961 -0.1002 0.0797 -0.3767 0.4001 0.4561 0.2317 0.1256 0.0108

0.1892 -0.4218 -0.2401 0.0499 -0.3161 -0.1308 0.0752 0.1477 0.2802 0.3176

0.2482 -0.0573 0.3001 -0.3550 -0.2600 -0.3888 -0.4402 -0.0491 -0.4189 0.2948

yprobs =

0.1965 0.4205 0.3446 0.1416 0.1767 0.3316 0.2915 0.5533 0.3898 0.4982

0.1489 0.1854 0.1282 0.2670 0.3502 0.1879 0.0640 0.1123 0.0953 0.1369

0.2036 0.1743 0.3117 0.2185 0.5968 0.4721 0.2963 0.2754 0.3211 0.3434

0.3257 0.2244 0.5646 0.2593 0.2136 0.5694 0.3348 0.4207 0.3833 0.4941

0.2438 0.3102 0.7104 0.5105 0.4013 0.3910 0.2942 0.5388 0.2338 0.2162

0.3814 0.4247 0.3573 0.5874 0.4139 0.5093 0.7104 0.4434 0.3769 0.2272

0.2435 0.2827 0.4691 0.5209 0.2094 0.1897 0.1743 0.5113 0.3883 0.2919

0.1149 0.2121 0.2346 0.2945 0.1869 0.0756 0.0980 0.0875 0.2089 0.2119

0.1123 0.2283 0.2051 0.1974 0.2596 0.2916 0.1132 0.2464 0.1639 0.0633

0.4280 0.1728 0.2823 0.4471 0.0937 0.4099 0.2346 0.1521 0.1747 0.4534

notes =

'saa\_trial2'

x =

0 0 0 0 0 1 0 0 1 1

0 0 0 0 1 0 0 0 0 1

0 0 0 0 1 0 0 0 0 0

0 0 1 0 0 0 1 1 1 0

1 1 1 1 1 0 0 0 0 0

0 0 0 1 0 0 1 1 0 0

1 0 0 0 0 0 1 1 1 0

0 1 1 1 0 0 0 0 0 0

0 0 0 0 0 1 0 0 0 0

1 1 0 0 0 1 0 0 0 1

x =

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0 1 0 0 1 0 0 0 1 0

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0 0 1 0 0 0 1 1 0 0

1 0 0 0 1 1 1 0 0 0

0 0 1 1 0 0 1 1 0 0

0 1 0 0 0 0 0 0 1 0

0 1 0 1 0 0 0 0 0 0

1 0 0 1 0 0 0 0 0 1

x =

0 1 0 0 0 0 0 1 1 0

0 0 0 1 1 0 0 0 0 0

0 0 0 0 1 1 0 0 0 1

1 0 0 0 0 0 1 0 0 1

0 1 1 0 0 0 0 1 0 0

1 0 0 0 0 0 1 0 0 0

0 0 1 1 1 0 0 0 1 1

0 0 1 0 0 0 0 0 0 0

0 1 0 0 0 1 0 1 1 0

1 0 0 1 0 1 1 0 0 0

names =

'LMH'

notes =

'aLaLtrial2'

Gamma =

1.0495 1.1677 1.2654 0.8854 0.8219 1.0496 1.2071 1.7743 1.2035 1.2819

1.2216 1.3812 0.7145 1.1959 1.6605 1.2443 0.6005 0.7684 0.9972 0.7537

0.7321 1.0870 1.3154 0.8377 1.8597 1.5483 1.1122 1.2234 1.2028 1.2215

1.2992 0.9009 1.7442 0.7449 1.0361 1.3673 1.2087 1.1371 1.2222 1.5385

1.0047 1.2081 1.8671 1.2168 1.0652 1.0127 1.2246 1.6838 1.1291 1.1058

0.9197 1.0124 1.2106 1.6181 1.1688 1.3285 1.8863 1.1470 1.0066 0.6849

0.8820 1.0331 1.5710 1.6517 0.8967 1.1137 0.8764 1.3830 1.4144 1.1251

0.9138 1.4287 1.2433 1.4094 1.2084 0.6773 0.6523 0.6730 1.3369 1.2050

1.0833 1.3672 1.2254 1.3486 1.4244 1.4635 0.6822 1.3361 0.9578 0.4558

1.6976 1.1195 0.9723 1.2755 0.8387 1.2864 0.9078 0.8296 0.9278 1.4410

pen =

0.5034 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.4700 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

0.5534 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

0.5304 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

0.5593 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.4767 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

0.5307 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.4886 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

0.5404 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.4872 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

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0 1 0 1 0 0 0 0 1 0

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1 0 0 0 0 1 0 0 0 1

notes =

'aLaMtrial2'

Gamma =

1.0495 1.1677 1.2654 0.8854 0.8219 1.0496 1.2071 1.7743 1.2035 1.2819

1.2216 1.3812 0.7145 1.1959 1.6605 1.2443 0.6005 0.7684 0.9972 0.7537

0.7321 1.0870 1.3154 0.8377 1.8597 1.5483 1.1122 1.2234 1.2028 1.2215

1.2992 0.9009 1.7442 0.7449 1.0361 1.3673 1.2087 1.1371 1.2222 1.5385

1.0047 1.2081 1.8671 1.2168 1.0652 1.0127 1.2246 1.6838 1.1291 1.1058

0.9197 1.0124 1.2106 1.6181 1.1688 1.3285 1.8863 1.1470 1.0066 0.6849

0.8820 1.0331 1.5710 1.6517 0.8967 1.1137 0.8764 1.3830 1.4144 1.1251

0.9138 1.4287 1.2433 1.4094 1.2084 0.6773 0.6523 0.6730 1.3369 1.2050

1.0833 1.3672 1.2254 1.3486 1.4244 1.4635 0.6822 1.3361 0.9578 0.4558

1.6976 1.1195 0.9723 1.2755 0.8387 1.2864 0.9078 0.8296 0.9278 1.4410

pen =

1.0068 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.9399 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

1.1067 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

1.0608 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

1.1186 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.9534 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

1.0613 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.9771 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

1.0808 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.9744 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aLaHtrial2'

Gamma =

1.0495 1.1677 1.2654 0.8854 0.8219 1.0496 1.2071 1.7743 1.2035 1.2819

1.2216 1.3812 0.7145 1.1959 1.6605 1.2443 0.6005 0.7684 0.9972 0.7537

0.7321 1.0870 1.3154 0.8377 1.8597 1.5483 1.1122 1.2234 1.2028 1.2215

1.2992 0.9009 1.7442 0.7449 1.0361 1.3673 1.2087 1.1371 1.2222 1.5385

1.0047 1.2081 1.8671 1.2168 1.0652 1.0127 1.2246 1.6838 1.1291 1.1058

0.9197 1.0124 1.2106 1.6181 1.1688 1.3285 1.8863 1.1470 1.0066 0.6849

0.8820 1.0331 1.5710 1.6517 0.8967 1.1137 0.8764 1.3830 1.4144 1.1251

0.9138 1.4287 1.2433 1.4094 1.2084 0.6773 0.6523 0.6730 1.3369 1.2050

1.0833 1.3672 1.2254 1.3486 1.4244 1.4635 0.6822 1.3361 0.9578 0.4558

1.6976 1.1195 0.9723 1.2755 0.8387 1.2864 0.9078 0.8296 0.9278 1.4410

pen =

2.0137 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

1.8799 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

2.2134 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

2.1216 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

2.2371 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

1.9068 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

2.1227 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

1.9543 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

2.1615 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

1.9489 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aMaLtrial2'

Gamma =

2.0990 2.3354 2.5308 1.7709 1.6438 2.0991 2.4143 3.5485 2.4071 2.5638

2.4432 2.7624 1.4289 2.3919 3.3210 2.4885 1.2011 1.5369 1.9944 1.5075

1.4643 2.1741 2.6307 1.6754 3.7195 3.0966 2.2244 2.4469 2.4057 2.4430

2.5985 1.8018 3.4885 1.4897 2.0723 2.7346 2.4173 2.2742 2.4443 3.0769

2.0095 2.4162 3.7342 2.4336 2.1304 2.0254 2.4492 3.3676 2.2581 2.2116

1.8395 2.0248 2.4212 3.2362 2.3376 2.6570 3.7725 2.2940 2.0132 1.3699

1.7640 2.0662 3.1420 3.3033 1.7934 2.2275 1.7528 2.7661 2.8288 2.2503

1.8276 2.8574 2.4867 2.8189 2.4167 1.3545 1.3045 1.3460 2.6738 2.4101

2.1666 2.7344 2.4509 2.6972 2.8488 2.9270 1.3644 2.6723 1.9156 0.9116

3.3953 2.2391 1.9446 2.5510 1.6774 2.5729 1.8156 1.6593 1.8556 2.8821

pen =

0.5034 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.4700 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

0.5534 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

0.5304 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

0.5593 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.4767 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

0.5307 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.4886 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

0.5404 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.4872 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aMaMtrial2'

Gamma =

2.0990 2.3354 2.5308 1.7709 1.6438 2.0991 2.4143 3.5485 2.4071 2.5638

2.4432 2.7624 1.4289 2.3919 3.3210 2.4885 1.2011 1.5369 1.9944 1.5075

1.4643 2.1741 2.6307 1.6754 3.7195 3.0966 2.2244 2.4469 2.4057 2.4430

2.5985 1.8018 3.4885 1.4897 2.0723 2.7346 2.4173 2.2742 2.4443 3.0769

2.0095 2.4162 3.7342 2.4336 2.1304 2.0254 2.4492 3.3676 2.2581 2.2116

1.8395 2.0248 2.4212 3.2362 2.3376 2.6570 3.7725 2.2940 2.0132 1.3699

1.7640 2.0662 3.1420 3.3033 1.7934 2.2275 1.7528 2.7661 2.8288 2.2503

1.8276 2.8574 2.4867 2.8189 2.4167 1.3545 1.3045 1.3460 2.6738 2.4101

2.1666 2.7344 2.4509 2.6972 2.8488 2.9270 1.3644 2.6723 1.9156 0.9116

3.3953 2.2391 1.9446 2.5510 1.6774 2.5729 1.8156 1.6593 1.8556 2.8821

pen =

1.0068 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.9399 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

1.1067 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

1.0608 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

1.1186 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.9534 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

1.0613 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.9771 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

1.0808 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.9744 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aMaHtrial2'

Gamma =

2.0990 2.3354 2.5308 1.7709 1.6438 2.0991 2.4143 3.5485 2.4071 2.5638

2.4432 2.7624 1.4289 2.3919 3.3210 2.4885 1.2011 1.5369 1.9944 1.5075

1.4643 2.1741 2.6307 1.6754 3.7195 3.0966 2.2244 2.4469 2.4057 2.4430

2.5985 1.8018 3.4885 1.4897 2.0723 2.7346 2.4173 2.2742 2.4443 3.0769

2.0095 2.4162 3.7342 2.4336 2.1304 2.0254 2.4492 3.3676 2.2581 2.2116

1.8395 2.0248 2.4212 3.2362 2.3376 2.6570 3.7725 2.2940 2.0132 1.3699

1.7640 2.0662 3.1420 3.3033 1.7934 2.2275 1.7528 2.7661 2.8288 2.2503

1.8276 2.8574 2.4867 2.8189 2.4167 1.3545 1.3045 1.3460 2.6738 2.4101

2.1666 2.7344 2.4509 2.6972 2.8488 2.9270 1.3644 2.6723 1.9156 0.9116

3.3953 2.2391 1.9446 2.5510 1.6774 2.5729 1.8156 1.6593 1.8556 2.8821

pen =

2.0137 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

1.8799 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

2.2134 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

2.1216 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

2.2371 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

1.9068 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

2.1227 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

1.9543 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

2.1615 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

1.9489 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aHaLtrial2'

Gamma =

4.1979 4.6708 5.0616 3.5417 3.2876 4.1983 4.8286 7.0971 4.8142 5.1275

4.8863 5.5247 2.8579 4.7838 6.6419 4.9770 2.4021 3.0737 3.9887 3.0149

2.9285 4.3482 5.2615 3.3508 7.4390 6.1932 4.4489 4.8937 4.8113 4.8860

5.1970 3.6037 6.9769 2.9794 4.1446 5.4691 4.8347 4.5483 4.8886 6.1539

4.0189 4.8324 7.4684 4.8673 4.2609 4.0508 4.8984 6.7352 4.5162 4.4232

3.6789 4.0496 4.8423 6.4723 4.6752 5.3140 7.5450 4.5879 4.0264 2.7398

3.5279 4.1325 6.2840 6.6067 3.5868 4.4549 3.5057 5.5322 5.6576 4.5006

3.6553 5.7148 4.9734 5.6378 4.8335 2.7090 2.6091 2.6920 5.3476 4.8202

4.3333 5.4687 4.9017 5.3943 5.6977 5.8541 2.7289 5.3445 3.8312 1.8232

6.7905 4.4781 3.8892 5.1019 3.3548 5.1458 3.6312 3.3186 3.7112 5.7642

pen =

0.5034 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.4700 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

0.5534 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

0.5304 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

0.5593 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.4767 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

0.5307 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.4886 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

0.5404 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.4872 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aHaMtrial2'

Gamma =

4.1979 4.6708 5.0616 3.5417 3.2876 4.1983 4.8286 7.0971 4.8142 5.1275

4.8863 5.5247 2.8579 4.7838 6.6419 4.9770 2.4021 3.0737 3.9887 3.0149

2.9285 4.3482 5.2615 3.3508 7.4390 6.1932 4.4489 4.8937 4.8113 4.8860

5.1970 3.6037 6.9769 2.9794 4.1446 5.4691 4.8347 4.5483 4.8886 6.1539

4.0189 4.8324 7.4684 4.8673 4.2609 4.0508 4.8984 6.7352 4.5162 4.4232

3.6789 4.0496 4.8423 6.4723 4.6752 5.3140 7.5450 4.5879 4.0264 2.7398

3.5279 4.1325 6.2840 6.6067 3.5868 4.4549 3.5057 5.5322 5.6576 4.5006

3.6553 5.7148 4.9734 5.6378 4.8335 2.7090 2.6091 2.6920 5.3476 4.8202

4.3333 5.4687 4.9017 5.3943 5.6977 5.8541 2.7289 5.3445 3.8312 1.8232

6.7905 4.4781 3.8892 5.1019 3.3548 5.1458 3.6312 3.3186 3.7112 5.7642

pen =

1.0068 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

0.9399 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

1.1067 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

1.0608 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

1.1186 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

0.9534 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

1.0613 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

0.9771 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

1.0808 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

0.9744 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

notes =

'aHaHtrial2'

Gamma =

4.1979 4.6708 5.0616 3.5417 3.2876 4.1983 4.8286 7.0971 4.8142 5.1275

4.8863 5.5247 2.8579 4.7838 6.6419 4.9770 2.4021 3.0737 3.9887 3.0149

2.9285 4.3482 5.2615 3.3508 7.4390 6.1932 4.4489 4.8937 4.8113 4.8860

5.1970 3.6037 6.9769 2.9794 4.1446 5.4691 4.8347 4.5483 4.8886 6.1539

4.0189 4.8324 7.4684 4.8673 4.2609 4.0508 4.8984 6.7352 4.5162 4.4232

3.6789 4.0496 4.8423 6.4723 4.6752 5.3140 7.5450 4.5879 4.0264 2.7398

3.5279 4.1325 6.2840 6.6067 3.5868 4.4549 3.5057 5.5322 5.6576 4.5006

3.6553 5.7148 4.9734 5.6378 4.8335 2.7090 2.6091 2.6920 5.3476 4.8202

4.3333 5.4687 4.9017 5.3943 5.6977 5.8541 2.7289 5.3445 3.8312 1.8232

6.7905 4.4781 3.8892 5.1019 3.3548 5.1458 3.6312 3.3186 3.7112 5.7642

pen =

2.0137 -0.0248 -0.1984 -0.6688 -1.5839 -3.0916 -5.3395 -8.4752 -12.6462 -18.0000

1.8799 -0.0016 -0.0309 -0.1720 -0.5812 -1.4949 -3.2345 -6.2119 -10.9326 -18.0000

2.2134 -0.0218 -0.1811 -0.6258 -1.5081 -2.9837 -5.2102 -8.3474 -12.5565 -18.0000

2.1216 -0.0370 -0.2607 -0.8165 -1.8354 -3.4401 -5.7478 -8.8712 -12.9198 -18.0000

2.2371 -0.0389 -0.2696 -0.8366 -1.8686 -3.4851 -5.7995 -8.9207 -12.9535 -18.0000

1.9068 -0.0590 -0.3586 -1.0306 -2.1795 -3.8964 -6.2634 -9.3565 -13.2463 -18.0000

2.1227 -0.0233 -0.1900 -0.6480 -1.5474 -3.0398 -5.2776 -8.4142 -12.6035 -18.0000

1.9543 -0.0019 -0.0338 -0.1837 -0.6102 -1.5485 -3.3142 -6.3062 -11.0101 -18.0000

2.1615 -0.0028 -0.0441 -0.2231 -0.7045 -1.7184 -3.5609 -6.5933 -11.2423 -18.0000

1.9489 -0.0143 -0.1361 -0.5079 -1.2929 -2.6685 -4.8241 -7.9584 -12.2787 -18.0000

x =

0 0 0 0 0 0 1 1 0 1

1 1 0 0 1 0 0 0 0 0

0 0 0 0 1 1 0 0 1 0

1 0 1 0 0 0 0 0 0 1

0 0 1 0 0 0 1 1 0 0

0 0 0 1 0 0 1 0 0 0

0 0 1 1 0 0 0 0 1 0

0 1 0 1 0 0 0 0 1 0

0 1 0 0 1 1 0 1 0 0

1 0 0 0 0 1 0 0 0 1

**Trial 1 with 6x6**

>> main

C =

1.3147 0.7785 1.4572 1.2922 1.1787 1.2060

1.4058 1.0469 0.9854 1.4595 1.2577 0.5318

0.6270 1.4575 1.3003 1.1557 1.2431 0.7769

1.4134 1.4649 0.6419 0.5357 0.8922 0.5462

1.1324 0.6576 0.9218 1.3491 1.1555 0.5971

0.5975 1.4706 1.4157 1.4340 0.6712 1.3235

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.1948 0.2655 0.2094 -0.3810 0.2513 0.0472

