Life Cycle Dynamic Programming under with CARES Act Stimulus Checks

This is the example vignette for function: **snw_vfi_main_bisec_vec_stimulus** from the **PrjOptiSNW Package.** This function solves for policy function using Exact Vectorized Solution. Value in 2020 with surprise COVID unemployment Shock, with non-covid year Value as the continuation function, and provides households with stimulus checks specified in the 1st and 2nd round under actual Trump admin policies. The file focuses on the change in value function, asset choice, and consumption choice given a one period unemployment shock (that does not reappear in the future again). Solving this provides the distribution needed for the Biden checks, American Rescue Plan, problem.

Test SNW_VFI_MAIN_BISEC_VEC_STIMULUS

Solve the Regular Value and Also the Unemployment Value.

First, solve for value without unemployment issue (use the vectorized code that was previously tested):

```
mp_params = snw_mp_param('default_docdense');
mp_controls = snw_mp_control('default_test');
[V_VFI_ss,ap_VFI_ss,cons_VFI_ss,mp_valpol_more_ss] = ...
    snw_vfi_main_bisec_vec(mp_params, mp_controls);
```

```
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:83 of 82, time-this-age:7.3136
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:82 of 82, time-this-age:6.0441
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:81 of 82, time-this-age:6.3855
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:80 of 82, time-this-age:6.3018
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:79 of 82, time-this-age:6.173
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:78 of 82, time-this-age:6.2879
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:77 of 82, time-this-age:6.1391
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:76 of 82, time-this-age:6.0309
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:75 of 82, time-this-age:5.9803
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:74 of 82, time-this-age:6.164
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:73 of 82, time-this-age:5.9372
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:72 of 82, time-this-age:6.1783
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:71 of 82, time-this-age:6.0787
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:70 of 82, time-this-age:5.9692
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:69 of 82, time-this-age:5.9902
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:68 of 82, time-this-age:5.9674
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:67 of 82, time-this-age:6.1461
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:66 of 82, time-this-age:6.2066
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:65 of 82, time-this-age:5.9771
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:64 of 82, time-this-age:5.8333
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:63 of 82, time-this-age:6.0066
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:62 of 82, time-this-age:5.9925
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:61 of 82, time-this-age:5.9705
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:60 of 82, time-this-age:5.9967
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:59 of 82, time-this-age:6.0311
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:58 of 82, time-this-age:5.9875
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:57 of 82, time-this-age:6.0755
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:56 of 82, time-this-age:6.057
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:55 of 82, time-this-age:6.2244
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:54 of 82, time-this-age:6.2209
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:53 of 82, time-this-age:6.0393
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:52 of 82, time-this-age:6.3126
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:51 of 82, time-this-age:6.257
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:50 of 82, time-this-age:6.2639
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:49 of 82, time-this-age:6.1337
```

```
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:48 of 82, time-this-age:5.8459
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:47 of 82, time-this-age:6.3343
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:46 of 82, time-this-age:6.4592
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:45 of 82, time-this-age:6.4581
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:44 of 82, time-this-age:6.41
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:43 of 82, time-this-age:6.1706
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:42 of 82, time-this-age:6.4048
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:41 of 82, time-this-age:6.5389
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:40 of 82, time-this-age:6.323
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:39 of 82, time-this-age:6.4913
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:38 of 82, time-this-age:6.3163
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:37 of 82, time-this-age:6.4228
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:36 of 82, time-this-age:6.4678
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:35 of 82, time-this-age:6.5718
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:34 of 82, time-this-age:6.3062
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:33 of 82, time-this-age:6.4084
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:32 of 82, time-this-age:6.4444
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:31 of 82, time-this-age:6.2996
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:30 of 82, time-this-age:6.4695
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:29 of 82, time-this-age:6.164
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:28 of 82, time-this-age:6.2855
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:27 of 82, time-this-age:6.3753
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:26 of 82, time-this-age:6.1972
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:25 of 82, time-this-age:6.516
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:24 of 82, time-this-age:6.1376
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:23 of 82, time-this-age:6.3222
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:22 of 82, time-this-age:6.3612
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:21 of 82, time-this-age:6.6135
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:20 of 82, time-this-age:6.6567
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:19 of 82, time-this-age:6.7933
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:18 of 82, time-this-age:6.5731
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:17 of 82, time-this-age:6.6717
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:16 of 82, time-this-age:6.5018
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:15 of 82, time-this-age:6.5444
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:14 of 82, time-this-age:6.3181
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:13 of 82, time-this-age:6.5248
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:12 of 82, time-this-age:6.5545
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:11 of 82, time-this-age:6.673
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:10 of 82, time-this-age:6.3717
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:9 of 82, time-this-age:6.5723
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:8 of 82, time-this-age:6.2553
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:7 of 82, time-this-age:6.8687
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:6 of 82, time-this-age:6.5149
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:5 of 82, time-this-age:6.499
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:4 of 82, time-this-age:6.5916
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:3 of 82, time-this-age:6.6237
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:2 of 82, time-this-age:6.765
SNW_VFI_MAIN_BISEC_VEC: Finished Age Group:1 of 82, time-this-age:6.4599
Completed SNW_VFI_MAIN_BISEC_VEC;SNW_MP_PARAM=default_docdense;SNW_MP_CONTROL=default_test;time=524.7214
----------------------------------------
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
CONTAINER NAME: mp_outcomes ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	ndim	numel	rowN	colN	sum	mean	std	coefvari
V_VFI	1	1	6	4.37e+07	83	5.265e+05	-1.5339e+08	-3.5101	26.119	-7.441
ap_VFI	2	2	6	4.37e+07	83	5.265e+05	1.4159e+09	32.402	36.798	1.1357
cons_VFI	3	3	6	4.37e+07	83	5.265e+05	2.1402e+08	4.8975	8.3294	1.7007

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xxx TABLE:V_VFI xxxxxxxxxxxxxxxxxx
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	c1	c2	c3	c4	c5	c526496	c526497	c526498	c526499	c52650
r1	-346.51	-346.12	-343.63	-337.86	-328.51	21.702	21.852	22.003	22.154	22.30

r2	-334.38	-333.99	-331.51	-325.83	-316.83	21.724	21.869	22.015	22.163	22.31
r3	-322.45	-322.06	-319.6	-314.14	-305.6	21.745	21.885	22.027	22.171	22.31
r4	-310.63	-310.27	-307.99	-302.88	-294.87	21.767	21.903	22.041	22.182	22.32
r5	-299.94	-299.6	-297.46	-292.67	-285.12	21.775	21.907	22.042	22.18	22.32
r79	-9.9437	-9.9325	-9.8557	-9.6597	-9.3232	2.5394	2.5501	2.5602	2.5696	2.578
r80	-8.9023	-8.8911	-8.8143	-8.6183	-8.2818	2.3039	2.3121	2.3198	2.327	2.333
r81	-7.6363	-7.6251	-7.5484	-7.3524	-7.0159	2.0068	2.0124	2.0176	2.0226	2.027
r82	-5.9673	-5.9561	-5.8793	-5.6833	-5.3468	1.5958	1.5989	1.6018	1.6046	1.607
r83	-3.5892	-3.578	-3.5012	-3.3052	-2.9687	0.97904	0.98004	0.98097	0.98185	0.9826

xxx TABLE:ap_VFI xxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5	c526496	c526497	c526498	c526499	c526500
r1	0	0	0.0005656	0.0075134	0.022901	114.75	120.41	126.27	132.38	138.8
r2	0	0	0.00051498	0.0065334	0.021549	114.86	120.53	126.41	132.54	138.95
r3	0	0	0.00051498	0.0049294	0.019875	114.97	120.65	126.56	132.7	139.12
r4	0	0	0.00051498	0.0047937	0.019672	115.73	121.42	127.34	133.51	139.92
r5	0	0	0.00048517	0.0046683	0.019484	116.5	122.21	128.15	134.32	140.74
r79	0	0	0	0	0	81.091	85.68	90.335	94.378	98.419
r80	0	0	0	0	0	76.669	80.563	84.304	88.04	91.693
r81	0	0	0	0	0	68.313	71.534	74.475	77.832	81.11
r82	0	0	0	0	0	50.126	53.467	56.953	58.745	60.587
r83	0	0	0	0	0	0	0	0	0	0

xxx TABLE:cons_VFI xxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5	c526496	c526497	c526498	c526499	c
r1	0.036717	0.037251	0.040426	0.04363	0.048012	9.6491	9.817	9.9649	10.073	1
r2	0.036717	0.037251	0.040477	0.04461	0.049364	9.8118	9.9685	10.101	10.191	1
r3	0.036717	0.037251	0.040477	0.046214	0.051039	9.9779	10.12	10.234	10.302	1
r4	0.038144	0.038678	0.041903	0.047776	0.052666	10.131	10.258	10.354	10.405	1
r5	0.039534	0.040068	0.043323	0.04929	0.054241	10.272	10.384	10.463	10.5	
r79	0.2179	0.21844	0.22216	0.23228	0.25197	35.858	37.092	38.455	40.627	4
r80	0.2179	0.21844	0.22216	0.23228	0.25197	40.253	42.183	44.459	46.938	
r81	0.2179	0.21844	0.22216	0.23228	0.25197	48.587	51.19	54.266	57.123	6
r82	0.2179	0.21844	0.22216	0.23228	0.25197	66.755	69.238	71.77	76.192	8
r83	0.2179	0.21844	0.22216	0.23228	0.25197	116.87	122.69	128.71	134.92	1

Second, solve for the unemployment value, use the exact-bisec result code, call the snw_vfi_main_bisec_vec.m function with a third input of existing value. xi is the share of income lost during covid year given surprise covid shock, b is the share of income loss that is covered by unemployment insurance. xi=0.5 and b=0 means will lose 50 percent of income given COVID shocks, and the loss will not be covered at all by unemployment insurance. Calling the **snw_vfi_main_bisec_vec_stimulus** means households will receive positive amounts of stimulus given household structure (marital status and children count), as well as their total household income level.