-0.1829 0.2952 0.2547 -0.0016 -0.2449 -0.3614

0.4502 -0.3131 -0.2240 0.4597 0.0060 -0.3507

-0.4656 -0.0102 0.1797 -0.1596 0.1991 -0.2425

-0.0613 -0.0544 0.1551 0.0853 0.3909 0.3407

-0.1184 0.1463 -0.3374 -0.2762 0.4593 -0.2457

yprobs =

0.5889 0.2474 0.3472 0.8971 0.4498 0.7898

0.5050 0.2069 0.6015 0.2086 0.8330 0.6165

0.3749 0.5670 0.2556 0.3692 0.1422 0.1725

0.5154 0.4896 0.1828 0.1762 0.2299 0.3749

0.2040 0.0635 0.1821 0.2565 0.2500 0.1783

0.1379 0.1827 0.2135 0.1607 0.1579 0.1377

notes =

'saa\_trial1'

x =

0 0 0 1 0 0

0 0 1 0 1 0

1 1 1 0 0 0

1 1 0 0 0 0

0 0 0 1 1 1

0 0 0 0 0 1

Saa objave =

-0.4610

x =

0 1 0 1 0 0

0 0 0 0 1 0

0 1 0 0 0 0

1 0 0 0 0 0

1 0 1 1 1 1

0 0 1 0 0 1

Saa objave =

-0.3761

x =

0 0 0 0 1 1

0 0 0 0 1 1

0 1 0 1 0 0

1 1 0 0 0 0

1 0 1 1 0 0

0 0 1 0 0 0

Saa objave =

-0.0288

names =

'LMH'

notes =

'aLaLtrial1'

Gamma =

1.4840 0.7365 1.2159 1.9052 1.2207 1.7115

1.4652 0.8358 1.4007 1.0447 1.8863 1.1966

1.0987 1.9164 1.1855 1.3511 0.9195 0.7497

1.7497 1.7232 0.6909 0.6244 0.9114 1.0318

1.2077 0.5284 1.0336 1.4810 1.3639 0.8593

0.7855 1.3801 1.4614 1.2840 0.8927 1.1478

pen =

0.6023 -1.5149 -2.6774 -4.3850 -6.7756 -10.0000

0.5573 -1.2139 -2.2937 -3.9805 -6.4730 -10.0000

0.5467 -0.3577 -0.9772 -2.3341 -5.0309 -10.0000

0.4579 -0.4148 -1.0837 -2.4901 -5.1870 -10.0000

0.4845 -0.0399 -0.2113 -0.8955 -3.2004 -10.0000

0.5760 -0.0179 -0.1206 -0.6305 -2.7118 -10.0000

x =

0 0 0 0 0 1

0 0 0 0 1 0

0 1 1 0 0 0

1 1 0 0 0 0

1 0 0 1 1 0

0 0 1 1 0 1

objave =

0.3150

notes =

'aLaMtrial1'

Gamma =

1.4840 0.7365 1.2159 1.9052 1.2207 1.7115

1.4652 0.8358 1.4007 1.0447 1.8863 1.1966

1.0987 1.9164 1.1855 1.3511 0.9195 0.7497

1.7497 1.7232 0.6909 0.6244 0.9114 1.0318

1.2077 0.5284 1.0336 1.4810 1.3639 0.8593

0.7855 1.3801 1.4614 1.2840 0.8927 1.1478

pen =

1.2046 -1.5149 -2.6774 -4.3850 -6.7756 -10.0000

1.1145 -1.2139 -2.2937 -3.9805 -6.4730 -10.0000

1.0934 -0.3577 -0.9772 -2.3341 -5.0309 -10.0000

0.9157 -0.4148 -1.0837 -2.4901 -5.1870 -10.0000

0.9689 -0.0399 -0.2113 -0.8955 -3.2004 -10.0000

1.1521 -0.0179 -0.1206 -0.6305 -2.7118 -10.0000

objave = 0.0990

notes =

'aLaHtrial1'

objave =

0.0016

notes =

'aMaLtrial1'

objave =

0.0858

notes =

'aMaMtrial1'

Gamma =

2.9679 1.4730 2.4319 3.8104 2.4415 3.4230

2.9304 1.6715 2.8014 2.0894 3.7727 2.3933

2.1974 3.8328 2.3711 2.7023 1.8389 1.4995

3.4995 3.4464 1.3819 1.2488 1.8229 2.0637

2.4154 1.0569 2.0672 2.9620 2.7279 1.7186

1.5710 2.7601 2.9228 2.5680 1.7853 2.2956

pen =

1.2046 -1.5149 -2.6774 -4.3850 -6.7756 -10.0000

1.1145 -1.2139 -2.2937 -3.9805 -6.4730 -10.0000

1.0934 -0.3577 -0.9772 -2.3341 -5.0309 -10.0000

0.9157 -0.4148 -1.0837 -2.4901 -5.1870 -10.0000

0.9689 -0.0399 -0.2113 -0.8955 -3.2004 -10.0000

1.1521 -0.0179 -0.1206 -0.6305 -2.7118 -10.0000

x =

0 0 0 0 0 1

0 0 0 0 1 0

0 1 1 0 0 0

1 1 0 0 0 0

1 0 0 1 1 0

0 0 1 1 0 1

objave =

0.0479

notes =

'aMaHtrial1'

objave =

0.1909

notes =

'aHaLtrial1'

objave =

-1.1274

notes =

'aHaMtrial1'

Gamma =

5.9359 2.9461 4.8637 7.6208 4.8829 6.8460

5.8608 3.3430 5.6027 4.1788 7.5453 4.7866

4.3947 7.6656 4.7422 5.4046 3.6778 2.9989

6.9990 6.8929 2.7637 2.4976 3.6457 4.1273

4.8308 2.1138 4.1344 5.9240 5.4557 3.4371

3.1419 5.5202 5.8456 5.1361 3.5707 4.5913

pen =

1.2046 -1.5149 -2.6774 -4.3850 -6.7756 -10.0000

1.1145 -1.2139 -2.2937 -3.9805 -6.4730 -10.0000

1.0934 -0.3577 -0.9772 -2.3341 -5.0309 -10.0000

0.9157 -0.4148 -1.0837 -2.4901 -5.1870 -10.0000

0.9689 -0.0399 -0.2113 -0.8955 -3.2004 -10.0000

1.1521 -0.0179 -0.1206 -0.6305 -2.7118 -10.0000

x =

0 0 0 1 0 1

1 0 0 0 1 0

0 1 1 0 0 0

1 1 0 0 0 0

0 0 0 1 1 0

0 0 1 0 0 1

objave =

-1.0398

notes =

'aHaHtrial1'

objave =

-0.815

**Trial 2 with 6x6**

>> main

>> main

C =

1.3321 0.5481 1.0066 1.3443 0.8362 0.6592

0.5342 1.1966 0.9232 0.7459 1.4743 1.0172

0.5890 0.8029 1.2931 0.6057 1.1283 0.9236

1.0011 0.5855 1.1487 1.3108 1.4203 1.4531

1.0913 1.4635 0.8714 1.0109 1.4765 0.8998

0.7298 1.4986 0.8785 1.0224 0.9506 0.9921

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.1904 -0.1294 0.2501 0.1327 0.0817 -0.0953

-0.2820 -0.2165 0.4098 0.3565 -0.0591 -0.3369

0.3970 0.3787 -0.4976 -0.1118 0.4171 -0.4354

0.3226 0.2534 -0.3859 -0.4370 -0.4798 -0.3598

-0.3579 0.2670 0.0657 -0.0326 0.2107 0.4122

-0.2640 0.0134 0.2591 -0.4875 -0.0986 -0.1396

yprobs =

0.8500 0.2151 0.3460 0.8422 0.6979 0.1803

0.8024 0.5389 0.2706 0.2943 0.8772 0.7727

0.3968 0.3632 0.1507 0.5101 0.2647 0.1241

0.5395 0.1073 0.3726 0.5507 0.1191 0.2301

0.2349 0.0899 0.1478 0.2034 0.0505 0.2860

0.0881 0.1708 0.2365 0.2277 0.1043 0.2118

notes =

'saa\_trial2'

x =

1 0 0 0 0 0

0 0 0 0 1 0

0 1 1 1 0 0

1 0 1 1 0 0

0 0 0 0 1 1

0 1 0 0 0 1

objave =

-0.1205

x =

1 0 0 0 0 0

0 0 0 0 1 0

0 1 1 1 1 0

1 0 0 1 0 1

0 0 1 0 0 1

0 1 0 0 0 0

objave =

-0.1841

x =

0 0 1 0 1 0

0 1 0 0 1 0

1 1 0 1 0 0

1 0 0 1 0 1

0 0 0 0 0 1

0 0 1 0 0 0

objave =

-1.1894

names =

'LMH'

notes =

'aLaLtrial2'

Gamma =

1.9054 0.5877 1.0078 1.9001 1.4356 0.5925

1.3452 1.3224 0.8252 0.7684 1.9157 1.5468

1.1507 1.1852 0.9718 1.4035 1.1353 0.7295

1.6136 0.5142 1.3431 1.7915 0.9558 1.2013

1.3591 1.0430 0.9477 1.2098 0.9130 1.4403

0.6632 1.3279 1.2403 1.2823 0.8285 1.2134

pen =

0.4772 -1.3083 -2.4169 -4.1129 -6.5738 -10.0000

0.4909 -1.6678 -2.8634 -4.5731 -6.9114 -10.0000

0.4452 -0.2961 -0.8565 -2.1493 -4.8387 -10.0000

0.5766 -0.3622 -0.9858 -2.3468 -5.0439 -10.0000

0.5678 -0.0185 -0.1237 -0.6406 -2.7321 -10.0000

0.5060 -0.0218 -0.1385 -0.6874 -2.8248 -10.0000

x =

1 0 0 0 0 0

0 0 0 0 1 0

0 0 0 1 1 0

0 0 1 1 0 0

1 1 0 0 0 1

0 1 1 0 0 1

objave =

-0.2411

notes =

'aLaMtrial2'

objave =

-0.1622

notes =

'aLaHtrial2'

objave =

-0.5776

notes =

'aMaLtrial2'

Gamma =

3.8107 1.1753 2.0157 3.8001 2.8712 1.1851

2.6904 2.6447 1.6504 1.5369 3.8315 3.0936

2.3014 2.3705 1.9436 2.8070 2.2706 1.4591

3.2271 1.0283 2.6862 3.5830 1.9116 2.4027

2.7182 2.0860 1.8955 2.4197 1.8261 2.8806

1.3265 2.6558 2.4806 2.5647 1.6569 2.4267

pen =

0.4772 -1.3083 -2.4169 -4.1129 -6.5738 -10.0000

0.4909 -1.6678 -2.8634 -4.5731 -6.9114 -10.0000

0.4452 -0.2961 -0.8565 -2.1493 -4.8387 -10.0000

0.5766 -0.3622 -0.9858 -2.3468 -5.0439 -10.0000

0.5678 -0.0185 -0.1237 -0.6406 -2.7321 -10.0000

0.5060 -0.0218 -0.1385 -0.6874 -2.8248 -10.0000

x =

1 0 0 1 0 0

0 0 0 0 1 0

0 1 0 0 1 0

0 0 1 1 0 0

1 0 0 0 0 1

0 1 1 0 0 1

objave =

-1.3193

notes =

'aMaMtrial2'

objave =

-1.0805

notes =

'aMaHtrial2'

objave =

-1.3106

notes =

'aHaLtrial2'

Gamma =

7.6215 2.3507 4.0313 7.6003 5.7425 2.3702

5.3808 5.2895 3.3008 3.0737 7.6629 6.1871

4.6027 4.7410 3.8871 5.6140 4.5413 2.9182

6.4543 2.0567 5.3724 7.1661 3.8232 4.8053

5.4364 4.1720 3.7909 4.8393 3.6522 5.7612

2.6529 5.3116 4.9612 5.1293 3.3138 4.8534

pen =

0.4772 -1.3083 -2.4169 -4.1129 -6.5738 -10.0000

0.4909 -1.6678 -2.8634 -4.5731 -6.9114 -10.0000

0.4452 -0.2961 -0.8565 -2.1493 -4.8387 -10.0000

0.5766 -0.3622 -0.9858 -2.3468 -5.0439 -10.0000

0.5678 -0.0185 -0.1237 -0.6406 -2.7321 -10.0000

0.5060 -0.0218 -0.1385 -0.6874 -2.8248 -10.0000

x =

1 0 0 1 0 0

0 0 0 0 1 0

0 1 0 0 1 0

1 0 1 1 0 0

0 0 0 0 0 1

0 1 1 0 0 1

objave =

-0.9851

notes =

'aHaMtrial2'

objave =

-1.0263

notes =

'aHaHtrial2'

objave =

-0.8960

**Trial 3 with 6x6—1000 SAA samples**

>> main

C =

0.9234 1.3167 0.7325 0.8412 0.6852 1.2479

0.7064 0.5934 1.0999 0.8974 1.0865 1.4527

1.0048 1.1898 1.2144 0.5810 0.9040 0.9152

0.9785 1.4297 0.5759 0.6021 0.7768 1.0967

0.6150 1.2945 1.0633 0.8139 1.3313 0.6241

0.6697 0.6460 0.9715 0.7310 1.3008 0.5688

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.1996 0.2044 -0.3667 -0.1455 0.2221 -0.4344

0.4609 -0.1270 0.2573 -0.0012 0.0627 0.1845

0.2997 -0.0004 0.3478 0.4646 0.3923 0.3195

-0.2537 0.2645 -0.1357 0.4246 0.1023 -0.0693

-0.1290 0.2408 -0.4454 -0.1141 -0.3379 -0.4682

-0.2031 -0.1657 0.4747 -0.0239 -0.3401 -0.1261

yprobs =

0.3526 0.2858 0.5674 0.4074 0.4927 0.3721

0.4402 0.4947 0.2721 0.2979 0.6673 0.4464

0.2297 0.3601 0.5199 0.1881 0.3585 0.1961

0.1877 0.4629 0.4787 0.5778 0.1961 0.3041

0.1939 0.1839 0.0920 0.1140 0.0977 0.1357

0.2570 0.1112 0.0681 0.0534 0.1698 0.2247

notes =

'saa\_trial3'

x =

0 1 1 1 0 1

0 0 0 0 1 1

1 0 1 0 1 0

0 1 0 1 0 0

0 0 0 0 0 0

1 0 0 0 0 0

objave =

-2.4933

x =

0 0 1 0 1 1

0 0 0 0 1 1

0 1 1 1 0 0

0 1 0 1 0 0

1 0 0 0 0 0

1 0 0 0 0 0

objave =

-2.3348

x =

0 0 1 1 1 0

0 0 0 0 1 1

0 1 1 0 0 0

0 1 0 1 0 1

1 0 0 0 0 0

1 0 0 0 0 0

objave =

-2.4667

names =

'LMH'

notes =

'aLaLtrial3'

Gamma =

1.0648 1.1472 1.3369 1.1175 1.1855 1.2604

1.0777 1.1108 0.9977 0.9389 1.6413 1.4610

0.9892 1.3581 1.7092 0.6892 1.2119 0.8733

0.8382 1.5755 1.1779 1.3752 0.7531 1.1137

1.1162 1.4143 0.9155 0.8823 1.0734 0.8779

1.3354 0.7560 0.7508 0.5735 1.3114 1.1591

pen =

0.4789 -1.0664 -2.0953 -3.7615 -6.3023 -10.0000

0.4864 -1.2026 -2.2788 -3.9643 -6.4605 -10.0000

0.4841 -0.5008 -1.2362 -2.7039 -5.3927 -10.0000

0.4550 -0.8104 -1.7299 -3.3365 -5.9555 -10.0000

0.4785 -0.0113 -0.0875 -0.5157 -2.4662 -10.0000

0.4073 -0.0189 -0.1253 -0.6458 -2.7427 -10.0000

x =

0 0 1 0 0 0

0 0 0 0 0 1

0 0 1 0 1 0

0 1 0 1 0 0

1 1 0 1 0 0

1 0 0 0 1 1

objave =

-3.8609

notes =

'aLaMtrial3'

objave =

-3.8161

notes =

'aLaHtrial3'

objave =

-3.9358

notes =

'aMaLtrial3'

Gamma =

2.1297 2.2944 2.6739 2.2350 2.3710 2.5208

2.1554 2.2216 1.9953 1.8779 3.2827 2.9221

1.9783 2.7162 3.4184 1.3784 2.4238 1.7467

1.6764 3.1509 2.3558 2.7503 1.5062 2.2275

2.2324 2.8286 1.8311 1.7646 2.1467 1.7558

2.6707 1.5120 1.5015 1.1470 2.6228 2.3181

pen =

0.4789 -1.0664 -2.0953 -3.7615 -6.3023 -10.0000

0.4864 -1.2026 -2.2788 -3.9643 -6.4605 -10.0000

0.4841 -0.5008 -1.2362 -2.7039 -5.3927 -10.0000

0.4550 -0.8104 -1.7299 -3.3365 -5.9555 -10.0000

0.4785 -0.0113 -0.0875 -0.5157 -2.4662 -10.0000

0.4073 -0.0189 -0.1253 -0.6458 -2.7427 -10.0000

x =

0 0 1 0 0 0

0 0 0 0 1 1

0 0 1 0 0 0

0 1 0 1 0 0

1 1 0 1 0 0

1 0 0 0 1 1

objave =

-2.9879

notes =

'aMaMtrial3'

objave =

-2.8751

notes =

'aMaHtrial3'

objave =

-2.7364

notes =

'aHaLtrial3'

Gamma =

4.2594 4.5887 5.3477 4.4700 4.7420 5.0416

4.3108 4.4433 3.9907 3.7558 6.5654 5.8442

3.9567 5.4325 6.8368 2.7568 4.8475 3.4933

3.3528 6.3019 4.7115 5.5006 3.0123 4.4550

4.4647 5.6573 3.6622 3.5293 4.2935 3.5115

5.3414 3.0240 3.0030 2.2941 5.2456 4.6362

pen =

0.4789 -1.0664 -2.0953 -3.7615 -6.3023 -10.0000

0.4864 -1.2026 -2.2788 -3.9643 -6.4605 -10.0000

0.4841 -0.5008 -1.2362 -2.7039 -5.3927 -10.0000

0.4550 -0.8104 -1.7299 -3.3365 -5.9555 -10.0000

0.4785 -0.0113 -0.0875 -0.5157 -2.4662 -10.0000

0.4073 -0.0189 -0.1253 -0.6458 -2.7427 -10.0000

x =

0 0 1 0 0 0

0 0 0 0 1 1

0 0 1 0 0 0

0 1 0 1 0 0

1 1 0 1 0 0

1 0 0 0 1 1

objave =

-2.8633

notes =

'aHaMtrial3'

objave =

-2.8092

notes =

'aHaHtrial3'

objave =

-2.9401

>>

**Trial 4 with 6x6**

>> main

C =

0.6038 1.4241 1.4708 0.7122 1.0643 1.1633

1.2433 1.4137 0.7552 1.4747 1.1249 0.5713

0.9047 0.9609 1.3369 1.4400 0.5355 0.9151

0.5599 0.9044 0.9132 1.0406 0.6177 0.9297

0.6280 0.7576 0.7967 1.4345 1.1608 1.0726

0.5092 1.2312 1.1334 1.4142 1.2751 1.0208

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.1763 0.3200 0.0231 0.3973 -0.2523 0.2762

-0.0893 -0.2709 0.2909 -0.3329 0.1898 -0.3020

0.3555 0.2164 0.2704 0.1653 0.4765 -0.0505

0.1275 -0.0439 -0.1272 -0.2689 -0.0882 -0.3786

-0.1438 0.1183 -0.2148 -0.4712 -0.1572 -0.3877

0.3147 -0.3635 -0.3012 -0.3337 0.0471 0.2013

yprobs =

0.1750 0.7508 0.2300 0.7796 0.4081 0.6356

0.1583 0.1985 0.6903 0.6624 0.6930 0.1769

0.4070 0.4548 0.5499 0.1398 0.4546 0.2818

0.3537 0.2619 0.1113 0.5531 0.4124 0.2325

0.2329 0.2539 0.0525 0.2766 0.1694 0.1014

0.1329 0.1295 0.2590 0.0549 0.1568 0.1413

notes =

'saa\_trial4'

x =

0 1 0 0 0 0

0 0 0 1 1 0

1 0 1 0 0 0

0 0 0 1 1 0

1 1 0 0 0 1

0 0 1 0 0 1

objave =

-0.6610

x =

0 1 0 0 0 0

0 0 0 1 1 0

1 0 1 0 0 1

0 0 0 1 1 0

1 1 0 0 0 0

0 0 1 0 0 1

objave =

-0.7149

x =

0 1 0 0 0 0

0 0 0 1 1 0

1 1 1 0 0 0

0 0 0 1 1 1

1 0 0 0 0 0

0 0 1 0 0 1

objave =

-0.9066

names =

'LMH'

notes =

'aLaLtrial4'

Gamma =

0.5657 1.8435 1.0820 1.5309 1.1472 1.5395

0.8850 1.0370 1.5256 1.8389 1.7149 0.5799

1.1894 1.3041 1.6645 0.9732 1.0911 0.9680

1.0080 0.9912 0.6858 1.6589 1.1578 0.9435

1.0735 1.2067 0.5696 1.6190 1.1329 0.8668

0.7770 1.1247 1.5848 0.9229 1.2538 1.0659

pen =

0.5365 -1.3375 -2.4545 -4.1528 -6.6038 -10.0000

0.5486 -0.9793 -1.9744 -3.6241 -6.1926 -10.0000

0.5078 -0.7283 -1.6056 -3.1844 -5.8257 -10.0000

0.4138 -0.4445 -1.1373 -2.5665 -5.2615 -10.0000

0.4875 -0.0403 -0.2127 -0.8991 -3.2064 -10.0000

0.5487 -0.0105 -0.0835 -0.5008 -2.4323 -10.0000

x =

0 1 0 0 0 0

0 0 0 0 1 0

1 0 1 0 0 0

0 0 0 1 0 1

1 1 0 1 0 0

0 0 1 0 1 1

objave =

-0.7900

notes =

'aLaMtrial4'

objave =

-1.1878

notes =

'aLaHtrial4'

objave =

-0.9099

notes =

'aMaLtrial4'

Gamma =

1.1313 3.6869 2.1639 3.0618 2.2944 3.0791

1.7699 2.0739 3.0512 3.6779 3.4298 1.1597

2.3789 2.6083 3.3290 1.9465 2.1823 1.9359

2.0159 1.9824 1.3716 3.3179 2.3156 1.8870

2.1469 2.4134 1.1392 3.2381 2.2657 1.7336

1.5541 2.2494 3.1696 1.8458 2.5076 2.1318

pen =

0.5365 -1.3375 -2.4545 -4.1528 -6.6038 -10.0000

0.5486 -0.9793 -1.9744 -3.6241 -6.1926 -10.0000

0.5078 -0.7283 -1.6056 -3.1844 -5.8257 -10.0000

0.4138 -0.4445 -1.1373 -2.5665 -5.2615 -10.0000

0.4875 -0.0403 -0.2127 -0.8991 -3.2064 -10.0000

0.5487 -0.0105 -0.0835 -0.5008 -2.4323 -10.0000

x =

0 1 0 0 0 1

0 0 0 0 1 0

1 0 1 0 0 0

0 0 0 1 0 0

1 1 0 1 0 0

0 0 1 0 1 1

objave =

-1.3956

notes =

'aMaMtrial4'

objave =

-1.2445

notes =

'aMaHtrial4'

objave =

-1.2030

notes =

'aHaLtrial4'

Gamma =

2.2626 7.3739 4.3278 6.1237 4.5888 6.1582

3.5398 4.1479 6.1024 7.3558 6.8595 2.3195

4.7578 5.2166 6.6580 3.8930 4.3646 3.8718

4.0319 3.9649 2.7431 6.6357 4.6313 3.7739

4.2939 4.8268 2.2784 6.4762 4.5314 3.4672

3.1082 4.4987 6.3392 3.6916 5.0152 4.2635

pen =

0.5365 -1.3375 -2.4545 -4.1528 -6.6038 -10.0000

0.5486 -0.9793 -1.9744 -3.6241 -6.1926 -10.0000

0.5078 -0.7283 -1.6056 -3.1844 -5.8257 -10.0000

0.4138 -0.4445 -1.1373 -2.5665 -5.2615 -10.0000

0.4875 -0.0403 -0.2127 -0.8991 -3.2064 -10.0000

0.5487 -0.0105 -0.0835 -0.5008 -2.4323 -10.0000

x =

0 1 0 0 0 1

0 0 0 1 1 0

1 0 1 0 0 0

0 0 0 1 0 0

1 1 0 0 0 0

0 0 1 0 1 1

objave =

-1.4241

notes =

'aHaMtrial4'

objave =

-1.3989

notes =

'aHaHtrial4'

objave =

-1.2254

>>

**Recreated trial with z function corrected**

C =

1.1406 0.6519 1.3063 0.9003 0.8541 0.7436

1.1588 0.8807 0.7222 0.6119 0.7662 1.3687

1.1753 1.3210 1.4998 0.9243 0.7915 1.0286

1.2446 0.6714 0.5637 1.1135 0.6884 1.4141

1.3422 0.8300 0.9255 1.4881 0.5229 1.4739

1.0167 1.4665 0.9043 0.7199 0.9494 1.0854

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

-0.3810 -0.4292 -0.4151 0.0473 0.4092 0.2203

0.4265 0.4248 -0.2855 0.0535 0.0708 0.1788

0.0936 0.1421 -0.2512 0.1306 -0.1646 -0.2872

0.3836 -0.3955 -0.2733 0.4855 0.4571 -0.4184

-0.0755 0.2002 0.2030 0.1343 -0.0601 -0.2255

0.1073 -0.1042 0.2542 0.1005 0.1015 0.3675

yprobs =

0.5525 0.3413 0.4069 0.6831 0.6647 0.6170

0.5162 0.5586 0.3289 0.3694 0.7299 0.5654

0.3805 0.4091 0.6842 0.6757 0.3818 0.4137

0.4712 0.7515 0.4491 0.4747 0.6135 0.3743

0.4877 0.7366 0.5506 0.3011 0.5867 0.6547

0.5402 0.5327 0.7547 0.7756 0.3903 0.6291

bit =

'100 samples'

x =

0 0 0 1 1 0

0 0 0 1 1 0

0 0 1 0 0 1

1 1 0 0 0 0

0 0 1 0 0 1

1 1 0 0 0 0

x =

1 0 1 0 1 0

0 0 0 0 1 1

0 0 1 0 0 0

0 1 0 1 0 0

1 0 0 0 0 1

0 1 0 1 0 0

x =

1 0 0 0 1 0

1 0 0 0 1 0

0 0 1 1 0 0

0 1 0 0 0 1

0 1 0 0 0 1

0 0 1 1 0 0

x =

0 0 0 0 1 1

0 1 0 0 1 0

0 0 1 1 0 0

1 1 0 0 0 0

1 0 0 0 0 1

0 0 1 1 0 0

x =

1 0 0 0 1 0

0 1 0 0 0 1

0 0 1 1 0 0

1 0 0 0 1 0

0 1 0 0 0 1

0 0 1 1 0 0

bit =

'1000 samples'

x =

1 0 0 0 0 1

0 1 0 0 1 0

0 0 1 1 0 0

0 1 0 0 1 0

1 0 0 0 0 1

0 0 1 1 0 0

x =

1 0 0 0 1 0

1 0 0 0 1 0

0 0 1 1 0 0

0 1 0 0 0 1

0 1 0 0 0 1

0 0 1 1 0 0

x =

1 0 0 0 1 0

1 0 0 0 1 0

0 0 1 1 0 0

0 1 0 0 0 1

0 1 0 0 0 1

0 0 1 1 0 0

x =

1 0 0 0 1 0

1 0 0 0 1 0

0 0 1 1 0 0

0 1 0 0 0 1

0 1 0 0 0 1

0 0 1 1 0 0

x =

1 0 0 0 1 0

1 0 0 0 1 0

0 0 1 1 0 0

0 1 0 0 0 1

0 1 0 0 0 1

0 0 1 1 0 0

bit =

'50 samples'

x =

1 0 0 0 0 1

1 0 0 0 0 1

0 0 1 1 0 0

0 1 0 0 1 0

0 1 0 0 1 0

0 0 1 1 0 0

x =

1 0 0 0 1 1

1 0 0 0 1 0

0 0 1 0 0 0

0 1 0 1 0 0

0 0 1 0 0 1

0 1 0 1 0 0

x =

0 1 0 0 1 0

1 0 0 0 0 1

0 0 1 1 0 0

0 1 0 0 1 0

1 0 0 0 0 1

0 0 1 1 0 0

x =

0 0 1 0 1 1

1 0 0 0 1 0

0 0 1 0 0 0

0 1 0 1 0 0

1 0 0 0 0 1

0 1 0 1 0 0

x =

1 0 0 1 0 0

1 0 1 0 1 0

0 0 1 0 0 0

0 0 0 1 1 0

0 1 0 0 0 1

0 1 0 0 0 1

bit =

'10 samples'

x =

1 0 0 0 1 0

1 0 1 0 0 1

0 0 1 0 0 0

0 1 0 1 0 0

0 0 0 0 1 1

0 1 0 1 0 0

x =

0 0 0 1 1 0

0 0 1 0 0 1

0 0 1 0 0 1

1 1 0 0 0 0

1 1 0 0 0 0

0 0 0 1 1 0

x =

0 0 0 0 1 0

1 0 0 0 0 1

0 1 1 0 0 0

0 0 0 1 0 1

0 1 1 0 0 0

1 0 0 1 1 0

x =

0 0 0 1 1 0

1 0 0 0 0 1

0 0 1 0 0 0

0 0 1 1 1 0

1 1 0 0 0 1

0 1 0 0 0 0

x =

1 0 0 0 0 0

0 0 0 0 1 1

1 0 1 1 0 0

0 1 0 1 0 0

0 0 0 0 1 1

0 1 1 0 0 0

bit =

'5 samples'

x =

1 0 0 0 0 1

1 0 0 0 0 1

0 0 1 1 0 0

0 0 1 1 0 0

0 1 0 0 1 0

0 1 0 0 1 0

x =

0 0 0 1 1 0

0 0 0 0 1 1

0 0 1 1 0 0

1 1 0 0 0 0

1 1 0 0 0 0

0 0 1 0 0 1

x =

1 0 0 0 0 1

0 1 0 0 1 0

0 0 1 1 0 0

0 1 0 0 1 0

1 0 0 0 0 1

0 0 1 1 0 0

x =

1 0 0 1 0 0

0 0 0 0 1 1

0 1 1 0 0 0

0 1 1 0 0 0

0 0 0 0 1 1

1 0 0 1 0 0

x =

0 0 1 0 1 0

1 0 0 0 0 1

0 0 1 1 0 0

0 0 0 1 1 0

0 1 0 0 0 0

1 0 0 0 0 1

bit =

'1 sample'

x =

0 0 0 0 1 0

0 0 0 0 0 1

0 0 1 0 0 0

0 1 0 0 0 0

0 0 0 1 0 0

1 0 0 0 0 0

x =

0 0 1 0 0 0

1 0 0 0 0 0

0 1 0 0 0 0

0 0 0 0 1 0

0 0 0 0 0 1

0 0 0 1 0 0

x =

0 0 1 1 0 0

0 0 0 0 1 0

0 1 0 0 0 0

1 0 0 0 0 0

0 0 0 0 0 1

0 0 0 1 0 0

x =

0 0 0 1 0 0

0 0 0 0 1 0

0 0 1 0 0 0

0 0 0 0 0 1

1 0 0 0 0 0

0 1 0 0 0 0

x =

0 0 0 1 0 0

0 1 0 0 0 0

0 0 0 0 1 0

1 0 0 0 0 0

0 0 0 0 0 1

0 0 1 0 0 0

IISE Instance 1 1 Sample

>> main

C =

0.8541 1.4215 1.2367 1.4225 1.3509 1.2742

0.5396 1.4502 1.3022 1.1576 1.3649 1.0015

1.0703 1.3989 1.0987 0.9312 0.9127 1.3890

1.0125 0.7951 1.3810 1.4550 0.5776 0.7499

1.3314 0.5105 0.9191 0.7345 1.4353 1.0156

0.5041 1.3208 1.3822 1.1497 1.1428 0.6712

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.1202 -0.0506 -0.2048 0.3212 0.2591 0.2281

-0.3256 -0.3081 -0.4619 0.4310 0.3489 0.2836

-0.4189 -0.3241 -0.0258 -0.3000 -0.1343 -0.0084

-0.1642 -0.3181 -0.1023 0.0919 0.2870 -0.1327

-0.4056 -0.1060 -0.3875 0.3700 -0.2128 -0.4366

0.0186 -0.4835 -0.4094 -0.3278 -0.0805 0.2163

yprobs =

0.5564 0.5252 0.4143 0.6491 0.4372 0.3493

0.6150 0.2815 0.2576 0.4433 0.6838 0.8277

0.3316 0.4556 0.5857 0.5253 0.3795 0.5658

0.5542 0.3163 0.2412 0.1191 0.2187 0.2830

0.1326 0.1493 0.2371 0.2786 0.2664 0.1830

0.1316 0.1022 0.1288 0.2220 0.2883 0.2703

bit =

'1 sample'

x =

0 0 1 1 0 0

0 1 0 0 1 0

1 1 0 0 1 1

1 0 1 0 0 1

0 0 0 1 0 0

0 0 0 0 0 0

objave =

-1.5990

x =

1 0 0 1 1 0

0 1 1 0 0 1

0 0 1 0 0 0

1 0 0 1 0 1

0 1 0 0 0 0

0 0 0 0 1 0

objave =

-1.6296

x =

1 0 0 1 1 1

0 1 0 0 0 1

0 1 0 0 0 0

0 0 1 0 0 0

0 0 1 1 1 0

1 0 0 0 0 0

objave =

-4.3549

x =

0 1 0 1 1 1

1 1 1 1 0 0

1 0 0 0 0 1

0 0 1 0 0 0

0 0 0 0 1 0

0 0 0 0 0 0

objave =

-4.0626

x =

0 0 0 1 1 1

1 1 0 1 1 1

0 1 1 0 0 0

1 0 0 0 0 0

0 0 1 0 0 0

0 0 0 0 0 0

objave =

-2.9168

IISE Instance 1 5 Samples

>> main

C =

1.1290 1.1981 0.8880 0.7506 1.4596 1.2858

0.6794 1.2648 1.1892 0.5912 1.1944 1.4955

1.3818 0.9255 0.8179 1.0717 1.1100 1.2206

0.7307 1.3395 0.8721 0.8425 1.2512 0.7610

1.4814 0.9823 0.7889 1.3940 1.4164 0.8256

1.4643 1.3888 0.8010 1.4914 0.6629 0.5811

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.0709 0.1298 0.2393 -0.0311 -0.0062 -0.2347