```
mp_params('xi') = 0.5;
mp_params('b') = 0;
mp_params('a2_covidyr') = mp_params('a2_covidyr_manna_heaven');
[V_VFI_wthtrumpchk,ap_VFI_wthtrumpchecks,cons_VFI_wthtrumpchk,mp_valpol_more_wthtrumpchk] = ...
    snw_vfi_main_bisec_vec_stimulus(mp_params, mp_controls, V_VFI_ss);
```

```
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 1 of 82, time-this-age:6.7252
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 2 of 82, time-this-age:6.7772
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 3 of 82, time-this-age:6.6627
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 4 of 82, time-this-age:6.8223
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 5 of 82, time-this-age:6.9215
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 6 of 82, time-this-age:6.9037
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 7 of 82, time-this-age:6.705
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SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 8 of 82, time-this-age:6.6991
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 9 of 82, time-this-age:6.5535
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 10 of 82, time-this-age:6.6878
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 11 of 82, time-this-age:6.8421
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 12 of 82, time-this-age:6.9718
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 13 of 82, time-this-age:6.558
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 14 of 82, time-this-age:6.8131
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 15 of 82, time-this-age:6.7311
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 16 of 82, time-this-age:6.8506
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 17 of 82, time-this-age:6.9098
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 18 of 82, time-this-age:6.9122
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 19 of 82, time-this-age:6.6187
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 20 of 82, time-this-age:6.6395
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 21 of 82, time-this-age:6.7542
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 22 of 82, time-this-age:6.7548
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 23 of 82, time-this-age:6.5631
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 24 of 82, time-this-age:6.7776
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 25 of 82, time-this-age:6.7139
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 26 of 82, time-this-age:6.7068
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 27 of 82, time-this-age:6.7994
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 28 of 82, time-this-age:6.8842
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 29 of 82, time-this-age:6.7604
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 30 of 82, time-this-age:6.9635
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 31 of 82, time-this-age:6.8146
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 32 of 82, time-this-age:6.8804
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 33 of 82, time-this-age:6.8114
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 34 of 82, time-this-age:6.7898
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 35 of 82, time-this-age:6.6137
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 36 of 82, time-this-age:6.8399
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 37 of 82, time-this-age:6.6602
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 38 of 82, time-this-age:6.9641
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 39 of 82, time-this-age:6.8519
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 40 of 82, time-this-age:6.8513
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 41 of 82, time-this-age:6.893
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 42 of 82, time-this-age:6.8807
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 43 of 82, time-this-age:6.7441
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 44 of 82, time-this-age:6.8549
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 45 of 82, time-this-age:6.7601
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 46 of 82, time-this-age:6.7472
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 47 of 82, time-this-age:6.6921
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 48 of 82, time-this-age:6.4452
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 49 of 82, time-this-age:6.4472
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 50 of 82, time-this-age:6.4329
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 51 of 82, time-this-age:6.523
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 52 of 82, time-this-age:6.4913
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 53 of 82, time-this-age:6.4862
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 54 of 82, time-this-age:6.401
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 55 of 82, time-this-age:6.5517
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 56 of 82, time-this-age:6.7873
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 57 of 82, time-this-age:6.433
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 58 of 82, time-this-age:6.3329
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 59 of 82, time-this-age:6.553
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 60 of 82, time-this-age:6.5107
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 61 of 82, time-this-age:6.237
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 62 of 82, time-this-age:6.6392
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 63 of 82, time-this-age:6.4975
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 64 of 82, time-this-age:6.6955
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 65 of 82, time-this-age:6.551
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 66 of 82, time-this-age:6.6603
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 67 of 82, time-this-age:6.4622
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 68 of 82, time-this-age:6.6553
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 69 of 82, time-this-age:6.5615
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 70 of 82, time-this-age:6.5603
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 71 of 82, time-this-age:6.4717
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 72 of 82, time-this-age:6.4662
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SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 73 of 82, time-this-age:6.6733
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 74 of 82, time-this-age:6.502
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 75 of 82, time-this-age:6.4768
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 76 of 82, time-this-age:6.3919
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 77 of 82, time-this-age:6.3927
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 78 of 82, time-this-age:6.5768
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 79 of 82, time-this-age:6.6318
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 80 of 82, time-this-age:6.4096
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 81 of 82, time-this-age:6.5877
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 82 of 82, time-this-age:6.6085
SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock: Age 83 of 82, time-this-age:7.4669
Completed SNW_VFI_MAIN_BISEC_VEC 1 Period Unemp Shock;SNW_MP_PARAM=default_docdense;SNW_MP_CONTROL=default_test;time
----------------------------------------
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
CONTAINER NAME: mp_outcomes ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	ndim	numel	rowN	colN	sum	mean	std	coefvari
V_VFI	1	1	6	4.37e+07	83	5.265e+05	-1.6177e+08	-3.7019	25.686	-6.9386
ap_VFI	2	2	6	4.37e+07	83	5.265e+05	1.3806e+09	31.593	36.655	1.1602
cons_VFI	3	3	6	4.37e+07	83	5.265e+05	2.1144e+08	4.8386	8.3253	1.7206

xxx TABLE:V_VFI xxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5	c526496	c526497	c526498	c526499	c52650
r1	-338.66	-338.37	-336.41	-331.48	-322.96	21.573	21.728	21.882	22.036	22.19
r2	-326.59	-326.33	-324.44	-319.64	-311.54	21.595	21.745	21.894	22.044	22.19
r3	-314.86	-314.6	-312.85	-308.24	-300.64	21.617	21.762	21.906	22.052	22.20
r4	-303.88	-303.63	-301.98	-297.61	-290.46	21.633	21.772	21.913	22.056	22.20
r5	-293.91	-293.67	-292.1	-287.96	-281.19	21.634	21.77	21.907	22.046	22.18
r79	-9.372	-9.3634	-9.3044	-9.1503	-8.8682	2.5374	2.5482	2.5584	2.568	2.57
r80	-8.3306	-8.322	-8.263	-8.1104	-7.8319	2.3024	2.3107	2.3185	2.3259	2.332
r81	-7.0647	-7.0561	-6.9971	-6.8452	-6.5708	2.0057	2.0114	2.0168	2.0218	2.026
r82	-5.3957	-5.3871	-5.3281	-5.1763	-4.905	1.5952	1.5984	1.6014	1.6042	1.606
r83	-3.5892	-3.578	-3.5012	-3.3052	-2.9687	0.97886	0.97987	0.98082	0.98171	0.9825

xxx TABLE:ap_VFI xxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5	c526496	c526497	c526498	c52649
r1	0.0059975	0.0065322	0.010276	0.016055	0.032959	110.06	115.71	121.55	127.62
r2	0.0050174	0.0055522	0.0092956	0.014703	0.032959	110.03	115.68	121.54	127.62
r3	0.0041199	0.0041199	0.0076917	0.013905	0.032814	109.99	115.65	121.53	127.63
r4	0.0041199	0.0041199	0.0068606	0.013905	0.031916	110.28	115.95	121.84	127.96
r5	0.0041199	0.0041199	0.0060579	0.013905	0.031052	110.58	116.27	122.17	128.31
r79	0	0	0	0.0041199	0.013905	81.091	85.229	89.297	93.341
r80	0	0	0	0.0035488	0.013905	75.865	79.539	83.28	87.016
r81	0	0	0	0.00051498	0.011675	67.781	70.521	73.462	76.819
r82	0	0	0	0	0.0084397	50.126	53.467	56.108	57.742
r83	0	0	0	0	0	0	0	0	0