0.3726 -0.4329 -0.0852 0.3989 0.3116 -0.3735

0.4965 0.4458 0.4372 0.4811 0.1152 -0.4718

0.4312 0.2000 0.3256 0.4086 -0.4682 -0.3339

-0.3996 -0.4975 -0.0370 0.4331 0.3673 -0.2599

-0.3965 -0.3027 -0.1339 0.3653 0.4584 -0.4272

yprobs =

0.5564 0.5252 0.4143 0.6491 0.4372 0.3493

0.6150 0.2815 0.2576 0.4433 0.6838 0.8277

0.3316 0.4556 0.5857 0.5253 0.3795 0.5658

0.5542 0.3163 0.2412 0.1191 0.2187 0.2830

0.1326 0.1493 0.2371 0.2786 0.2664 0.1830

0.1316 0.1022 0.1288 0.2220 0.2883 0.2703

bit =

'5 samples'

x =

1 0 0 1 0 0

0 0 1 0 0 1

1 1 0 1 0 0

0 0 0 0 1 0

0 0 0 0 1 1

0 1 1 0 0 0

objave =

-3.1895

x =

0 1 0 1 0 0

1 0 0 0 1 1

0 0 1 0 0 0

1 0 0 0 0 0

0 1 1 1 1 0

0 0 0 0 0 1

objave =

-1.6981

x =

1 0 0 0 1 0

0 0 0 0 0 1

0 0 0 1 1 0

1 1 0 1 0 0

0 1 1 0 0 0

0 0 1 0 0 1

objave =

-1.6866

x =

1 0 0 0 1 0

0 0 1 0 0 1

0 0 1 1 0 0

0 1 0 0 1 0

1 0 0 1 0 0

0 1 0 0 0 1

objave =

-2.3135

x =

1 1 0 0 0 0

0 0 1 0 1 1

0 0 0 0 1 1

1 0 1 0 0 0

0 1 0 1 0 0

0 0 0 1 0 0

objave =

-1.9695

IISE Instance 1 10 Samples

>> main

C =

0.8247 0.7939 1.4869 0.5717 1.3806 0.7774

1.2976 1.2484 1.4449 0.8597 0.6085 0.9836

1.3487 0.9542 0.5750 0.8954 1.2479 1.1786

1.1170 1.3501 0.7576 1.3600 1.0811 1.3679

1.0480 0.9491 1.4369 0.8997 1.2547 1.0004

1.4488 1.0908 0.5908 0.5363 1.2278 0.6699

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

-0.4321 0.2579 0.0583 -0.0673 -0.4073 0.0187

0.4980 -0.2261 0.2771 0.4056 -0.4145 -0.0268

-0.0715 -0.3444 -0.3061 -0.1466 -0.0681 -0.3456

0.0711 -0.4422 -0.0709 0.4967 0.0722 0.1198

0.2270 -0.3977 -0.4537 0.2311 0.2706 0.1430

0.4655 -0.3531 0.3357 0.4852 -0.3424 0.3943

yprobs =

0.5564 0.5252 0.4143 0.6491 0.4372 0.3493

0.6150 0.2815 0.2576 0.4433 0.6838 0.8277

0.3316 0.4556 0.5857 0.5253 0.3795 0.5658

0.5542 0.3163 0.2412 0.1191 0.2187 0.2830

0.1326 0.1493 0.2371 0.2786 0.2664 0.1830

0.1316 0.1022 0.1288 0.2220 0.2883 0.2703

bit =

'10 samples'

x =

0 0 0 0 1 0

0 1 0 0 0 1

0 0 1 1 0 0

1 0 0 0 0 0

0 1 1 1 0 0

1 0 0 0 1 1

objave =

-1.9611

x =

0 0 1 1 0 0

1 0 0 0 0 1

0 0 0 1 1 1

1 1 0 0 0 0

0 0 1 0 0 0

0 1 0 0 1 0

objave =

-0.8414

x =

0 0 1 0 1 0

1 0 0 1 0 1

0 0 0 1 0 1

1 1 1 0 0 0

0 1 0 0 0 0

0 0 0 0 1 0

objave =

-1.9660

x =

1 0 1 0 0 1

0 0 0 1 1 0

0 1 0 1 0 0

1 0 0 0 0 0

0 1 1 0 1 0

0 0 0 0 0 1

objave =

-1.8631

x =

0 1 0 0 0 1

0 0 1 0 0 1

1 0 1 1 0 0

1 0 0 0 1 0

0 1 0 1 0 0

0 0 0 0 1 0

objave =

-2.3206

IISE Instance 1 50 Samples

>> main

C =

1.1973 1.2025 1.3675 1.3466 0.5855 0.8233

0.7155 0.6213 0.8168 0.8962 1.2458 0.6781

1.2011 1.3305 0.8573 1.2261 1.4005 1.0469

0.9400 0.5200 1.1086 0.9719 0.5226 1.2003

0.6872 1.3822 0.9768 1.1133 1.1357 0.7358

1.1846 1.4914 1.0492 1.0097 1.4623 0.8879

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

-0.1097 -0.1365 0.4507 -0.2166 -0.2328 0.0632

-0.4566 0.1612 0.2245 0.1874 0.0075 0.1814

0.2879 0.1794 0.2859 0.3535 0.1612 -0.4775

-0.1372 -0.0690 -0.0311 -0.0430 -0.1553 0.0278

-0.2088 0.1756 0.2590 -0.3667 0.3102 -0.4377

-0.0683 0.0453 -0.2952 -0.0046 0.0959 -0.3483

yprobs =

0.5564 0.5252 0.4143 0.6491 0.4372 0.3493

0.6150 0.2815 0.2576 0.4433 0.6838 0.8277

0.3316 0.4556 0.5857 0.5253 0.3795 0.5658

0.5542 0.3163 0.2412 0.1191 0.2187 0.2830

0.1326 0.1493 0.2371 0.2786 0.2664 0.1830

0.1316 0.1022 0.1288 0.2220 0.2883 0.2703

bit =

'50 samples'

x =

0 1 0 1 0 0

1 0 0 0 0 1

0 1 1 0 0 0

1 0 0 0 0 1

0 0 1 0 1 0

0 0 0 1 1 0

objave =

-1.4428

x =

0 1 0 1 0 0

0 0 0 0 1 0

0 1 0 0 1 1

1 0 0 0 0 0

0 0 1 1 0 0

1 0 1 0 0 1

objave =

-1.4438

x =

0 1 1 1 0 0

0 0 0 0 0 1

0 0 1 0 1 0

1 1 0 0 0 0

0 0 0 1 0 1

1 0 0 0 1 0

objave =

-1.6844

x =

0 1 1 1 0 0

0 0 0 0 0 1

1 1 1 0 1 0

1 0 0 0 1 1

0 0 0 1 0 0

0 0 0 0 0 0

objave =

-1.7585

x =

0 0 1 1 0 0

0 0 0 1 0 1

1 1 0 0 0 1

1 1 0 0 0 0

0 0 1 0 1 0

0 0 0 0 1 0

objave =

-0.9384

IISE Instance 1 100 Samples

>> main

C =

1.3892 0.9206 1.1212 1.0587 1.0122 1.0020

1.2809 1.0042 0.5800 0.9231 0.9137 0.7650

1.1964 0.7584 0.6350 0.8658 1.4712 1.0446

1.2620 1.4640 1.4955 0.9992 0.6761 0.5540

0.5498 0.5786 1.4239 0.6932 0.5795 0.7634

0.7747 1.4528 0.6302 0.8256 0.7073 0.5472

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.3209 -0.2253 -0.2314 -0.2745 -0.3590 0.0209

0.1911 -0.1312 -0.4836 0.2136 0.2931 0.0267

-0.3893 -0.3138 0.1737 -0.1404 -0.0424 -0.0360

-0.2791 -0.2268 -0.3185 -0.2433 -0.2376 0.4412

0.3876 -0.2362 -0.2966 -0.0695 -0.3460 0.4700

-0.1236 -0.4872 0.3880 0.0739 0.2584 0.4178

yprobs =

0.5564 0.5252 0.4143 0.6491 0.4372 0.3493

0.6150 0.2815 0.2576 0.4433 0.6838 0.8277

0.3316 0.4556 0.5857 0.5253 0.3795 0.5658

0.5542 0.3163 0.2412 0.1191 0.2187 0.2830

0.1326 0.1493 0.2371 0.2786 0.2664 0.1830

0.1316 0.1022 0.1288 0.2220 0.2883 0.2703

bit =

'100 samples'

x =

0 0 1 1 0 0

1 1 0 1 0 0

0 0 1 0 0 1

1 1 0 0 0 0

0 0 0 0 1 0

0 0 0 0 1 1

objave =

-1.5566

x =

1 1 0 0 1 1

0 1 0 0 1 0

0 0 1 1 0 0

1 0 0 0 0 0

0 0 1 1 0 0

0 0 0 0 0 1

objave =

-2.3232

x =

0 0 1 1 0 0

0 0 0 0 1 1

1 1 0 0 1 1

1 1 0 0 0 0

0 0 1 1 0 0

0 0 0 0 0 0

objave =

-1.6453

x =

0 0 1 1 0 0

1 0 0 0 1 0

0 1 0 1 0 1

1 1 0 0 0 0

0 0 1 0 1 0

0 0 0 0 0 1

objave =

-0.9530

x =

0 0 1 1 0 0

1 0 0 0 0 1

0 1 0 1 1 0

1 1 1 0 0 0

0 0 0 0 0 0

0 0 0 0 1 1

objave =

-1.6947

IISE Instance 1 1000 Samples

>> main

C =

0.9284 1.2052 0.7193 1.0787 1.2404 1.2219

0.7997 0.5013 0.9112 0.8521 0.9164 0.9882

0.8771 1.1986 1.3491 0.8034 0.6095 0.6522

0.9973 0.9170 1.0621 0.5842 1.0447 1.3905

0.9737 0.9352 0.5058 0.8587 1.1904 0.7168

1.0771 1.4065 0.6310 0.7843 0.6636 1.4844

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.0772 -0.3456 -0.2110 -0.0430 0.1650 0.2366

0.0947 -0.4393 0.3851 0.3728 0.1132 0.1874

-0.0468 0.3838 0.0469 0.4505 0.4342 0.4471

0.0212 -0.1732 -0.4726 0.3860 0.3611 -0.2802

-0.2149 -0.0678 0.2871 -0.2265 0.0762 0.3637

0.0501 -0.0140 -0.1956 0.2633 0.4948 -0.0048

yprobs =

0.5564 0.5252 0.4143 0.6491 0.4372 0.3493

0.6150 0.2815 0.2576 0.4433 0.6838 0.8277

0.3316 0.4556 0.5857 0.5253 0.3795 0.5658

0.5542 0.3163 0.2412 0.1191 0.2187 0.2830

0.1326 0.1493 0.2371 0.2786 0.2664 0.1830

0.1316 0.1022 0.1288 0.2220 0.2883 0.2703

bit =

'1000 samples'

x =

0 1 0 1 0 0

0 0 0 0 0 1

0 1 1 0 0 0

1 0 1 0 0 0

0 0 0 0 1 0

1 0 0 1 1 1

objave =

-1.1474

x =

0 1 1 1 0 0

0 0 0 0 0 1

0 1 1 0 0 0

1 0 0 0 0 0

1 0 0 1 1 0

0 0 0 0 1 1

objave =

-0.6075

x =

0 1 0 1 0 0

0 0 0 0 0 1

1 1 1 0 0 0

1 0 0 0 0 0

0 0 1 1 1 0

0 0 0 0 1 1

objave =

-0.8160

x =

0 1 0 1 0 0

0 0 0 0 0 1

0 1 1 1 0 0

1 0 0 0 0 0

1 0 1 0 1 0

0 0 0 0 1 1

objave =

-0.2302

x =

0 1 1 1 0 0

0 0 0 0 0 1

1 0 1 1 0 0

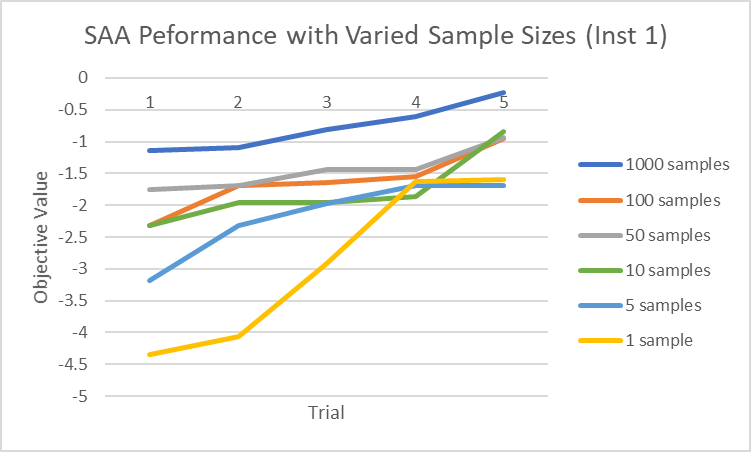
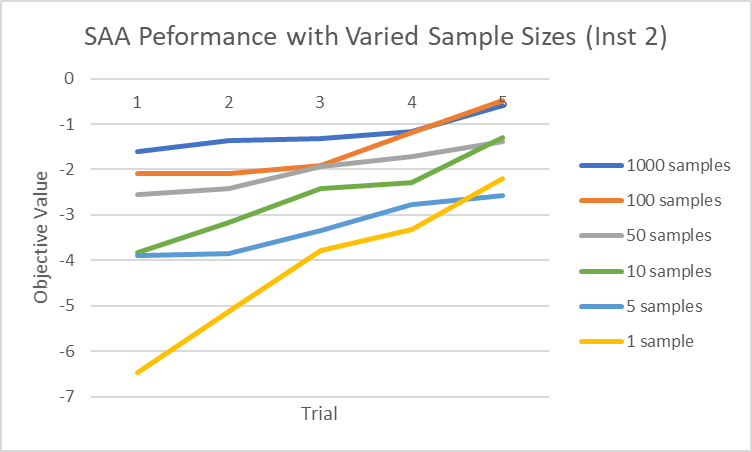
1 1 0 0 0 0

0 0 0 0 1 0

0 0 0 0 1 1

objave =

-1.0967



>> main

C =

1.4130 0.9215 0.6855 0.6148 1.0300 1.0726

0.7427 1.4267 0.8992 0.7465 0.8704 1.0674

1.3922 1.0289 0.7840 0.5869 0.9501 0.6684

0.9878 0.6328 1.2558 0.8114 1.3953 1.3349

1.4024 0.6867 0.5191 0.6799 1.1909 1.0000

1.4723 0.9453 0.7444 1.1677 0.9093 1.2009

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.1212 -0.2363 0.4547 0.0740 0.3568 -0.3490

-0.2248 -0.4843 -0.4068 0.4978 -0.3624 -0.3715

-0.0612 0.4840 -0.1925 0.0469 -0.3355 0.2330

0.1382 0.3402 0.1972 0.2953 -0.0854 0.3147

0.3716 0.0659 0.1647 0.1104 -0.0350 -0.3017

-0.4962 -0.3772 -0.0672 -0.1148 -0.4255 0.0463

yprobs =

0.2757 0.1853 0.7287 0.5557 0.8036 0.5243

0.8340 0.6342 0.7830 0.8912 0.5378 0.5482

0.1606 0.5582 0.4863 0.5155 0.1506 0.1065

0.3372 0.3368 0.5909 0.5701 0.2166 0.2412

0.2885 0.2607 0.1890 0.1501 0.2343 0.1028

0.2756 0.2913 0.1469 0.0908 0.2576 0.0601

bit =

'100 samples'

>> sdpvar.ctranspose

Undefined variable "sdpvar" or class "sdpvar.ctranspose".

>> main

C =

0.6518 0.6791 0.9672 1.1207 0.6582 0.6324

1.1673 0.8848 1.4887 1.3795 0.9605 0.9570

1.4093 1.4340 1.4819 1.1829 1.3749 0.6813

1.3652 1.0890 0.8252 1.4202 1.4080 0.9391

1.0735 1.0837 0.9601 0.8848 0.5620 0.7531

0.7470 0.7142 0.5627 1.2224 0.8142 0.7878

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

0.3517 -0.4253 0.0820 0.1569 0.2278 -0.1411

0.2136 0.0973 -0.2165 -0.1880 -0.4700 -0.3438

0.0039 0.0616 -0.4127 -0.0278 0.4850 0.4499

0.1164 -0.3596 -0.3721 -0.2595 -0.1786 0.4596

0.4948 -0.1609 -0.1033 0.4795 -0.0601 0.4809

0.0803 -0.0734 0.0516 -0.4119 0.4104 0.2133

yprobs =

0.5920 0.7737 0.6593 0.2884 0.8914 0.5151

0.7361 0.7826 0.8504 0.4347 0.5242 0.6147

0.3023 0.1891 0.2409 0.3002 0.1785 0.4794

0.5556 0.1462 0.2541 0.1181 0.3100 0.2967

0.1700 0.1524 0.1854 0.2348 0.2242 0.1747

0.1331 0.0768 0.1633 0.2486 0.2872 0.0689

bit =

'100 samples'

x =

0 1 1 0 0 0

0 1 1 0 0 0

1 0 0 0 0 1

1 0 0 1 0 0

0 0 0 1 1 1

0 0 0 0 1 0

objave =

-1.9243

x =

0 1 1 0 0 0

0 1 1 0 0 0

1 0 0 0 0 1

1 0 0 0 1 0

0 0 0 1 0 1

0 0 0 1 1 0

objave =

-1.1908

x =

0 1 1 0 0 0

0 1 1 0 0 0

1 0 0 0 0 1

1 0 0 0 1 0

0 0 0 1 1 1

0 0 0 1 0 0

objave =

-0.4730

x =

0 1 1 0 0 0

0 1 1 0 0 0

0 0 0 0 0 1

1 0 0 0 1 1

1 0 0 1 0 0

0 0 0 1 1 0

objave =

-2.0820

x =

0 1 0 0 0 1

0 1 1 0 0 0

1 0 1 1 0 0

1 0 0 0 1 0

0 0 0 1 0 1

0 0 0 0 1 0

objave =

-2.0807

bit =

'1000 samples'

x =

0 1 1 0 0 0

0 1 1 0 0 0

1 0 0 0 0 1

1 0 0 0 1 1

0 0 0 1 0 0

0 0 0 1 1 0

objave =

-1.1589

x =

0 1 1 0 0 0

0 1 1 0 0 0

1 0 0 1 0 1

1 0 0 0 0 1

0 0 0 0 1 0

0 0 0 1 1 0

objave =

-0.5842

x =

0 1 1 0 0 0

0 1 1 0 0 0

1 0 0 0 0 1

1 0 0 0 0 1

0 0 0 1 1 0

0 0 0 1 1 0

objave =

-1.6010

x =

0 1 1 0 0 0

0 1 1 0 0 0

1 0 0 1 0 1

1 0 0 0 0 1

0 0 0 0 1 0

0 0 0 1 1 0

objave =

-1.3581

x =

0 1 1 0 0 0

0 1 1 0 0 0

1 0 0 1 1 1

1 0 0 0 0 1

0 0 0 0 0 0

0 0 0 1 1 0

objave =

-1.3194

bit =

'50 samples'

x =

0 1 0 0 0 0

0 0 1 0 0 1

0 1 0 0 1 1

1 0 0 0 0 0

1 0 1 1 0 0

0 0 0 1 1 0

objave =

-1.9436

x =

0 1 1 0 0 0

0 1 1 0 0 0

1 0 0 0 0 1

1 0 0 0 1 0

0 0 0 1 1 0

0 0 0 1 0 1

objave =

-1.3836

x =

0 0 0 0 1 1

0 1 0 1 0 0

0 0 0 0 0 1

1 1 1 0 0 0

1 0 1 1 0 0

0 0 0 0 1 0

objave =

-2.5471

x =

0 1 1 0 0 1

0 0 1 1 0 0

0 0 0 1 0 1

1 0 0 0 1 0

1 1 0 0 0 0

0 0 0 0 1 0

objave =

-2.4256

x =

1 0 1 1 0 0

0 0 1 1 0 0

0 1 0 0 0 1

1 0 0 0 1 0

0 1 0 0 0 1

0 0 0 0 1 0

objave =

-1.7129

bit =

'10 samples'

x =

0 0 1 0 1 0

0 0 1 1 0 0

0 1 0 0 1 0

1 0 0 0 0 1

1 1 0 0 0 1

0 0 0 1 0 0

objave =

-3.1772

x =

1 1 0 0 0 1

0 0 1 1 0 0

0 1 0 0 1 1

1 0 0 0 1 0

0 0 0 0 0 0

0 0 1 1 0 0

objave =

-2.2776

x =

0 1 0 0 1 0

0 0 1 1 0 0

0 1 0 0 1 0

1 0 0 0 0 0

0 0 1 0 0 1

1 0 0 1 0 1

objave =

-3.8331

x =

1 1 0 0 0 0

0 0 1 0 0 0

0 0 0 1 0 1

1 1 1 0 1 0

0 0 0 0 0 1

0 0 0 1 1 0

objave =

-2.4106

x =

0 1 0 0 0 1

0 0 1 0 0 0

0 1 1 1 0 1

1 0 0 0 1 0

1 0 0 0 0 0

0 0 0 1 1 0

objave =

-1.3071

bit =

'5 samples'

x =

0 0 1 1 0 0

1 0 1 0 0 0

1 1 0 0 0 0

0 0 0 0 1 0

0 0 0 0 0 1

0 1 0 1 1 1

objave =

-3.8868

x =

0 1 0 0 1 0

0 0 1 0 0 0

1 0 0 0 0 1

0 0 1 0 1 0

1 1 0 1 0 0

0 0 0 1 0 1

objave =

-3.3538

x =

0 0 1 0 1 0

0 0 1 1 0 0

1 1 0 0 1 1

1 0 0 0 0 0

0 1 0 1 0 0

0 0 0 0 0 1

objave =

-2.7640

x =

0 1 0 0 1 0

0 0 1 1 0 1

0 0 1 0 0 1

1 0 0 0 1 0

1 1 0 0 0 0

0 0 0 1 0 0

objave =

-3.8447

x =

0 1 0 0 0 1

0 0 1 0 0 1

1 1 1 0 1 0

1 0 0 0 0 0

0 0 0 1 0 0

0 0 0 1 1 0

objave =

-2.5657

bit =

'1 sample'

x =

0 1 1 1 0 0

0 0 1 1 0 0

1 1 0 0 0 1

1 0 0 0 1 0

0 0 0 0 0 0

0 0 0 0 1 1

objave =

-2.2038

x =

0 1 0 1 0 0

0 0 1 1 0 0

1 1 1 0 0 1

0 0 0 0 1 1

0 0 0 0 1 0

1 0 0 0 0 0

objave =

-3.3318

x =

0 1 0 0 0 1

0 1 0 1 1 0

0 0 1 0 0 0

1 0 0 0 0 0

1 0 1 1 0 1

0 0 0 0 1 0

objave =

-3.7775

x =

0 1 0 1 1 1

1 0 1 0 0 1

1 0 1 0 0 0

0 0 0 0 1 0

0 0 0 1 0 0

0 1 0 0 0 0

objave =

-6.4580

x =

1 0 0 0 0 0

1 1 0 1 0 0

0 0 1 0 0 1

0 0 1 0 0 0

0 1 0 0 1 0

0 0 0 1 1 1

objave =

-5.1372

>> main

C =

0.8677 0.9717 0.7528 1.2533 1.3237 1.1000 0.7554 1.0243 0.5951 1.2596

0.9534 0.6233 0.8135 0.9875 1.2256 1.2645 0.6449 1.3052 1.4452 0.9150

0.5266 1.4298 1.1143 1.1619 0.7893 0.6070 0.5484 0.6494 1.0723 1.4561

0.9570 1.0853 1.1482 1.3420 0.8604 0.6685 0.8844 1.4789 1.1901 0.9544

1.4384 0.7448 0.9905 1.3018 1.2430 1.0502 0.9250 0.8061 0.9176 0.8739

1.4467 1.4139 1.3486 0.7601 0.6931 1.1807 0.7777 1.4414 0.7889 0.6015

1.3452 1.4070 1.0142 0.7423 0.8554 1.2515 0.5675 0.7589 1.1179 0.7031

0.7318 0.7726 0.8021 0.5599 0.5124 0.7458 0.8661 0.8335 1.4691 1.3505

1.3564 1.1767 0.8491 1.4047 1.1555 0.7717 0.6900 0.8822 1.2808 0.6727

0.6415 0.8040 1.3307 0.7001 0.8498 1.3662 0.9657 1.0257 0.8053 0.5511

D =

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

r =

2

2

2

2

2

2

2

2

2

2

U =

0.0619 0.4545 0.0899 0.4030 -0.4662 0.0710 -0.4010 -0.2312 0.1778 -0.0542

-0.3328 -0.4383 0.3291 -0.1273 -0.2625 0.1224 0.0817 0.3150 -0.1970 0.2427

0.2028 -0.2587 0.1553 -0.4167 -0.0033 0.3006 0.2156 -0.2540 0.4370 -0.2321

-0.3908 0.0959 -0.0088 0.1234 0.0206 0.4855 -0.1576 0.1549 0.4205 0.0803

-0.0924 0.4811 0.0090 -0.2544 -0.1420 -0.2736 -0.1140 -0.2821 0.2332 0.2796

-0.3452 -0.3685 0.2059 -0.1930 0.3278 0.3895 0.4694 0.2152 -0.2421 -0.3079

0.2760 -0.0602 -0.1703 0.1555 0.4656 0.4618 -0.4907 0.2427 0.0834 0.3383

-0.2419 0.4909 0.2284 0.2186 0.3847 0.3292 0.0420 0.1290 0.1987 -0.0787

-0.1830 -0.0612 0.2256 0.1164 -0.4320 0.2966 -0.1520 0.1928 0.4398 -0.3730

0.4884 -0.4422 0.4866 -0.1707 -0.0696 0.3090 0.1112 0.0361 -0.0954 -0.0947

yprobs =

0.1119 0.1581 0.2461 0.2553 0.4367 0.2456 0.3110 0.4356 0.5833 0.5842

0.5584 0.1956 0.4433 0.2161 0.2094 0.4164 0.1299 0.4185 0.4940 0.1863

0.5238 0.5553 0.5465 0.1373 0.3717 0.4255 0.2998 0.1059 0.5529 0.2362

0.5882 0.2403 0.4417 0.2895 0.2231 0.3316 0.5203 0.3966 0.3935 0.2535

0.5089 0.3205 0.3870 0.3610 0.5302 0.3605 0.3682 0.1376 0.1411 0.1043

0.2254 0.2607 0.5162 0.1036 0.2570 0.1543 0.2646 0.1059 0.5515 0.4781

0.2525 0.4082 0.1095 0.4208 0.4166 0.5619 0.2550 0.1065 0.3819 0.3080

0.3694 0.4606 0.2556 0.2416 0.1770 0.5604 0.5487 0.2781 0.5615 0.3925

0.2166 0.5130 0.3716 0.2267 0.1110 0.3518 0.1714 0.5447 0.2799 0.1518

0.3253 0.4061 0.3722 0.1275 0.5829 0.4138 0.4716 0.4121 0.5624 0.5739

Undefined function or variable 'y'.

Error in main (line 97)

[obj,x2,v2,z2,w2]=fixed\_y\_prob(C,D,r,alpha,theta,y,scenprobs,topkpicks,equal,lwr)

**Testing the assignment Hueristic**

All three tests use 1000 sampled scenarios to generate the expected performance for each menu

>> main

C =

1.4651 0.6873 0.6998 1.3530 0.6594 0.8615

0.9628 1.0424 0.8496 1.3567 0.6995 1.0275

0.5907 0.9903 1.2605 0.6027 1.0043 1.4980

1.3511 1.2168 1.1485 1.2590 1.1206 1.2195

0.5765 0.7696 0.6575 1.4373 1.2224 1.2529

1.4115 0.6253 0.5270 1.2889 1.1416 1.3690

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

U =

-0.2538 -0.2048 -0.0194 0.2280 -0.0235 -0.3174

0.3178 -0.1243 0.0404 0.1794 -0.0194 0.2912

0.0055 -0.1675 0.3986 -0.2505 -0.4761 0.3494

0.1228 -0.4165 0.3537 0.1321 -0.3171 -0.3193

-0.0213 -0.0336 0.0731 -0.0865 -0.4877 0.1459

-0.0374 0.3669 0.0840 0.3425 -0.1678 -0.3896

yprobs =

0.3568 0.4241 0.4578 0.4187 0.1978 0.3942

0.4357 0.5027 0.5061 0.2722 0.1282 0.4781

0.5620 0.4934 0.3028 0.2982 0.3378 0.1834

0.4187 0.5638 0.1475 0.2637 0.4413 0.3467

0.3989 0.4291 0.4171 0.4405 0.4384 0.3618

0.2136 0.4331 0.4342 0.2156 0.1716 0.5697

topkpicks =

1 1 1 1 1 1

2 2 2 2 2 2

3 3 3 3 3 3

4 4 4 4 4 4

5 5 5 5 5 5

6 6 6 6 6 6

yprobs =

0.1561 0.2858 0.3912 0.1815 0.2496 0.5630

0.3005 0.2691 0.4158 0.3024 0.3736 0.3175

0.3675 0.4168 0.1789 0.2803 0.3824 0.1194

0.3909 0.2823 0.4966 0.4003 0.5016 0.1963

0.5274 0.1788 0.2750   
0.2089 0.1002 0.2212

0.5969 0.3331 0.3120 0.1865 0.5597 0.5467

true\_sorted =

1.1787 0.8739 -0.2460

1.2787 1.8703 0.3908

0.4806 0.7243 0.5947

0.3637 -0.0503 0.6628

0.5765 1.2779 0.7256

0.7916 0.8085 0.7713

1.7732 0.6715 0.8021

1.7201 1.3569 0.8469

1.7638 1.1257 1.6208

0.9447 1.0885 1.6224

heur\_sorted =

0.5785

0.8889

0.5324

0.4782

0.9364

1.1076

0.6559

0.7800

1.1011

0.9950

**Menu convergence test**

bit =

'10x10 theta=3, 1,000 samples'

C =

1.1723 0.5249 1.2269 0.6930 0.5915 1.1423 1.1203 1.0761 1.0294 1.0246

0.9315 1.1714 0.8738 0.8416 1.1146 0.7213 1.1003 1.3106 1.3300 1.4727

1.1944 1.3372 1.0816 1.4329 0.5110 1.3371 0.6726 0.9038 1.3588 1.2104

0.7568 1.4715 0.6161 0.8907 1.0733 1.4711 0.5903 1.4884 1.2890 0.8119

0.5098 0.5569 0.5577 0.7732 1.2897 1.3464 0.7553 0.5900 0.8178 0.7915

1.0323 0.9503 1.4798 0.6519 0.7354 1.0060 1.3586 0.8209 0.9522 1.3504

0.7794 1.0825 0.7848 0.8971 0.9480 0.7789 1.4111 1.0114 1.2522 1.4116

1.4462 1.1866 1.0950 0.8747 1.0694 1.2466 1.1996 0.5606 0.6099 1.1393

1.4064 1.2194 1.4622 0.6311 0.5614 0.7369 1.2252 1.2257 0.6097 0.7554

0.8927 1.1500 0.6858 0.9350 0.9963 1.4573 0.7299 1.0566 0.7699 0.5887

D =

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

r =

2

2

2

2

2

2

2

2

2

2

difference =

0 6 9 9 5

0 0 6 7 8

0 0 0 6 9

0 0 0 0 8

0 0 0 0 0

bit =

'10x10 theta=3, 10,000 samples'

C =

1.4901 0.9501 1.1340 0.7158 0.8905 1.1607 0.5907 0.8538 0.6420 1.3196

1.3479 0.7527 1.4358 0.8077 1.4555 0.7520 1.4316 1.1216 1.1866 1.2998

1.3665 1.1955 1.1494 1.2591 1.3226 1.4573 0.9776 0.6309 1.1681 1.3752

0.8234 0.8180 0.6671 0.9289 0.8510 0.7431 1.3407 0.9748 1.3446 0.8514

1.3141 0.9998 1.4584 0.9188 0.5493 0.8106 1.3655 1.3194 0.7232 0.5263

0.6548 0.7122 0.9759 0.8880 1.4473 1.3632 1.4223 0.8835 1.3886 1.2785

1.4681 0.5347 0.8486 1.4208 1.3746 1.1516 0.8073 1.3698 1.3615 1.1464

1.0984 1.0514 1.4201 1.4010 0.8554 1.0770 0.5338 1.2662 1.0157 1.2771

0.8040 0.9932 0.6419 0.7567 0.7161 0.6758 1.2213 0.7488 0.6604 0.7979

1.4475 0.6708 1.4132 1.4657 1.4121 1.0341 1.2917 0.8892 0.8378 0.6603

D =

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1

r =

2

2

2

2

2

2

2

2

2

2

difference =

0 6 11 8 9

0 0 8 9 7

0 0 0 11 9

0 0 0 0 9

0 0 0 0 0



^ gathered from 3 10x10 menus, theta=3, samp=1000?