xxx TABLE:cons_VFI xxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5	c526496	c526497	c526498	c526499	c
r1	0.04363	0.04363	0.04363	0.048012	0.050894	9.4708	9.6491	9.817	9.9649	1
r2	0.04461	0.04461	0.04461	0.049364	0.050894	9.6414	9.8118	9.9685	10.101	1
r3	0.045508	0.046043	0.046214	0.050162	0.051039	9.8179	9.9779	10.12	10.234	1
r4	0.046238	0.046773	0.047776	0.050892	0.052666	9.9825	10.131	10.258	10.354	1
r5	0.04695	0.047485	0.04929	0.051604	0.054241	10.135	10.272	10.384	10.463	
r79	0.24891	0.24944	0.25317	0.25916	0.26907	34.82	36.506	38.455	40.627	4
r80	0.24891	0.24944	0.25317	0.25973	0.26907	40.033	42.183	44.459	46.938	
r81	0.24891	0.24944	0.25317	0.26276	0.2713	48.106	51.19	54.266	57.123	5

```
r82      0.24891      0.24944      0.25317      0.26328      0.27453      65.751      68.234      71.611      76.192      7
r83       0.2179      0.21844      0.22216      0.23228      0.25197      115.87      121.69      127.71      133.93      1
```

Difference Between Value and Choices In Unemployment and Future Periods

```
V_VFI_wthtrumpchk_drop = V_VFI_ss - V_VFI_wthtrumpchk;
ap_VFI_wthtrumpchk_drop = ap_VFI_ss - ap_VFI_wthtrumpchecks;
cons_VFI_wthtrumpchk_drop = cons_VFI_ss - cons_VFI_wthtrumpchk;
```

Define Parameter Frames

Define the matrix dimensions names and dimension vector values. Policy and Value Functions share the same ND dimensional structure.

```
% Grids:
age_grid = 18:100;
agrid = mp_params('agrid')';
eta_H_grid = mp_params('eta_H_grid')';
eta_S_grid = mp_params('eta_S_grid')';
ar_st_eta_HS_grid = string(cellstr([num2str(eta_H_grid', 'hz=%3.2f;'), num2str(eta_S_grid', 'wz
edu_grid = [0,1];
marry_grid = [0,1];
kids_grid = (1:1:mp_params('n_kidsgrid'))';
% NaN(n_jgrid,n_agrid,n_etagrid,n_educgrid,n_marriedgrid,n_kidsgrid);
cl_mp_datasetdesc = {};
cl_mp_datasetdesc{1} = containers.Map({'name', 'labval'}, {'age', age_grid});
cl_mp_datasetdesc{2} = containers.Map({'name', 'labval'}, {'savings', agrid});
cl_mp_datasetdesc{3} = containers.Map({'name', 'labval'}, {'eta', 1:length(eta_H_grid)});
cl_mp_datasetdesc{4} = containers.Map({'name', 'labval'}, {'edu', edu_grid});
cl_mp_datasetdesc{5} = containers.Map({'name', 'labval'}, {'marry', marry_grid});
cl_mp_datasetdesc{6} = containers.Map({'name', 'labval'}, {'kids', kids_grid});
```

Analyze Savings and Shocks

First, analyze Savings Levels and Shocks, Aggregate Over All Others, and do various other calculations.

```
% Generate some Data
mp_support_graph = containers.Map('KeyType', 'char', 'ValueType', 'any');
mp_support_graph('cl_st_xtitle') = {'Savings States, a'};
mp_support_graph('st_legend_loc') = 'eastoutside';
mp_support_graph('bl_graph_logy') = true; % do not log
mp_support_graph('it_legend_select') = 15; % how many shock legends to show
mp_support_graph('cl_colors') = 'jet';
```

MEAN(VAL(A,Z) - VAL(A,Z|CARESActChecks)), MEAN(AP(A,Z) - AP(A,Z|CARESActChecks)), MEAN(C(A,Z) - C(A,Z|CARESActChecks))

Tabulate value and policies along savings and shocks:

```
% Set
% NaN(n_jgrid,n_agrid,n_etagrid,n_educgrid,n_marriedgrid,n_kidsgrid);
ar_permute = [1,4,5,6,3,2];
```

```
% Value Function
tb_az_v = ff_summ_nd_array("MEAN(v(A,Z) - v(A,Z|CARESActChecks))", V_VFI_wthtrumpchk_drop, true
```

```
xxx  MEAN(v(A,Z) - v(A,Z|CARESActChecks))  xxxxxxxxxxxxxxxxxxxxxxxxxx
    group     savings      mean_eta_1     mean_eta_2     mean_eta_3     mean_eta_4     mean_eta_5     mean_eta_6
    _____    _________    __________     __________     __________     __________     __________     __________

      1              0        -9.5444        -8.6289        -7.7507        -6.9251        -6.1618        -5.4639
      2      0.00051498        -9.4551        -8.5532        -7.6865        -6.8706        -6.1156        -5.4249
      3       0.0041199        -8.8941        -8.0756        -7.2791         -6.523        -5.8197        -5.1739
      4        0.013905        -7.7416        -7.0754        -6.4143        -5.7772        -5.1778        -4.6226
      5        0.032959        -6.2779        -5.7814        -5.2761        -4.7806        -4.3085        -3.8674
      6        0.064373        -4.9217        -4.5607        -4.1851        -3.8109        -3.4502          -3.11
```

```
% Aprime Choice
tb_az_ap = ff_summ_nd_array("MEAN(AP(A,Z) - AP(A,Z|CARESActChecks))", ap_VFI_wthtrumpchk_drop,
```

```
xxx  MEAN(AP(A,Z) - AP(A,Z|CARESActChecks))  xxxxxxxxxxxxxxxxxxxxxxxxxx
    group     savings      mean_eta_1     mean_eta_2     mean_eta_3     mean_eta_4     mean_eta_5     mean_eta_6     mean
    _____    _________    __________     __________     __________     __________     __________     __________     ____

      1              0     -0.011368      -0.011194      -0.010895      -0.010535      -0.010172     -0.0097935     -0.0
      2      0.00051498     -0.011533       -0.01136      -0.011059      -0.010683      -0.010309     -0.0099285     -0.0
      3       0.0041199     -0.012704       -0.01251       -0.01216      -0.011741      -0.011267      -0.010827       -0
      4        0.013905     -0.014704      -0.014459      -0.014084      -0.013656      -0.013211      -0.012643       -0
      5        0.032959     -0.017946      -0.017547      -0.017034      -0.016459      -0.015844      -0.015157      -0.
      6        0.064373     -0.023092      -0.022476      -0.021789      -0.021051        -0.0203      -0.019526      -0.
```

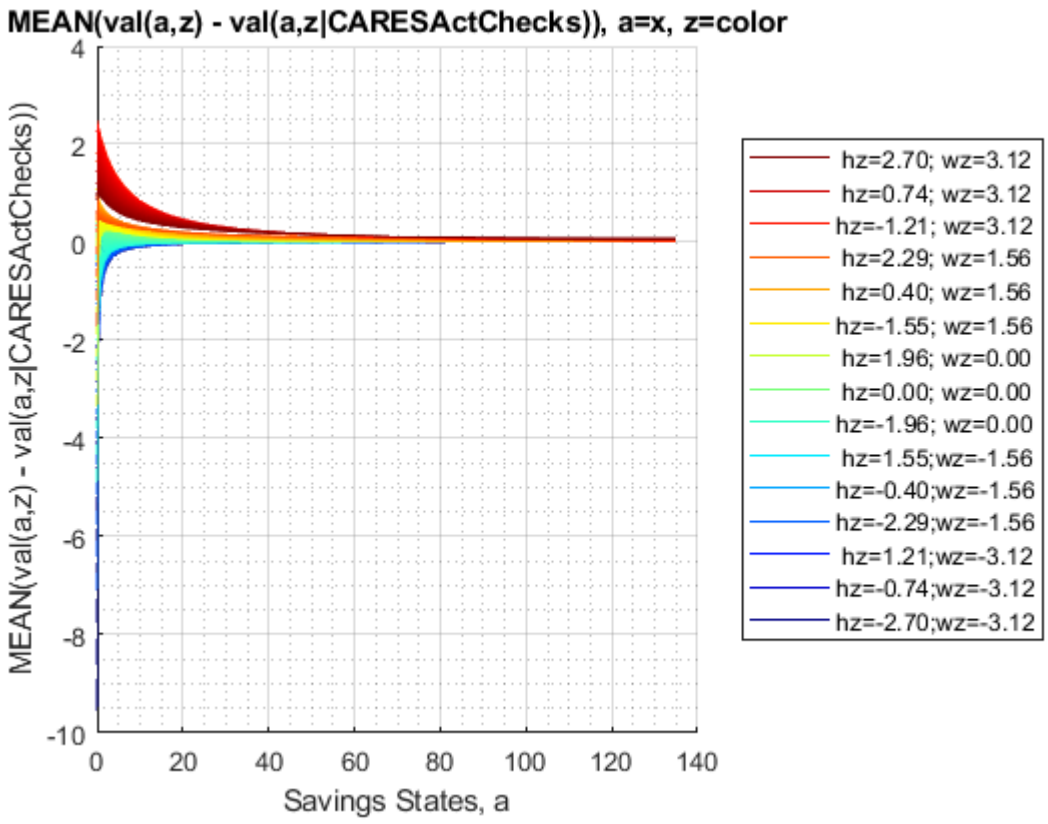
```
% Consumption Choices
tb_az_c = ff_summ_nd_array("MEAN(C(A,Z) - C(A,Z|CARESActChecks))", cons_VFI_wthtrumpchk_drop, t
```