6x6 theta=2, 100,000 scens, 1653.630s

10x10, theta=3, 100,000 scens,

25687.247s (7 hours)

bit =

'6x6 theta=2, 10,000 samples'

C =

0.7210 1.2700 0.6993 1.3858 1.4489 1.2852

0.7857 1.1961 1.1297 1.3141 0.6172 0.9751

0.5392 0.7393 1.0333 0.6334 0.8166 0.6109

1.4258 1.2679 1.2565 1.2430 0.5319 0.7522

1.3310 1.2012 1.4213 1.4022 0.7786 1.2159

1.3681 1.1452 1.3485 0.6469 1.1955 0.6654

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

difference =

0 1 1 0 0

0 0 0 1 1

0 0 0 1 1

0 0 0 0 0

0 0 0 0 0

simobjs =

1.9489 1.9017 1.9867 2.0715 1.9134

bit =

'6x6 theta=2, 10,000 samples'

C =

1.4437 1.1095 0.8035 1.2682 1.1042 1.4039

1.0650 0.9045 0.5547 0.9125 1.3711 0.8234

0.9829 1.4210 1.4559 0.6047 0.7248 1.2232

1.3634 1.4727 0.5609 0.8039 1.1638 1.3268

0.6399 0.6873 0.7147 1.4158 0.6870 1.2602

0.7647 1.1896 1.2785 0.5993 0.5283 1.4177

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

difference =

0 0 2 0 0

0 0 2 0 0

0 0 0 2 2

0 0 0 0 0

0 0 0 0 0

objs =

0.7881 0.8454 0.6171 0.9269 0.7227

simobjs =

1.4632 1.4311 1.3592 1.4415 1.4228

bit =

'6x6 theta=2, 50,000 samples'

C =

1.4360 0.6269 0.7122 0.7174 0.5476 0.6408

0.8620 0.8314 0.9999 0.7136 0.9642 1.0578

1.4788 1.3199 1.1106 1.3257 0.7513 0.9607

0.7586 0.8386 0.5298 1.2697 0.7189 1.4378

1.1016 0.5289 0.5503 0.7787 0.7408 0.9478

0.6497 0.7326 0.8149 1.3744 0.7241 0.6767

D =

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

1 1 1 1 1 1

r =

2

2

2

2

2

2

difference =

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

0 0 0 0 0

objs =

0.7929 0.7836 0.6583 0.7985 0.7298

simobjs =

1.3971 1.4553 1.4203 1.4139 1.4165

Time was about 6hours, performance test scenarios used 10,000 scenarios

How many samples are needed to get opt?

>> main

C =

1.7788 1.1537 1.4574 1.6377

1.4235 1.2810 1.8754 1.9577

1.0908 1.4401 1.5181 1.2407

1.2665 1.5271 1.9436 1.6761

D =

0.6445 0.8359 0.8476 0.5340

0.6445 0.8359 0.8476 0.5340

0.6445 0.8359 0.8476 0.5340

0.6445 0.8359 0.8476 0.5340

r =

1.2548

1.2240

1.6678

1.8444

yprobs =

0.4037 0.1943 0.5726 0.3251

0.4692 0.3881 0.4395 0.4310

0.1959 0.2437 0.4238 0.3294

0.2706 0.1456 0.4179 0.4037

bit =

'all scens'

x =

1 0 1 0

1 1 0 0

0 1 0 1

0 0 1 1

obj =

2.6533

bit =

'1000 scens w/o replacement'

x =

1 0 1 0

1 1 1 0

0 1 0 1

0 0 0 1

obj =

2.5388

bit =

'500 scens w/o replacement'

x =

1 0 1 0

1 1 0 0

0 1 0 1

0 0 1 1

obj =

2.3906

bit =

'100 scens w/o replacement'

x =

1 0 1 0

1 1 1 0

0 1 0 1

0 0 0 1

obj =

2.7157

bit =

'1000 scens w/ replacement'

x =

1 0 1 0

1 1 0 1

0 1 1 0

0 0 0 1

obj =

0.7196

bit =

'500 scens w/ replacement'

x =

1 0 1 0

1 1 0 1

0 1 1 0

0 0 0 1

obj =

0.9218

bit =

'100 scens w/ replacement'

x =

1 0 1 0

1 1 0 0

0 1 0 1

0 0 1 1

obj =

1.3588

>>

Trial 2

>> main

C =

1.8147 1.6324 1.9575 1.9572

1.9058 1.0975 1.9649 1.4854

1.1270 1.2785 1.1576 1.8003

1.9134 1.5469 1.9706 1.1419

D =

0.7109 0.9579 0.8961 0.9797

0.7109 0.9579 0.8961 0.9797

0.7109 0.9579 0.8961 0.9797

0.7109 0.9579 0.8961 0.9797

r =

1.6557

1.0357

1.8491

1.9340

yprobs =

0.3449 0.1595 0.4495 0.5204

0.1934 0.3492 0.2275 0.2271

0.3228 0.4275 0.3530 0.2288

0.4232 0.1813 0.4756 0.1746

bit =

'all scens'

x =

1 0 1 0

0 1 0 1

0 1 0 1

1 0 1 0

obj =

3.2202

bit =

'1000 scens w/o replacement'

x =

1 0 1 0

0 1 0 1

0 1 0 1

1 0 1 0

obj =

3.6604

bit =

'500 scens w/o replacement'

x =

1 0 1 0

0 1 0 1

0 1 0 1

1 0 1 0

obj =

3.5712

bit =

'100 scens w/o replacement'

x =

1 0 1 0

0 1 0 1

0 1 0 1

1 0 1 0

obj =

3.4558

bit =

'1000 scens w/ replacement'

x =

0 0 1 1

0 1 0 0

1 1 0 1

1 0 1 0

obj =

0.9008

bit =

'500 scens w/ replacement'

x =

1 0 0 1

0 1 0 0

0 1 1 1

1 0 1 0

obj =

1.3151

bit =

'100 scens w/ replacement'

x =

1 0 1 1

0 1 0 0

0 1 0 1

1 0 1 0

obj =

1.0862

Trial 3

>> main

C =

1.7462 1.8502 1.5359 1.7697

1.2665 1.6682 1.6382 1.3936

1.3634 1.2766 1.0400 1.6377

1.7745 1.2148 1.9373 1.5645

D =

0.6759 0.6075 0.9981 0.8523

0.6759 0.6075 0.9981 0.8523

0.6759 0.6075 0.9981 0.8523

0.6759 0.6075 0.9981 0.8523

r =

1.5253

1.4140

1.2096

1.8053

yprobs =

0.4362 0.3916 0.2240 0.4708

0.3278 0.1793 0.5957 0.4673

0.1623 0.5809 0.5714 0.5996

0.2686 0.3236 0.5053 0.3214

bit =

'all scens'

x =

1 1 0 0

1 0 1 0

0 1 0 1

0 0 1 1

obj =

3.5204

bit =

'5000 scens w/o replacement'

x =

1 1 0 1

1 0 1 0

0 1 0 0

0 0 1 1

obj =

3.5845

bit =

'1000 scens w/o replacement'

x =

1 1 0 1

1 0 1 0

0 1 0 0

0 0 1 1

obj =

3.7329

bit =

'500 scens w/o replacement'

x =

1 1 0 1

1 0 1 0

0 1 0 0

0 0 1 1

obj =

3.4369

bit =

'100 scens w/o replacement'

x =

1 1 0 1

1 0 1 0

0 1 1 0

0 0 0 1

obj =

4.0565

bit =

'5000 scens w/ replacement'

x =

1 1 0 1

0 0 1 0

0 1 0 1

1 0 1 0

obj =

3.2656

bit =

'1000 scens w/ replacement'

x =

1 1 0 1

0 0 1 0

0 1 0 1

1 0 1 0

obj =

2.9679

bit =

'500 scens w/ replacement'

x =

1 1 0 1

0 0 1 0

0 1 0 1

1 0 1 0

obj =

3.1324

bit =

'100 scens w/ replacement'

x =

1 1 0 0

0 0 1 1

0 1 0 1

1 0 1 0

obj =

2.9242

>>

**Updated Results for Pazour’s presentation**

6x6, 1<=theta <= 2, exhaustive performance analysis, no replacement for saa or performance scenarios

1 Sample

>> main

C =

1.4894 1.8800 1.4187 1.1486 1.0253 1.8804

1.3631 1.7267 1.2164 1.2777 1.0227 1.1145

1.7089 1.6938 1.1143 1.6752 1.6859 1.5768

1.1197 1.4705 1.1602 1.6206 1.1305 1.9182

1.1953 1.6214 1.1827 1.8656 1.7602 1.1039

1.9046 1.8227 1.4344 1.2336 1.4958 1.5911

D =

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

r =

1.8450

1.2451

1.5365

1.8983

1.5484

1.1197

yprobs =

0.5389 0.2169 0.4755 0.1403 0.2910 0.1912

0.4812 0.1016 0.4635 0.5040 0.3954 0.5480

0.2793 0.3498 0.5812 0.4965 0.2409 0.4351

0.1365 0.5390 0.5601 0.1052 0.4356 0.4427

0.1530 0.1910 0.4190 0.1823 0.5775 0.2393

0.4088 0.4591 0.2490 0.3926 0.4211 0.3635

x =

1 0 0 0 1 1

0 0 0 1 0 0

0 0 1 0 0 0

0 0 1 0 0 0

0 0 0 1 0 0

1 1 0 0 0 0

objave =

9.2137

x =

0 1 0 1 0 0

1 0 0 0 0 0

0 1 0 1 1 0

0 0 1 0 0 1

0 0 0 0 1 0

1 0 0 0 0 0

objave =

9.9744

x =

1 0 0 0 0 1

0 0 0 1 0 0

0 0 1 0 0 0

0 1 1 1 1 1

0 0 0 0 1 0

1 0 0 0 0 0

objave =

10.4924

x =

0 0 0 0 0 0

1 0 1 0 0 0

0 1 1 1 0 0

0 0 0 0 0 1

0 0 0 0 1 0

0 1 0 0 0 0

objave =

8.8259

x =

0 1 1 0 0 0

1 0 0 1 1 1

0 1 0 0 0 0

0 0 0 0 0 1

1 0 1 0 0 0

0 0 0 1 1 0

objave =

9.3207

>>

10 Samples

>> main

x =

1 0 1 0 0 0

1 0 0 1 0 0

0 0 0 1 0 1

0 1 1 0 0 1

0 0 0 0 1 0

0 1 0 0 1 0

objave =

12.8199

x =

1 0 0 0 0 0

1 0 0 1 0 1

0 0 1 1 0 1

0 1 0 0 1 0

0 0 1 0 1 0

0 1 0 0 0 0

objave =

11.8148

x =

0 1 1 0 0 0

1 0 0 1 0 0

0 0 0 0 0 1

0 0 1 0 1 1

0 0 0 0 1 0

1 1 0 1 0 0

objave =

11.6832

x =

1 0 0 0 0 0

0 0 1 1 0 0

0 1 0 0 0 1

0 1 1 0 0 1

0 0 0 0 1 0

1 0 0 1 1 0

objave =

11.9574

x =

1 0 0 0 0 0

1 0 0 1 0 1

0 1 0 1 0 0

0 0 1 0 1 1

0 0 1 0 1 0

0 1 0 0 0 0

objave =

11.9675

>>

100 Samples

>> main

x =

1 0 0 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 1 1

0 0 1 0 1 0

1 1 0 0 0 0

objave =

12.5905

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 0 1 0 1

0 1 1 0 0 0

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9130

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 1 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 0 0

objave =

12.8383

x =

1 0 1 0 0 0

0 0 0 1 0 1

1 0 0 1 0 1

0 1 1 0 0 0

0 0 0 0 1 0

0 1 0 0 1 0

objave =

12.7254

>>

1,000 Samples

>> main

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 1 1

0 0 0 0 1 0

1 1 0 0 0 0

objave =

12.9225

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 0 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 1 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.5214

>>

10,000 Samples

>> main

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 1 1

0 0 0 0 1 0

1 1 0 0 0 0

objave =

12.9225

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

>>

100,000 Samples

>> main

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

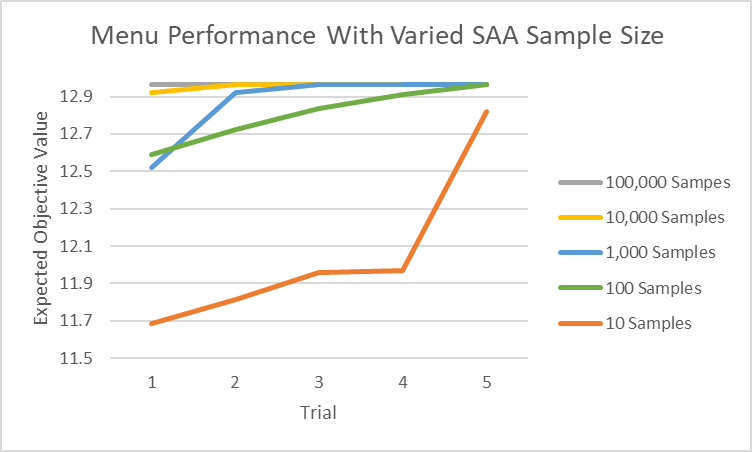
0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0



objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

**Different menu behaviors**

1,000 samples

bit =

(just 100 samples)

'popularity in [0.3, 0.9]'

x =

0 0 1 0 0 0

0 1 0 1 0 0

1 0 1 0 1 0

1 1 0 0 0 1

0 0 1 1 0 0

1 1 0 1 0 0

bit =

'popularity in [0.3, 0.9]'

(just 100 samples)

x =

0 1 0 0 0 1

0 0 1 0 0 0

1 1 1 0 1 0

0 0 0 1 1 1

0 0 1 0 1 0

1 1 0 0 0 1

>> main

bit =

'popularity in [0.3, 0.9]'

>> main

bit =

'popularity in [0.3, 0.9]'

yprobs =

0.4864 0.4913 0.2735 0.1190 0.4908 0.2718

0.4764 0.3534 0.3153 0.2187 0.3480 0.3540

0.3767 0.3501 0.2680 0.4442 0.3876 0.2209

0.1078 0.1881 0.4529 0.2665 0.4825 0.3260

0.5427 0.2235 0.4671 0.3340 0.5074 0.4115

0.4430 0.5349 0.5053 0.4649 0.2073 0.5967

x =

1 1 0 0 0 0

1 0 0 0 0 1

0 0 0 1 0 0

0 0 1 0 1 1

0 0 0 1 1 0

0 1 1 0 0 0

ans =

501

>> main

bit =

'popularity in [0.3, 0.9]'

yprobs =

0.5329 0.4778 0.5359 0.3958 0.3175 0.7388

0.5741 0.5426 0.8221 0.5180 0.3697 0.6114

0.3704 0.4752 0.3006 0.4969 0.6974 0.6629

0.6860 0.5471 0.8707 0.8009 0.4922 0.8412

0.7448 0.5507 0.8556 0.3493 0.4014 0.5578

0.8022 0.6711 0.6717 0.8494 0.3805 0.7064

x =

0 1 0 0 0 1

0 1 1 0 0 0

1 0 0 0 1 0

0 0 0 0 0 1

0 0 1 1 1 0

1 0 0 0 0 0

ans =

312

>> main

bit =

'popularity in [0.3, 0.9]'

yprobs =

0.6374 0.6583 0.7472 0.5624 0.8946 0.4515

0.7004 0.8175 0.3202 0.5229 0.4445 0.4509

0.8706 0.6997 0.3681 0.8879 0.8546 0.5231

0.8712 0.6159 0.3864 0.8025 0.6799 0.4354

0.3358 0.7101 0.8839 0.8506 0.4558 0.8533

0.7808 0.8723 0.8567 0.4095 0.5739 0.8325

x =

0 1 0 0 1 1

0 1 1 0 0 0

0 0 0 0 1 0

1 0 0 1 0 1

0 0 0 1 0 0

1 0 0 0 0 0

ans =

427

bit =

'popularity in [0.4, 1]'

yprobs =

0.7715 0.5870 0.6512 0.7172 0.6624 0.4753

0.6957 0.7040 0.9434 0.7030 0.7185 0.8547

0.5393 0.8402 0.6096 0.4486 0.7071 0.6966

0.4291 0.4457 0.7824 0.9660 0.5596 0.8753

0.7873 0.7929 0.4918 0.6275 0.5165 0.4313

0.4934 0.8357 0.4764 0.6746 0.5132 0.4486

x =

1 0 1 0 0 0

1 0 1 0 0 0

0 0 0 1 1 1

0 0 0 0 0 1

0 1 0 1 0 0

0 1 0 0 1 0

ans =

363

bit =

'popularity in [0, 1]'

yprobs =

0.4064 0.1271 0.6127 0.2007 0.6999 0.7362

0.5581 0.3346 0.0939 0.8047 0.8986 0.4276

0.5123 0.8007 0.1522 0.3363 0.0943 0.2466

0.0012 0.8952 0.4846 0.4912 0.3623 0.2451

0.6823 0.0284 0.0057 0.0303 0.0836 0.9535

0.5343 0.4242 0.7255 0.5902 0.0967 0.9736

x =

0 0 1 0 0 1

0 0 0 1 0 0

1 1 0 0 0 0

0 1 0 0 0 0

0 0 0 0 1 1

1 0 1 1 0 0

ans =

214

bit =

'popularity in [0.2, 1]'

yprobs =

0.3176 0.5808 0.9272 0.6529 0.6435 0.5578

0.8247 0.6777 0.7393 0.8710 0.2243 0.5394

0.3103 0.7860 0.3177 0.3442 0.4575 0.7403

0.3247 0.2925 0.9772 0.5428 0.5133 0.2842

0.8934 0.3195 0.5082 0.8155 0.8115 0.4048

0.7364 0.3273 0.7679 0.3860 0.7565 0.9551

x =

0 0 1 0 0 0

1 1 0 0 1 0

0 1 0 0 0 1

0 0 1 1 0 0

0 0 0 1 0 0

1 0 0 0 0 1

ans =

319

bit =

'popularity in [0.5, 0.7]'