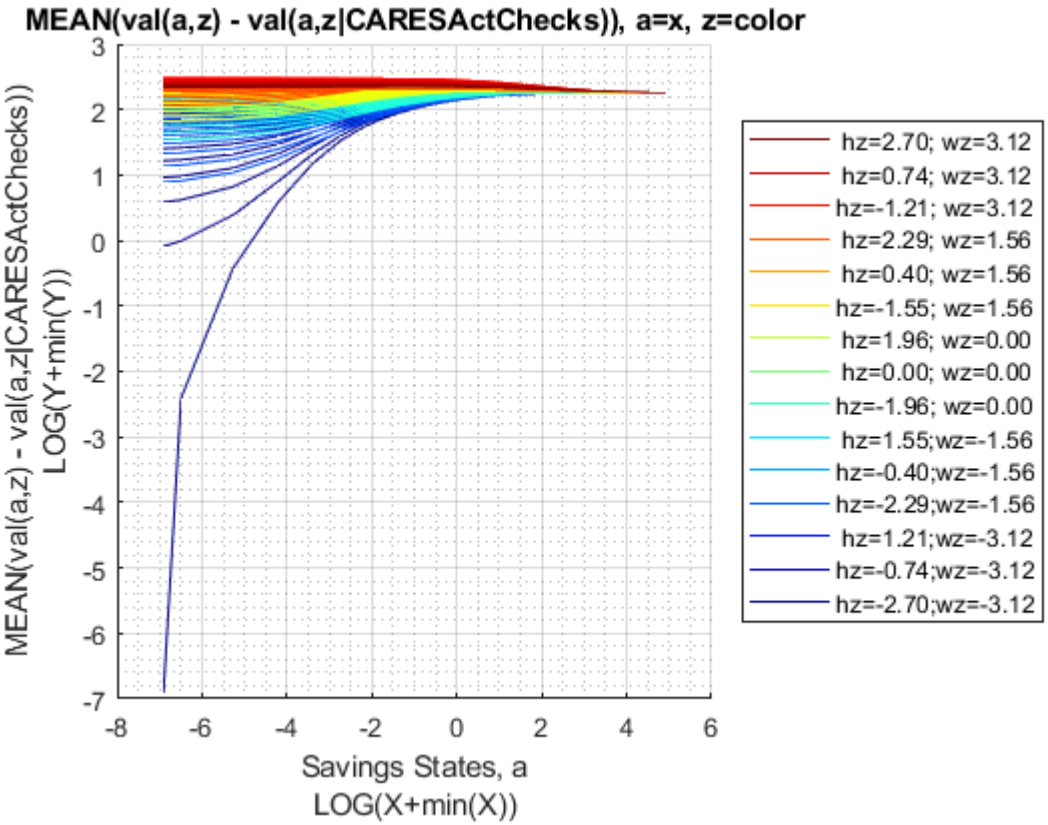
```
xxx  MEAN(C(A,Z) - C(A,Z|CARESActChecks))  xxxxxxxxxxxxxxxxxxxxxxxxxx
    group     savings      mean_eta_1     mean_eta_2     mean_eta_3     mean_eta_4     mean_eta_5     mean_eta_6
    _____    _________    __________     __________     __________     __________     __________     __________

      1              0      -0.052699      -0.051741      -0.050836      -0.049914      -0.048914      -0.047841
      2      0.00051498      -0.052535      -0.051576      -0.050673      -0.049767      -0.048777      -0.047707
      3       0.0041199      -0.051366      -0.050428      -0.049574      -0.048712      -0.047822      -0.046811
      4        0.013905      -0.049373      -0.048486      -0.047657      -0.046804      -0.045885      -0.045003
      5        0.032959      -0.046143      -0.045411      -0.044721      -0.044015      -0.043266      -0.042503
      6        0.064373      -0.041019      -0.040504      -0.039988      -0.039445      -0.038833      -0.038157
```

Graph Mean Values Change:

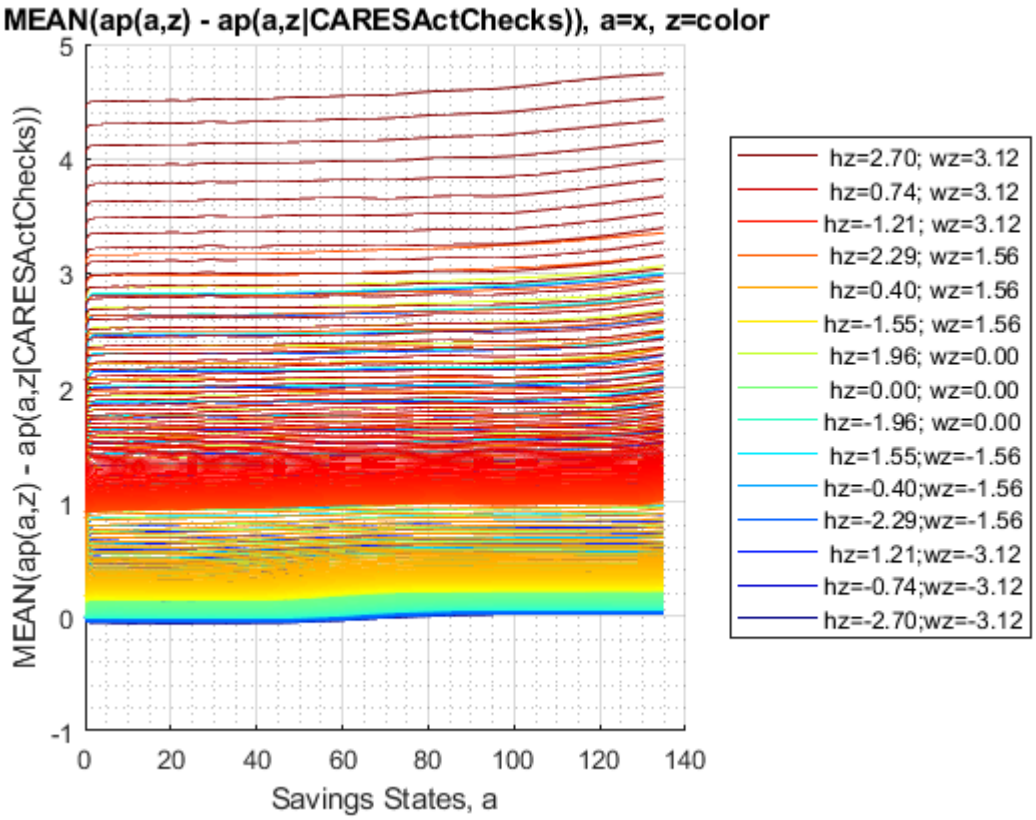
```
mp_support_graph('cl_st_graph_title') = {'MEAN(val(a,z) - val(a,z|CARESActChecks)), a=x, z=colo
mp_support_graph('cl_st_ytitle') = {'MEAN(val(a,z) - val(a,z|CARESActChecks))'};
ff_graph_grid((tb_az_v{1:end, 3:end})', ar_st_eta_HS_grid, agrid, mp_support_graph);
```

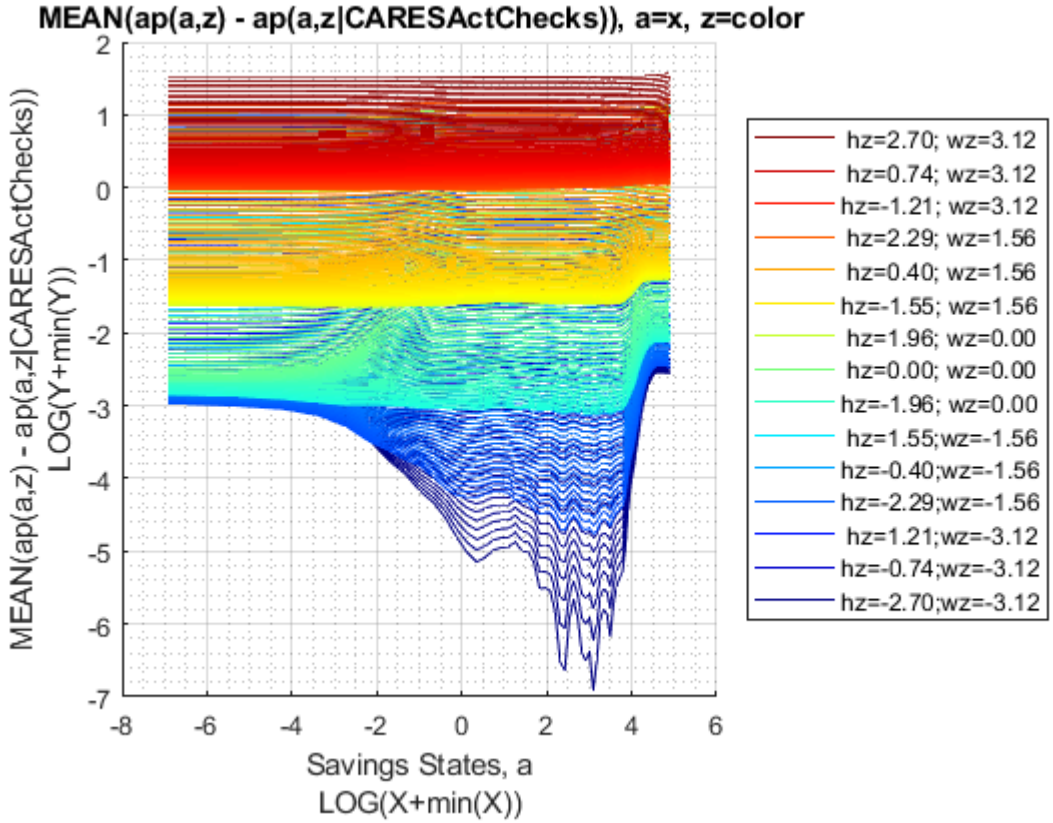




Graph Mean Savings Choices Change:

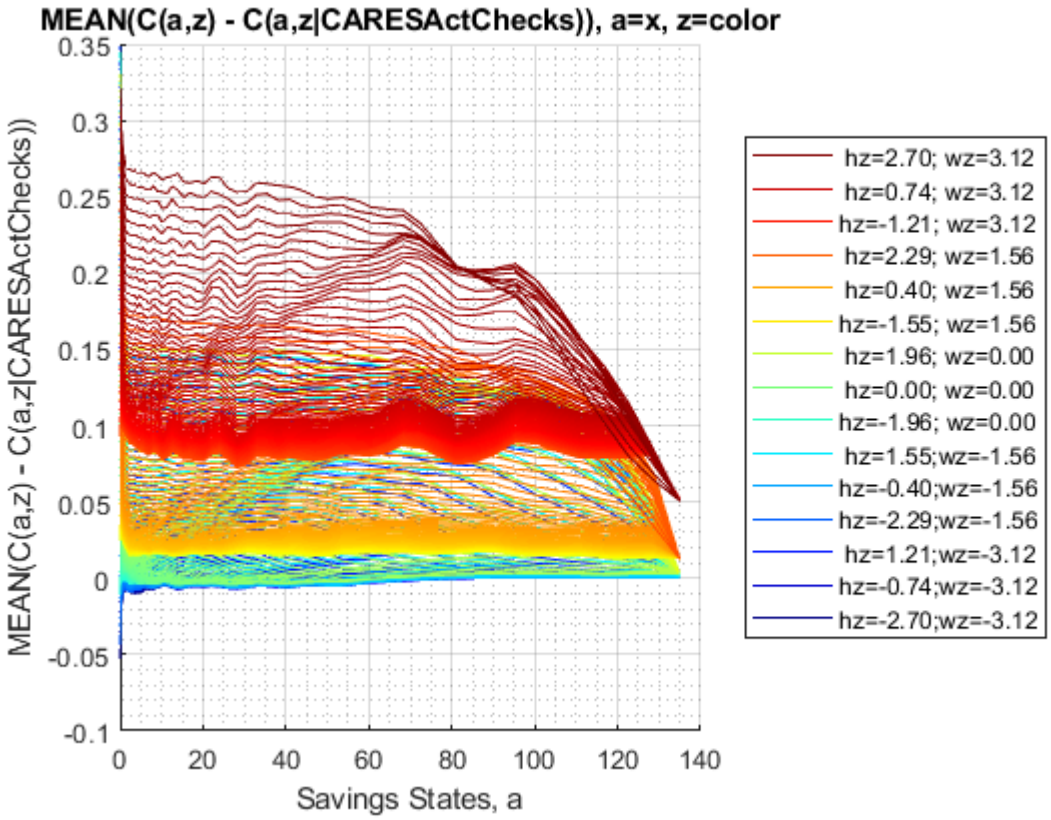
```
mp_support_graph('cl_st_graph_title') = {'MEAN(ap(a,z) - ap(a,z|CARESActChecks)), a=x, z=color'
mp_support_graph('cl_st_ytitle') = {'MEAN(ap(a,z) - ap(a,z|CARESActChecks))'};
ff_graph_grid((tb_az_ap{1:end, 3:end})', ar_st_eta_HS_grid, agrid, mp_support_graph);
```

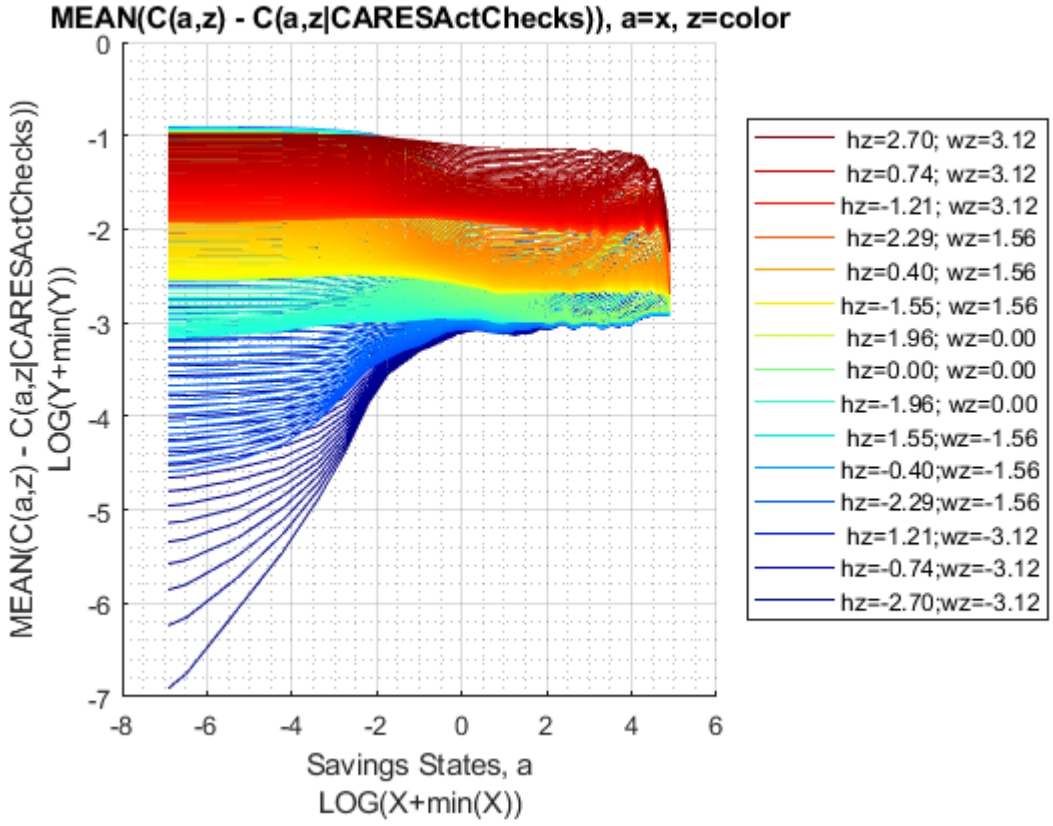




Graph Mean Consumption Change:

```
mp_support_graph('cl_st_graph_title') = {'MEAN(C(a,z) - C(a,z|CARESActChecks)), a=x, z=color'};
mp_support_graph('cl_st_ytitle') = {'MEAN(C(a,z) - C(a,z|CARESActChecks))'};
ff_graph_grid((tb_az_c{1:end, 3:end})', ar_st_eta_HS_grid, agrid, mp_support_graph);
```