yprobs =

0.6982 0.6754 0.6295 0.5645 0.6181 0.6905

0.5357 0.6206 0.6435 0.5343 0.5885 0.5897

0.5876 0.6841 0.6952 0.6882 0.6170 0.6144

0.6819 0.6095 0.6224 0.6163 0.6433 0.6516

0.6862 0.6607 0.6175 0.5597 0.5245 0.5457

0.5793 0.5451 0.6851 0.6402 0.6057 0.5224

x =

0 1 0 0 0 1

1 0 1 0 0 0

0 0 0 1 1 0

0 0 0 1 0 1

0 1 0 0 1 0

1 0 1 0 0 0

ans =

451

bit =

'popularity in [0.3, 0.9]'

yprobs =

0.8411 0.4387 0.7079 0.7501 0.8136 0.5658

0.4671 0.8010 0.8223 0.3711 0.3844 0.7742

0.8526 0.4019 0.3171 0.5731 0.7695 0.7249

0.8861 0.6854 0.4521 0.3276 0.7520 0.4942

0.4225 0.8135 0.7385 0.4277 0.3616 0.3762

0.5048 0.4334 0.4515 0.8989 0.4977 0.6019

x =

1 0 0 0 0 1

0 1 0 0 0 0

1 0 1 0 1 0

0 0 0 0 1 1

0 1 0 1 0 0

0 0 0 1 0 0

ans =

383

bit =

'popularity in [0.4, 1]'

yprobs =

0.7614 0.7339 0.7571 0.5965 0.7106 0.5187

0.7364 0.6080 0.9000 0.8031 0.6851 0.6588

0.7873 0.4041 0.8293 0.5261 0.9748 0.4307

0.4089 0.7867 0.9638 0.6832 0.9413 0.5247

0.6500 0.4541 0.5609 0.7133 0.7728 0.6329

0.4839 0.4071 0.7319 0.8172 0.7537 0.5806

x =

0 1 0 0 0 1

1 0 1 0 0 0

0 0 0 0 1 0

0 1 0 1 0 1

0 0 0 1 1 0

1 0 1 0 0 0

ans =

325

bit =

'popularity in [0, 1]'

yprobs =

0.4632 0.5728 0.5022 0.2517 0.3477 0.1431

0.5207 0.7734 0.1653 0.5173 0.7727 0.7027

0.0446 0.1240 0.2413 0.2042 0.8200 0.8269

0.7018 0.0671 0.2154 0.6726 0.6289 0.8184

0.0600 0.1680 0.3416 0.2507 0.7705 0.1899

0.5813 0.8443 0.0078 0.9236 0.5795 0.1136

x =

0 1 1 0 0 0

0 1 0 0 1 0

1 0 0 0 0 1

0 0 0 1 0 1

0 0 0 0 1 0

1 0 0 1 0 0

ans =

405

bit =

'popularity in [0.2, 1]'

yprobs =

0.5666 0.7980 0.9785 0.5905 0.7930 0.8672

0.9093 0.6739 0.2169 0.5124 0.3618 0.6024

0.8453 0.2020 0.2286 0.6262 0.2844 0.7481

0.8514 0.6242 0.3865 0.6136 0.3849 0.8565

0.5768 0.9278 0.4069 0.5522 0.7984 0.7448

0.5677 0.8408 0.6200 0.6998 0.5357 0.7575

x =

0 0 0 0 0 1

1 0 1 0 0 0

1 0 0 1 0 0

0 0 0 1 0 1

0 1 0 0 1 0

0 1 0 0 1 0

ans =

249

bit =

'popularity in [0.5, 0.7]'

yprobs =

0.5641 0.5578 0.6753 0.6841 0.6033 0.5366

0.5828 0.5212 0.5087 0.6236 0.6693 0.6116

0.6385 0.6203 0.6770 0.5330 0.5744 0.5672

0.6533 0.6052 0.6274 0.5173 0.5531 0.6410

0.5025 0.5298 0.5071 0.5144 0.6439 0.5811

0.6277 0.6442 0.6829 0.5533 0.6820 0.6048

x =

0 0 1 0 0 1

0 0 0 1 1 0

1 1 0 0 0 0

0 0 1 0 0 1

0 0 0 1 1 0

1 1 0 0 0 0

ans =

423

bit =

'popularity in [0.1, 0.6]'

yprobs =

0.1334 0.3223 0.5437 0.2443 0.1210 0.1998

0.5309 0.3198 0.1636 0.4611 0.3654 0.5112

0.5982 0.4049 0.2270 0.3585 0.3509 0.4248

0.1270 0.5144 0.3731 0.5528 0.3859 0.5953

0.5726 0.4992 0.5029 0.5624 0.2347 0.1775

0.3104 0.3297 0.2250 0.1147 0.4512 0.3418

x =

0 0 1 0 0 0

1 0 0 1 0 1

1 0 0 0 1 0

0 0 1 0 0 1

0 1 0 1 0 0

0 1 0 0 1 0

ans =

494

bit =

'popularity in [0.1, 0.6], mults are 1.5 and 0.5'

yprobs =

0.2406 0.7369 0.3263 0.7857 0.3668 0.3148

0.3983 0.5706 0.1806 0.4434 0.6911 0.1875

0.4551 0.1369 0.2447 0.2981 0.2119 0.2096

0.1051 0.2422 0.2758 0.4435 0.5503 0.5468

0.1313 0.1078 0.2858 0.0877 0.1090 0.1314

0.2735 0.1829 0.0936 0.2279 0.0722 0.0777

x =

0 1 0 0 0 0

0 1 0 0 1 0

1 0 1 1 0 0

0 0 0 0 1 1

0 0 1 0 0 1

1 0 0 1 0 0

ans =

420

bit =

'popularity in [0.1, 0.6], mults are 1.5 and 0.5'

yprobs =

0.2985 0.3351 0.3924 0.2415 0.4764 0.4947

0.4706 0.3721 0.2171 0.5178 0.3356 0.7696

0.2490 0.3912 0.1602 0.1125 0.4173 0.1709

0.4233 0.4635 0.4352 0.4289 0.4795 0.1179

0.1296 0.0903 0.2687 0.0938 0.2203 0.2939

0.0809 0.1966 0.1646 0.0656 0.1009 0.2248

x =

0 1 1 0 0 1

0 0 0 0 0 1

1 1 0 0 1 0

1 0 0 1 1 0

0 0 1 1 0 0

0 0 0 0 0 0

ans =

639

bit =

'popularity in [0.3, 0.6], mults are 1.5 and 0.5'

yprobs =

0.7661 0.8358 0.6335 0.6110 0.5811 0.6315

0.8452 0.4946 0.5507 0.4641 0.4956 0.6963

0.3115 0.5399 0.3635 0.4445 0.4442 0.3482

0.3087 0.5069 0.5282 0.5930 0.5129 0.4813

0.2523 0.1818 0.2430 0.1870 0.1779 0.2335

0.2808 0.2867 0.1809 0.2422 0.2317 0.2955

x =

0 1 0 0 0 0

1 0 0 0 0 0

0 1 0 1 1 0

0 0 0 1 1 0

0 0 1 0 0 1

1 0 1 0 0 1

ans =

413

bit =

'popularity in [0.3, 0.6], mults are 1.5 and 0.5'

yprobs =

0.5682 0.4777 0.4530 0.8166 0.7954 0.8942

0.5144 0.4546 0.4735 0.5314 0.6815 0.5997

0.5612 0.3091 0.3821 0.3050 0.3052 0.5971

0.4575 0.3541 0.5507 0.3407 0.5261 0.3949

0.2784 0.2801 0.1751 0.2719 0.1960 0.2233

0.2557 0.1648 0.2211 0.2768 0.2093 0.2058

x =

0 0 0 0 0 1

0 0 1 0 1 0

1 0 0 0 0 1

0 0 1 0 1 0

0 1 0 1 0 0

1 1 0 1 0 0

ans =

347

>> main

bit =

'popularity in [0.3, 0.9]'

yprobs =

0.7829 0.7561 0.7670 0.6553 0.3203 0.8154

0.4190 0.8625 0.7712 0.8162 0.6573 0.3736

0.3321 0.5951 0.5929 0.4540 0.8321 0.3189

0.6918 0.7785 0.5866 0.6291 0.5507 0.4514

0.6433 0.4472 0.6018 0.8008 0.6883 0.6124

0.5237 0.7161 0.4063 0.8885 0.4981 0.4831

x =

0 0 0 1 0 1

0 1 0 0 1 0

1 0 0 0 1 0

0 1 0 1 0 1

0 0 0 1 1 0

1 1 1 0 0 1

ans =

355

bit =

'popularity in [0.4, 1]'

yprobs =

0.8605 0.5763 0.7545 0.5777 0.6741 0.6837

0.8226 0.5412 0.7044 0.8465 0.9558 0.6273

0.4948 0.8008 0.4946 0.7886 0.7666 0.5073

0.8217 0.9945 0.6688 0.4356 0.7138 0.6825

0.4383 0.5607 0.7418 0.8182 0.5473 0.9355

0.4486 0.9473 0.7432 0.5234 0.5383 0.6304

x =

0 1 1 0 0 1

0 0 1 1 0 1

0 0 0 1 1 0

0 1 0 0 0 1

0 0 1 1 1 0

1 1 0 0 0 0

ans =

134

bit =

'popularity in [0, 1]'

yprobs =

0.3794 0.6292 0.1917 0.3816 0.3722 0.3361

0.7064 0.1525 0.0530 0.5881 0.8423 0.7586

0.7987 0.8303 0.5737 0.3312 0.5751 0.8660

0.2331 0.4392 0.1413 0.9801 0.4599 0.3029

0.8165 0.1146 0.7536 0.9539 0.3257 0.6282

0.4148 0.8918 0.4699 0.0859 0.6338 0.2000

x =

0 1 0 1 1 1

1 0 1 0 1 0

1 1 0 0 1 0

0 0 0 1 0 1

0 0 0 1 0 0

1 1 0 0 0 0

ans =

92

bit =

'popularity in [0.2, 1]'

yprobs =

0.9695 0.6519 0.9368 0.4035 0.8936 0.8061

0.6081 0.8044 0.4391 0.4605 0.2908 0.5928

0.6657 0.6833 0.3701 0.2981 0.2916 0.9587

0.3275 0.9017 0.9195 0.5585 0.8180 0.8868

0.9205 0.2808 0.3384 0.3767 0.2999 0.6154

0.9654 0.8816 0.8846 0.8028 0.4633 0.7294

x =

1 0 0 0 0 1

0 1 1 0 0 0

0 1 0 0 0 1

0 1 0 0 0 1

1 0 0 1 1 0

1 0 0 0 0 0

ans =

114

>> main

bit =

'popularity in [0.3, 0.6], [0.1,.4] and [0.5 ,0.8]'

yprobs =

0.7443 0.7788 0.5590 0.6848 0.6055 0.6756

0.5731 0.6050 0.5753 0.6420 0.7492 0.6649

0.4641 0.3107 0.3291 0.4939 0.4495 0.3416

0.5912 0.5377 0.3095 0.5297 0.4021 0.3448

0.3752 0.3272 0.2141 0.1228 0.2592 0.3802

0.1858 0.3261 0.2703 0.1162 0.3338 0.1390

x =

0 1 0 0 0 1

0 1 0 1 0 0

1 0 0 1 1 0

1 0 0 1 0 1

1 1 0 0 1 1

0 0 1 0 1 0

ans =

345

bit =

'popularity in [0.3, 0.6], [0.1,.4] and [0.5 ,0.8]'

yprobs =

0.5824 0.7935 0.6438 0.6651 0.7122 0.6474

0.7256 0.6720 0.5356 0.7100 0.5726 0.6660

0.4426 0.5431 0.4329 0.5973 0.4865 0.4530

0.4470 0.5538 0.3621 0.5855 0.5966 0.3387

0.2322 0.3802 0.1502 0.2156 0.2733 0.1805

0.3005 0.2957 0.1720 0.1962 0.3962 0.2734

x =

0 1 0 0 0 0

1 1 0 0 0 0

1 0 0 1 1 0

1 0 0 1 0 1

0 1 1 1 1 1

0 0 1 0 1 1

ans =

362

>>

>> main

bit =

'popularity in [0.1, 0.6]'

yprobs =

0.5441 0.1230 0.4119 0.1321 0.1964 0.5121

0.4479 0.1853 0.2096 0.3651 0.4926 0.3811

0.3665 0.4943 0.1526 0.1171 0.5899 0.1405

0.2943 0.1801 0.5067 0.2306 0.5316 0.1273

0.2540 0.4208 0.5095 0.2075 0.5349 0.4630

0.5132 0.4243 0.4570 0.4589 0.4510 0.5022

x =

1 0 1 0 0 1

1 0 0 1 0 1

0 1 0 0 1 0

0 0 1 1 1 0

0 1 1 1 1 0

1 1 0 0 0 1

ans =

490

>>

**Updated Results for Pazour’s presentation Round 2**

6x6, 1<=theta <= 2, exhaustive performance analysis, no replacement for saa or performance scenarios

1 Sample

>> main

C =

1.4894 1.8800 1.4187 1.1486 1.0253 1.8804

1.3631 1.7267 1.2164 1.2777 1.0227 1.1145

1.7089 1.6938 1.1143 1.6752 1.6859 1.5768

1.1197 1.4705 1.1602 1.6206 1.1305 1.9182

1.1953 1.6214 1.1827 1.8656 1.7602 1.1039

1.9046 1.8227 1.4344 1.2336 1.4958 1.5911

D =

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

1.1140 1.7461 1.6204 1.1466 1.4311 1.6400

r =

1.8450

1.2451

1.5365

1.8983

1.5484

1.1197

yprobs =

0.5389 0.2169 0.4755 0.1403 0.2910 0.1912

0.4812 0.1016 0.4635 0.5040 0.3954 0.5480

0.2793 0.3498 0.5812 0.4965 0.2409 0.4351

0.1365 0.5390 0.5601 0.1052 0.4356 0.4427

0.1530 0.1910 0.4190 0.1823 0.5775 0.2393

0.4088 0.4591 0.2490 0.3926 0.4211 0.3635

10 Sample

>> main

x =

1 1 1 0 0 0

0 0 0 1 0 1

1 0 0 1 0 0

0 0 1 0 0 0

0 0 0 0 1 0

0 1 0 0 1 1

ans =

6

objave =

11.9470

x =

1 0 1 0 0 0

0 0 0 0 0 1

0 1 0 1 0 0

0 0 1 0 1 0

0 0 0 0 1 0

1 1 0 1 0 1

ans =

6

objave =

12.0190

x =

1 0 0 0 1 0

1 0 0 0 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

0 1 1 1 0 0

ans =

4

objave =

12.3110

x =

1 0 0 0 0 0

1 1 0 0 1 0

0 1 1 1 0 0

0 0 1 0 0 1

0 0 0 0 1 0

0 0 0 1 0 1

ans =

3

objave =

11.6141

x =

0 0 1 0 0 0

1 0 0 1 0 0

0 1 0 0 0 1

0 1 0 1 0 1

0 0 1 0 1 0

1 0 0 0 1 0

ans =

3

objave =

11.8437

50 Sample

>> main

x =

1 1 0 0 0 0

1 0 0 1 0 0

0 0 0 1 0 1

0 1 0 0 0 1

0 0 1 0 1 0

0 0 1 0 1 0

ans =

17

objave =

12.2253

x =

1 0 0 0 0 0

0 0 1 1 0 0

0 0 0 0 0 1

0 1 0 0 1 1

0 0 1 0 1 0

1 1 0 1 0 0

ans =

28

objave =

11.8433

x =

1 0 1 0 0 0

0 0 0 1 1 1

0 0 0 1 0 1

0 1 1 0 0 0

0 0 0 0 1 0

1 1 0 0 0 0

ans =

21

objave =

12.7439

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

ans =

28

objave =

12.9646

x

1 0 0 0 0 1

0 0 0 1 0 1

1 0 1 0 0 0

0 1 1 0 0 0

0 0 0 1 1 0

0 1 0 0 1 0

ans =

20

objave =

12.1122

>>

100 Sample

>> main

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 1 0

0 0 0 0 1 0

1 1 0 0 0 1

ans =

43

objave =

12.6853

x =

1 0 0 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 1 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

ans =

52

objave =

12.5214

x =

1 0 1 0 0 0

1 0 1 0 0 0

0 0 0 1 0 1

0 1 0 0 0 1

0 0 0 0 1 0

0 1 0 1 1 0

ans =

42

objave =

12.8011

x =

1 0 1 0 0 0

0 0 0 1 1 0

1 1 0 1 0 0

0 0 1 0 0 1

0 0 0 0 1 0

0 1 0 0 0 1

ans =

45

objave =

12.4549

x =

1 0 1 0 0 0

1 0 0 1 1 0

0 0 0 1 0 1

0 1 1 0 0 0

0 0 0 0 1 0

0 1 0 0 0 1

ans =

47

objave =

12.5884

>>

500 Sample

>> main

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

ans =

245

objave =

12.9646

x =

1 0 1 0 0 0

1 0 0 0 0 1

0 0 0 1 0 1

0 1 1 0 0 0

0 0 0 0 1 0

0 1 0 1 1 0

ans =

236

objave =

12.6967

x =

1 0 1 0 1 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 0 0

ans =

255

objave =

12.8383

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 0 1 0 1

0 1 0 0 1 0

0 0 1 0 1 0

1 1 0 0 0 0

ans =

220

objave =

12.8658

x =

1 1 0 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 0 1 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

ans =

226

objave =

12.6812

>>

1,000 Sample

>> main

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 0 1 0 1

0 1 1 0 0 0

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9130

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

objave =

12.9646

5,000 Sample

>> main

>> main

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

ans =

2512

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

1 1 0 0 1 0

ans =

2798

objave =

12.9646

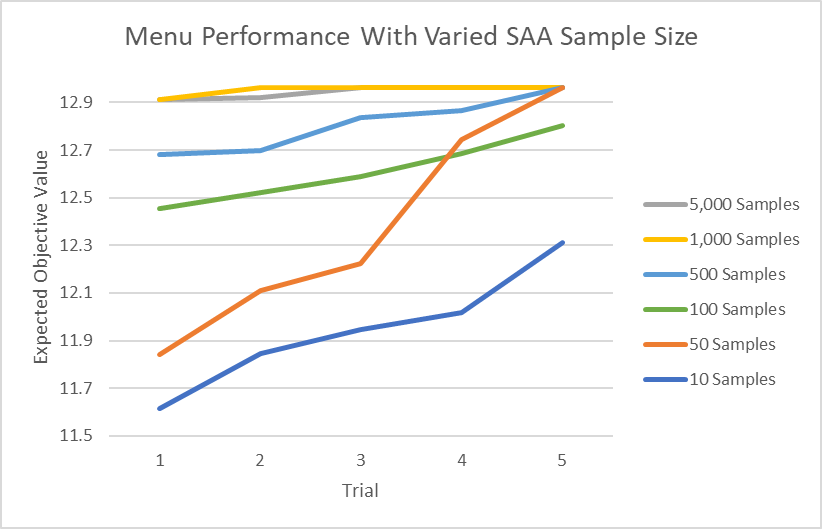
x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 0 1