Analyze Kids and Marriage and Age

Aggregating over education, savings, and shocks, what are the differential effects of Marriage and Age.

```
% Generate some Data
mp_support_graph = containers.Map('KeyType', 'char', 'ValueType', 'any');
ar_row_grid = [...
    "k0M0", "K1M0", "K2M0", "K3M0", "K4M0", ...
    "k0M1", "K1M1", "K2M1", "K3M1", "K4M1"];
mp_support_graph('cl_st_xtitle') = {'Age'};
mp_support_graph('st_legend_loc') = 'best';
mp_support_graph('bl_graph_logy') = true; % do not log
mp_support_graph('st_rounding') = '6.2f'; % format shock legend
mp_support_graph('cl_scatter_shapes') = {...
    'o', 'd' ,'s', 'x', '*', ...
    'o', 'd', 's', 'x', '*'};
mp_support_graph('cl_colors') = {...
    'red', 'red', 'red', 'red', 'red'...
    'blue', 'blue', 'blue', 'blue', 'blue'};
```

MEAN(V(KM,J) - V(KM,J | CARESActChecks)), MEAN(ap(KM,J) - ap(KM,J | CARESActChecks)), MEAN(c(KM,J) - c(KM,J | CARESActChecks))

Tabulate value and policies:

```
% Set
% NaN(n_jgrid,n_agrid,n_etagrid,n_educgrid,n_marriedgrid,n_kidsgrid);
ar_permute = [2,3,4,1,6,5];
```

```
% Value Function
tb_az_v = ff_summ_nd_array("MEAN(V(KM,J) - V(KM,J | CARESActChecks))", V_VFI_wthtrumpchk_drop,
```

```
xxx  MEAN(V(KM,J) - V(KM,J | CARESActChecks))  xxxxxxxxxxxxxxxxxxxxxxxxx
```

group	kids	marry	mean_age_18	mean_age_19	mean_age_20	mean_age_21	mean_age_22	mean_age_23
1	1	0	0.20987	0.20238	0.19595	0.20942	0.22066	0.23018
2	2	0	0.022243	0.023688	0.028353	0.061009	0.088315	0.11131
3	3	0	-0.23364	-0.21982	-0.20018	-0.1473	-0.10266	-0.064752
4	4	0	-0.52935	-0.50192	-0.46622	-0.39184	-0.32866	-0.27467
5	5	0	-0.84523	-0.80428	-0.75226	-0.65722	-0.57612	-0.50651
6	1	1	0.52928	0.52111	0.51249	0.51533	0.51786	0.52023
7	2	1	0.5522	0.5454	0.5376	0.54511	0.5512	0.5561
8	3	1	0.49953	0.49689	0.49302	0.50705	0.51901	0.52939
9	4	1	0.42705	0.4304	0.43213	0.45447	0.47365	0.49024
10	5	1	0.24952	0.26142	0.272	0.30611	0.33546	0.36094

```
% Aprime Choice
tb_az_ap = ff_summ_nd_array("MEAN(ap(KM,J) - ap(KM,J | CARESActChecks))", ap_VFI_wthtrumpchk_dr
```

```
xxx  MEAN(ap(KM,J) - ap(KM,J | CARESActChecks))  xxxxxxxxxxxxxxxxxxxxxxxxx
```

group	kids	marry	mean_age_18	mean_age_19	mean_age_20	mean_age_21	mean_age_22	mean_age_23
1	1	0	0.53262	0.53	0.5269	0.5656	0.60417	0.64224
2	2	0	0.51414	0.51055	0.50634	0.5445	0.58254	0.62027
3	3	0	0.49779	0.49363	0.48911	0.52697	0.56485	0.60238
4	4	0	0.48335	0.47903	0.47434	0.51213	0.54993	0.58742
5	5	0	0.46856	0.4643	0.45957	0.49738	0.53527	0.57289
6	1	1	1.1051	1.1492	1.1939	1.2868	1.3804	1.4738
7	2	1	1.0015	1.0381	1.0753	1.1593	1.2438	1.3281
8	3	1	0.92162	0.95378	0.98596	1.0641	1.1429	1.2213
9	4	1	0.83418	0.86183	0.88952	0.96344	1.0376	1.1111
10	5	1	0.705	0.72367	0.74238	0.80621	0.87035	0.93449

```
% Consumption Choices
tb_az_c = ff_summ_nd_array("MEAN(c(KM,J) - c(KM,J | CARESActChecks))", cons_VFI_wthtrumpchk_dro
```

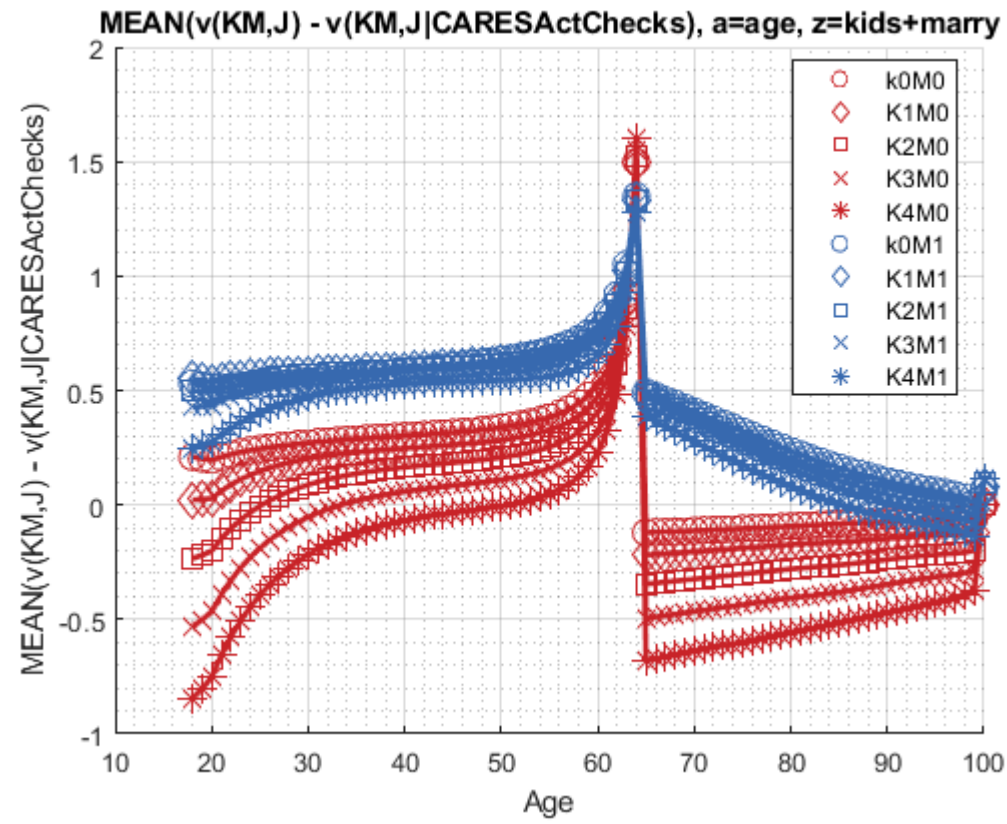
```
xxx  MEAN(c(KM,J) - c(KM,J | CARESActChecks))  xxxxxxxxxxxxxxxxxxxxxxxxx
```