 0 0 0 0 1 0

1 1 0 0 1 0

ans =

2542

objave =

12.9646

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 0 1 0 1

0 1 1 0 0 0

0 0 0 0 1 0

1 1 0 0 1 0

ans =

2238

objave =

12.9130

x =

1 0 1 0 0 0

0 0 0 1 0 1

0 0 1 1 0 0

0 1 0 0 1 1

0 0 0 0 1 0

1 1 0 0 0 0

ans =

2746

objave =

12.9225

>>

10,000 Sample

>> main

x =

1 0 1 0 0 0

1 0 0 1 0 0

0 0 1 1 0 0

0 1 0 0 0 1

0 0 0 0 1 0

0 1 0 0 1 1

objave =

12.9129

Candidate Params for Exhaustive test

(using Chicago, minwage=8, maxwage=25)

C =

1.3683 3.3119 3.8871 1.0058 2.8895 1.0466

2.8890 3.7245 4.2054 3.1246 4.0639 2.0608

3.0615 2.0552 2.7918 2.3184 3.5590 0.2398

0.2367 2.3945 2.6488 -0.2240 1.8105 0.1291

1.5016 4.4917 3.6419 1.9000 2.8773 2.6320

6.1274 4.5140 4.6909 6.7646 5.3388 3.9461

D =

3.4325 4.5682 3.2742 5.4426 5.2831 3.8265

3.4325 4.5682 3.2742 5.4426 5.2831 3.8265

3.4325 4.5682 3.2742 5.4426 5.2831 3.8265

3.4325 4.5682 3.2742 5.4426 5.2831 3.8265

3.4325 4.5682 3.2742 5.4426 5.2831 3.8265

3.4325 4.5682 3.2742 5.4426 5.2831 3.8265

r =

0.6612

10.3008

11.0066

6.5576

5.6976

14.6949

q =

1

1

1

1

1

1

yprobs =

0 1.0000 0.9626 0 1.0000 0

0.1847 0.7087 0.2426 0.4730 0.9838 0.0633

0.1371 0.1057 0.1197 0.0299 0.7803 0

0 0.4714 1.0000 0 0.3757 0

0 1.0000 0.3020 0.0383 0.8235 0.3229

0.4368 0.3284 0.1108 0.8990 0.3863 0.1594

Bit=’100 Samples’

x =

0 1 0 0 1 0

1 1 1 1 1 1

1 0 1 1 1 0

0 0 1 0 0 0

0 1 0 0 0 1

0 0 0 1 0 1

(sim)obj =

61.0476

Bit=’10,000 Samples’

x =

0 1 0 0 1 0

1 1 1 1 1 1

1 0 1 1 1 0

0 0 1 0 0 0

0 1 0 0 0 1

1 0 0 1 0 0

obj =

61.4677

Bit=’100,000 Samples’

x =

0 1 0 0 1 0

1 1 1 1 1 1

1 0 1 1 1 0

0 0 1 0 0 0

0 1 0 0 0 1

1 0 0 1 0 0

obj =

61.7933

Candidate Params for Exhaustive test

(using Chicago city center, minwage=8, maxwage=25)

C =

0.9950 3.6977 1.3817 2.7112

3.5668 4.6466 4.2836 4.5067

4.7723 5.2482 5.4702 5.2947

4.5361 3.7354 5.7507 3.8609

D =

4.7625 3.8916 5.0384 6.2295

6.4865 5.6156 6.7624 7.9535

6.5643 5.6934 6.8402 8.0313

5.7443 4.8734 6.0202 7.2113

r =

4.9715

12.3287

2.3209

7.9520

q =

1

1

1

1

yprobs =

0 0.3683 0 0.0300

0.1456 0.6535 0.3628 0.4255

0.1385 0.5762 0.4287 0.3347

0.2930 0.4253 1.0000 0.3814

**Outputs**

optmenu =

0 1 0 0

1 1 1 1

1 0 0 1

0 0 1 0

optruntime =

40.9730

optobj =

31.3820

menus =

0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0

0 1 1 0 0 1 1 1 0 0 1 1 0 1 1 1

1 1 0 1 0 1 0 1 0 1 0 1 1 1 0 1

0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1

0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

1 1 1 1 1 1 1 1 0 1 1 1 0 1 1 1

0 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1

0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

0 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1

0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

1 1 1 1 0 1 1 1 0 1 1 1 1 1 1 1

1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1

0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

1 1 1 1 0 1 1 1 0 1 1 1 0 1 1 1

1 1 0 1 1 1 0 1 1 1 0 1 1 1 0 1

0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0

0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

1 0 0 1 1 0 0 1 1 0 0 1 1 0 0 1

0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0

runtimes =

0.1133 0.1146 0.0911 0.1079

0.1159 0.1020 0.1311 0.1028

0.1166 0.1332 0.1214 0.1161

0.5302 0.4179 0.4310 0.4646

1.2086 1.2085 1.2073 1.2042

4.0590 3.7147 4.8628 4.3379

16.1708 21.8628 11.9095 16.8218

objs =

28.6370 31.0042 27.9567 30.9506

30.9955 30.9955 30.9955 30.9955

30.9899 30.9955 30.9506 30.9506

30.9899 30.9955 30.9955 30.9955

30.9955 30.9506 30.9506 30.9955

30.9955 30.9506 30.9506 30.9506

31.3820 31.3820 31.3820 31.3820

samesizediff =

Columns 1 through 22

0 0 0 1 0 -1 0 1 0 0 0 1 0 -1 0 0 0 0 0 0 0 1

0 0 0 -1 0 1 0 -1 0 0 0 -1 0 1 0 0 0 0 0 0 0 -1

1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 -1 0 0 0 -1 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 0 0

-1 0 0 0 -1 0 0 0 -1 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-1 0 0 0 -1 0 0 0 -1 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 -1 0 0 0 -1 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

1 0 0 0 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Columns 23 through 24

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

0 0

samesizetot =

1.5000 2.5000 1.0000 1.0000 0.5000 1.5000

0 0 0 0 0 0

0.5000 1.0000 1.0000 0.5000 0.5000 0

0.5000 0.5000 0.5000 0 0 0

0.5000 0.5000 0 0 0.5000 0.5000

0.5000 0.5000 0.5000 0 0 0

0 0 0 0 0 0

optdiff =

0 1 0 -1 0 1 0 0 0 0 0 0 0 1 0 0

1 0 0 1 1 0 0 0 1 1 0 0 1 0 0 0

0 -1 0 0 1 -1 0 0 1 -1 0 0 0 -1 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 -1 0 0 0 -1 0 0 0 -1 0 0 0 -1 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0

0 0 0 0 0 0 0 0 1 0 0 0 1 0 0 0

1 -1 0 0 0 -1 0 0 0 -1 0 0 0 -1 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

1 -1 0 0 0 -1 0 0 0 -1 0 0 0 -1 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0

0 0 0 0 1 0 0 0 1 0 0 0 0 0 0 0

0 -1 0 0 0 -1 0 0 0 -1 0 0 0 -1 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0

0 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0

0 -1 0 0 0 -1 0 0 0 -1 0 0 0 -1 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

optdifftot =

2.5000 2.0000 2.0000 1.5000

1.0000 1.0000 1.0000 1.0000

1.5000 1.0000 1.5000 1.5000

1.5000 1.0000 1.0000 1.0000

1.0000 1.5000 1.5000 1.0000

1.0000 1.5000 1.5000 1.5000

0 0 0 0

>>

Candidate Params for Exhaustive test 5x5

(using Chicago city center, minwage=8, maxwage=25)

C =

2.6249 2.3016 1.0314 1.9308 2.8835

1.9597 2.6509 0.6255 1.2579 2.2105

2.9581 4.4024 3.2193 2.8881 3.4303

3.7956 5.2399 4.6253 3.8499 4.3327

3.4352 2.7944 1.3480 2.2475 3.2001

D =

3.9547 1.9201 2.9849 3.6329 1.7310

3.8737 1.8390 2.9039 3.5518 1.6500

5.7634 3.7287 4.7936 5.4415 3.5397

6.8729 4.8383 5.9032 6.5511 4.6493

4.8289 2.7942 3.8591 4.5070 2.6052

r =

12.0400

12.8154

8.3712

11.0744

2.9837

q =

1

1

1

1

1

yprobs =

0.3857 0.1295 0 0.0473 1.0000

0 0.5654 0 0 0.1296

0.1415 0.6358 0.1509 0.4635 0.2553

0.2029 0.4167 0.6714 1.0000 0.2306

0.8100 0.1448 0 0.1253 0.7914

There are 2^(10^18) scenarios and the code ran for about 3 days then gave the memory error, assumingly because it ran out of tree node memory

Partial Exhaustive test 10x10 (8/12)

(using Chicago city center)

m=10;

n=10;

theta=3;

eq=0;

lwr=0;

C=[2.29240029596800,2.76117344517600,2.50055006016800,3.93520627437600,4.77688170539200,4.18871548759200,2.75319759970400,4.87978682328800,4.50395205908800,3.56909339588800;2.76218762093600,3.37765145952000,1.16599901545600,2.84599605524000,3.83135130544800,3.09950526845600,1.89203362148000,4.14151467196800,3.58386226896800,3.43601075867200;4.57865233730400,5.21293402808800,2.88904730791200,5.16173869654400,5.45121185909600,5.41524790976000,3.51381954478400,6.06129176528000,5.18562360004800,5.02633360126400;6.32966933532800,6.36235222220800,7.71625323114400,8.87889995397600,8.37887126588000,8.87958719734400,7.11967286040800,8.09018585958400,8.60702231728800,7.88501600988800;1.36480323658400,1.42925701864800,3.43164525869600,2.17121275132000,3.30447800292800,2.40969925641600,4.37960426806400,2.82131944531200,3.57386408576800,3.76544534680000;0.821402616480000,0.777555614008000,0.987293514688000,1.67426207741600,2.82936951560000,1.91274858251200,1.79263326892800,2.32436877140800,3.09875559844000,2.55943462301600;-0.195085457816000,-0.238932460288000,3.47408728746400,1.79205822826400,1.81288144130400,1.83387718821600,2.58922907462400,1.41513177486400,2.08226752414400,1.91245795834400;3.37615191132000,3.72421356764000,0.737960654192000,1.87796711955200,2.96180323100800,2.10674414596000,1.48449670750400,2.82570567915200,3.04467486539200,3.05481413327200;2.08588633224800,2.11856921912800,3.47247022806400,4.63511695089600,4.13508826280000,4.63580419426400,2.87588985732800,3.84640285650400,4.36323931420800,3.64123300680800;3.92544785579200,4.54091169437600,1.98851460612800,3.07180961551200,4.21235718294400,3.32531882872800,2.71454921215200,4.36732823224000,4.29522881732800,4.26558393548800];

D=[4.23205737304410,3.99730423518372,5.65883498451888,4.57031712256207,5.14883496259043,4.21249953366353,5.59947254264068,4.10814084742980,4.46469588641050,6.51438952730262;3.82441078166010,3.58965764379972,5.25118839313488,4.16267053117807,4.74118837120643,3.80485294227953,5.19182595125668,3.70049425604580,4.05704929502650,6.10674293591862;5.69081703543610,5.45606389757573,7.11759464691088,6.02907678495407,6.60759462498243,5.67125919605553,7.05823220503268,5.56690050982180,5.92345554880250,7.97314918969462;8.69850890656410,8.46375576870373,10.1252865180389,9.03676865608207,9.61528649611043,8.67895106718353,10.0659240761607,8.57459238094980,8.93114741993050,10.9808410608226;3.75943849751610,3.52468535965572,5.18621610899088,4.09769824703407,4.67621608706243,3.73988065813553,5.12685366711268,3.63552197190180,3.99207701088250,6.04177065177462;2.34574352538010,2.11099038751973,3.77252113685488,2.68400327489807,3.26252111492643,2.32618568599953,3.71315869497668,2.22182699976580,2.57838203874650,4.62807567963862;2.86675829634010,2.63200515847973,4.29353590781488,3.20501804585807,3.78353588588643,2.84720045695953,4.23417346593668,2.74284177072580,3.09939680970650,5.14909045059862;3.43951397518810,3.20476083732772,4.86629158666288,3.77777372470607,4.35629156473443,3.41995613580753,4.80692914478468,3.31559744957380,3.67215248855450,5.72184612944662;4.45472590348410,4.21997276562373,5.88150351495888,4.79298565300207,5.37150349303043,4.43516806410353,5.82214107308068,4.33080937786980,4.68736441685050,6.73705805774262;4.49559491821210,4.26084178035173,5.92237252968688,4.83385466773007,5.41237250775843,4.47603707883153,5.86301008780868,4.37167839259780,4.72823343157850,6.77792707247062];

r=[1.52805596790779;6.20076573811178;3.24665789973784;1.19754756631449;8.16782362967810;8.58495262834197;14.8073718520575;9.11200710928437;8.17104518796329;1.48973135532879];

q=ones(n,1);

yprobs=[0.00351568313136173,0.107164481851346,0,0.148484403212668,0.617855728122777,0.174244953083009,0.0418052125135081,0.605365508396798,0.337239205707313,0.227653535767176;0.00825376118659930,0.152913657096104,0,0.134136874896710,0.764332693012271,0.160423043706336,0,0.622385278476764,0.281119293785092,0.173524403333028;0.261910072552927,0.459834061740693,0.126432197175070,0.352365814146188,0.692781436491463,0.348441565359518,0.253329281421539,0.667995238376545,0.606728002765416,0.720569864499925;0.360915804923246,0.435856885616400,0.455244224880039,0.719074007077497,0.876447347937673,0.703522597583209,0.454642727261072,0.765891287886140,0.771259350680861,0.694857375562268;0,0,0.288296938239516,0,0.337428243096220,0,0.759288802854005,0.112657682212058,0.413929421484225,0.424024668975524;0,0,0,0,0.818174807853150,0,0,0.105720504695049,1,0.215342232697842;0,0,1,0,0.0369466776032636,0,0.118013882900038,0,0.0150764314155269,0;0.248938141474758,0.606700789947454,0,0,0.0569487004285428,0,0,0.0115702611912932,0.0769568176243443,0.166150195212003;0,0,0.169469417183449,0.736182734867935,1,0.736182734867935,0.0159789616900442,0.421799155449614,0.370940367010529,0.116219633080785;0.0936154363358828,0.257886099291899,0,0.123429370704805,0.597630529223647,0.154226403707760,0.0310980738464027,0.633160353455329,0.421685509100796,0.293552964432201];

Oi=[84;26;23;69;139;147;56;99;69;97];

Di=[26;16;157;26;148;145;130;102;7;13];

Oj=[123;110;172;72;82;6;184;13;83;160];

Dj=[121;123;61;73;73;72;152;11;81;159];

drand=[0.662846350820101,0.428093212959724,2.08962396229488,1.00110610033807,1.57962394036643,0.643288511439533,2.03026152041668,0.538929825205803,0.895484864186501,2.94517850507862];

sizes=[1; 5; 10; 50; 100; 500; 1000];

notes='partexhcitycent';

trials= 4;

exh=0;

yprobs =

0.0035 0.1072 0 0.1485 0.6179 0.1742 0.0418 0.6054 0.3372 0.2277

0.0083 0.1529 0 0.1341 0.7643 0.1604 0 0.6224 0.2811 0.1735

0.2619 0.4598 0.1264 0.3524 0.6928 0.3484 0.2533 0.6680 0.6067 0.7206

0.3609 0.4359 0.4552 0.7191 0.8764 0.7035 0.4546 0.7659 0.7713 0.6949

0 0 0.2883 0 0.3374 0 0.7593 0.1127 0.4139 0.4240

0 0 0 0 0.8182 0 0 0.1057 1.0000 0.2153

0 0 1.0000 0 0.0369 0 0.1180 0 0.0151 0

0.2489 0.6067 0 0 0.0569 0 0 0.0116 0.0770 0.1662

0 0 0.1695 0.7362 1.0000 0.7362 0.0160 0.4218 0.3709 0.1162

0.0936 0.2579 0 0.1234 0.5976 0.1542 0.0311 0.6332 0.4217 0.2936

There are 2^71 total saa scenarios