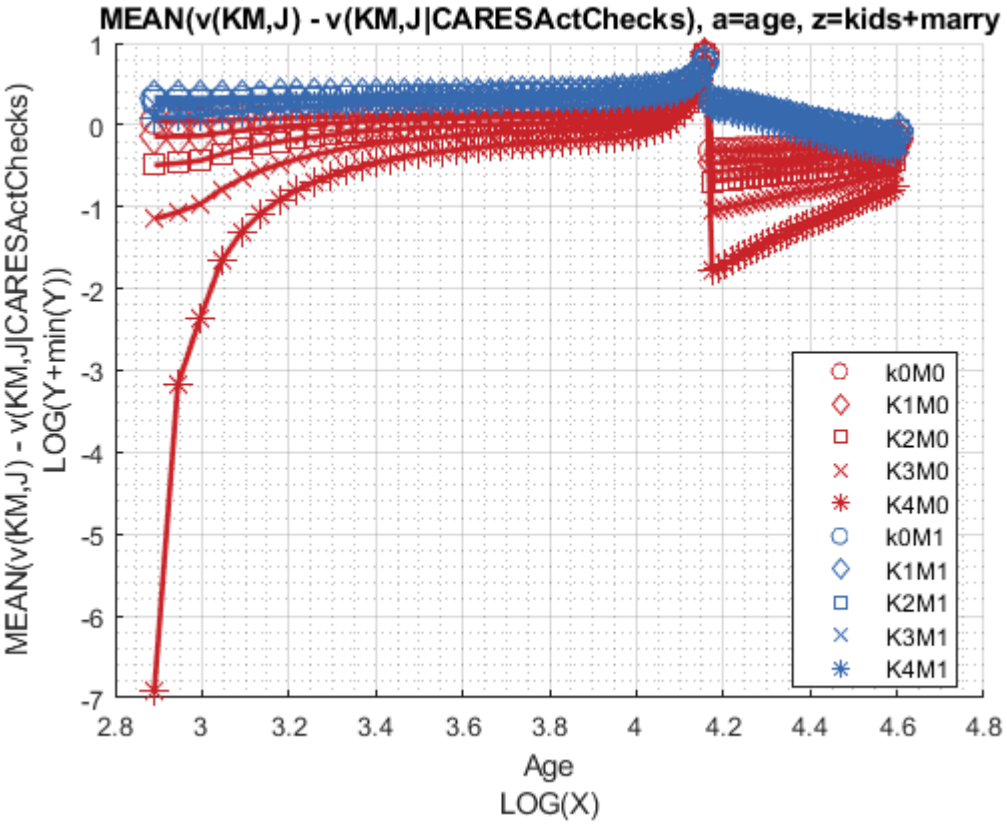
group	kids	marry	mean_age_18	mean_age_19	mean_age_20	mean_age_21	mean_age_22	mean_age_23
1	1	0	0.047337	0.049963	0.053058	0.053448	0.05364	0.053719
2	2	0	0.050981	0.054566	0.05878	0.059899	0.0608	0.061394
3	3	0	0.055321	0.059483	0.064008	0.06559	0.066809	0.067749
4	4	0	0.057273	0.061591	0.066283	0.068119	0.069574	0.070702
5	5	0	0.059094	0.063357	0.068081	0.070078	0.071607	0.072756
6	1	1	0.084887	0.09034	0.095904	0.10002	0.10361	0.10692
7	2	1	0.07847	0.084027	0.089707	0.094431	0.098619	0.10253
8	3	1	0.077776	0.082667	0.088185	0.092974	0.097184	0.10122
9	4	1	0.081391	0.085425	0.089972	0.092906	0.095639	0.098488
10	5	1	0.084117	0.08842	0.093091	0.096176	0.098845	0.10096

Graph Mean Values Change:

```
mp_support_graph('cl_st_graph_title') = {'MEAN(v(KM,J) - v(KM,J|CARESActChecks), a=age, z=kids+
mp_support_graph('cl_st_ytitle') = {'MEAN(v(KM,J) - v(KM,J|CARESActChecks)'};
```

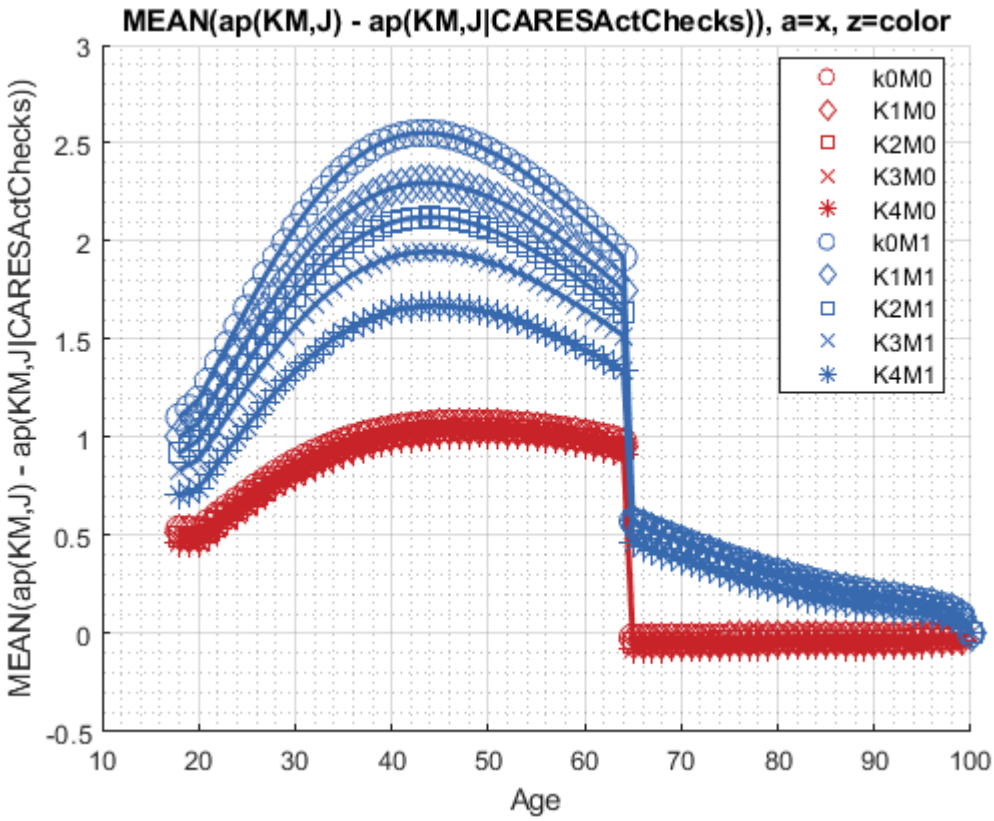
```
ff_graph_grid((tb_az_v{1:end, 4:end}), ar_row_grid, age_grid, mp_support_graph);
```

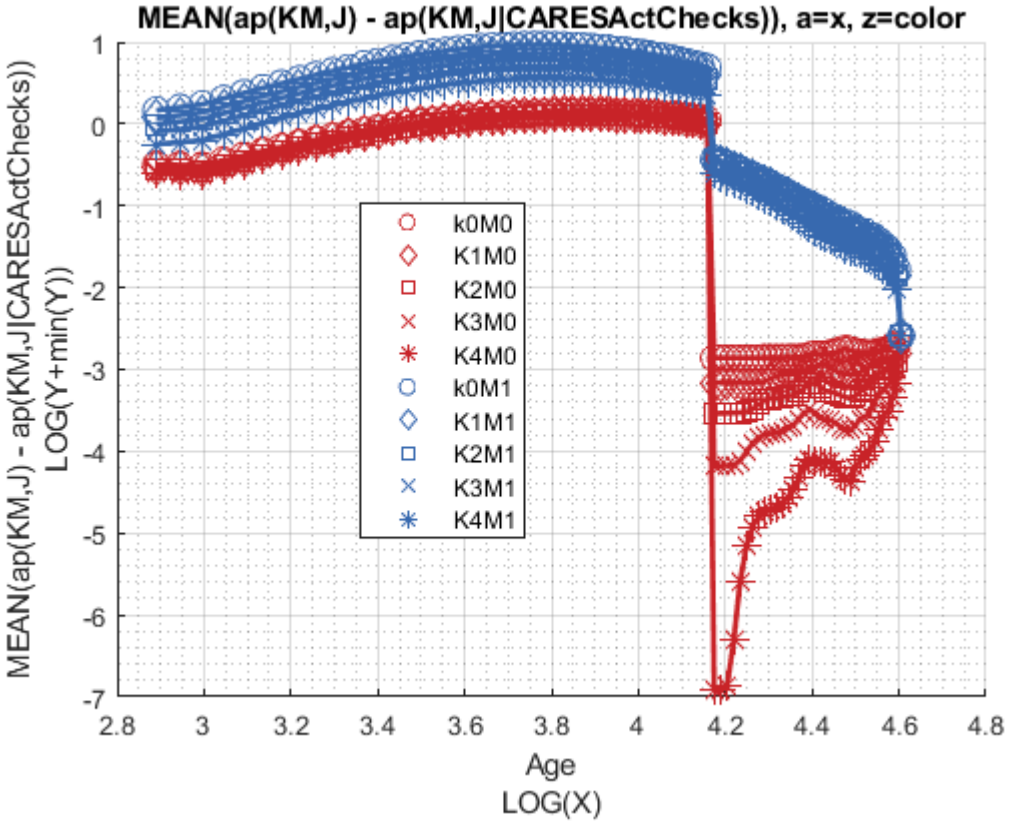




Graph Mean Savings Choices Change:

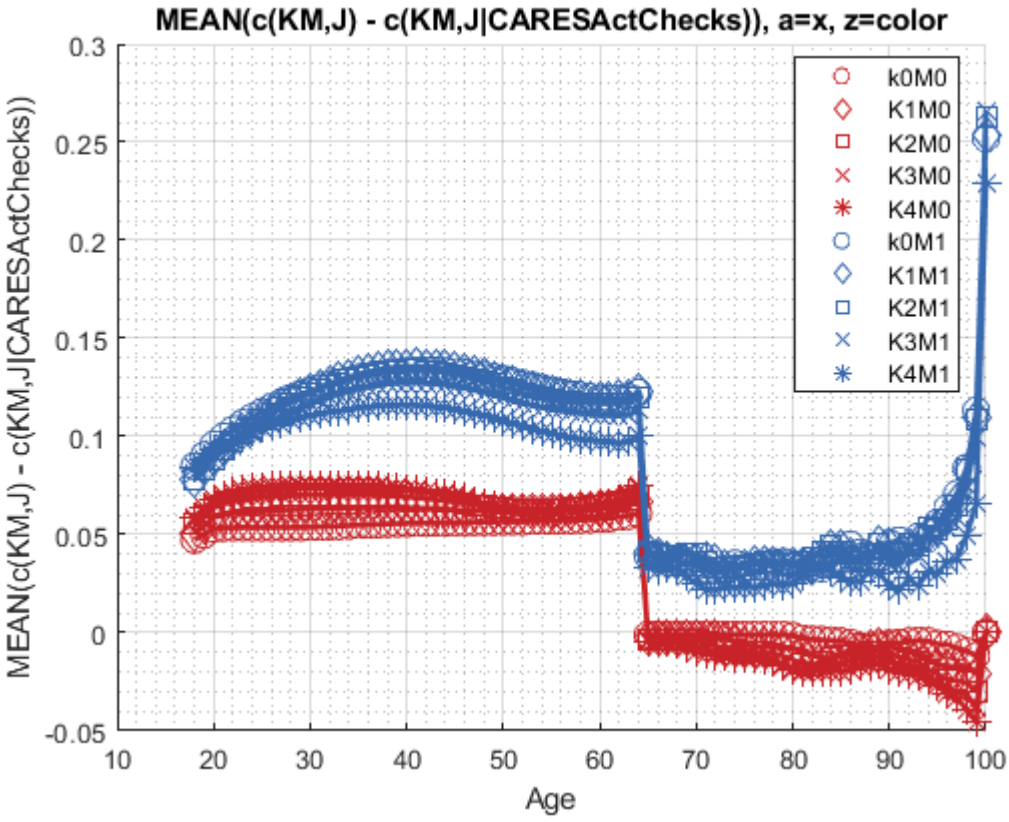
```
mp_support_graph('cl_st_graph_title') = {'MEAN(ap(KM,J) - ap(KM,J|CARESActChecks)), a=x, z=colo
mp_support_graph('cl_st_ytitle') = {'MEAN(ap(KM,J) - ap(KM,J|CARESActChecks))'};
ff_graph_grid((tb_az_ap{1:end, 4:end}), ar_row_grid, age_grid, mp_support_graph);
```

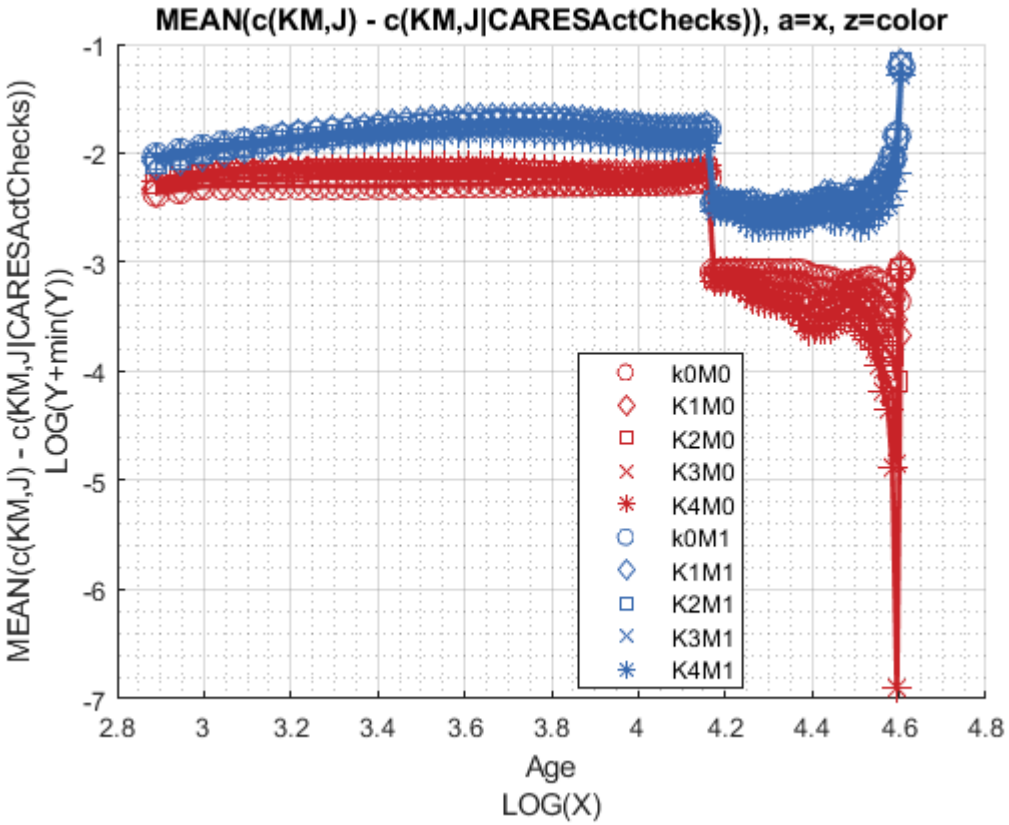




Graph Mean Consumption Change:

```
mp_support_graph('cl_st_graph_title') = {'MEAN(c(KM,J) - c(KM,J|CARESActChecks)), a=x, z=color'
mp_support_graph('cl_st_ytitle') = {'MEAN(c(KM,J) - c(KM,J|CARESActChecks))'};
ff_graph_grid((tb_az_c{1:end, 4:end}), ar_row_grid, age_grid, mp_support_graph);
```





Analyze Education and Marriage and Age

Aggregating over education, savings, and shocks, what are the differential effects of Marriage and Age.

```
% Generate some Data
mp_support_graph = containers.Map('KeyType', 'char', 'ValueType', 'any');
ar_row_grid = ["E0M0", "E1M0", "E0M1", "E1M1"];
mp_support_graph('cl_st_xtitle') = {'Age'};
mp_support_graph('st_legend_loc') = 'best';
mp_support_graph('bl_graph_logy') = true; % do not log
mp_support_graph('st_rounding') = '6.2f'; % format shock legend
mp_support_graph('cl_scatter_shapes') = {'*', 'p', '*','p' };
mp_support_graph('cl_colors') = {'red', 'red', 'blue', 'blue'};
```

MEAN(v(EKM,J) - v(EKM,J|CARESActChecks)), MEAN(ap(EM,J) - ap(EM,J|CARESActChecks)), MEAN(c(EM,J) - c(EM,J|CARESActChecks))

Tabulate value and policies:

```
% Set
% NaN(n_jgrid,n_agrid,n_etagrid,n_educgrid,n_marriedgrid,n_kidsgrid);
ar_permute = [2,3,6,1,4,5];
% Value Function
tb_az_v = ff_summ_nd_array("MEAN(v(EM,J) - v(EM,J|CARESActChecks))", V_VFI_wthtrumpchk_drop, tr
```

xxx MEAN(v(EM,J) - v(EM,J|CARESActChecks)) xxxxxxxxxxxxxxxxxxxxxxxxxxx

group	edu	marry	mean_age_18	mean_age_19	mean_age_20	mean_age_21	mean_age_22	mean_age_23
1	0	0	-0.27436	-0.26427	-0.25034	-0.2123	-0.17843	-0.1482
2	1	0	-0.27608	-0.25571	-0.2274	-0.15807	-0.10095	-0.053573
3	0	1	0.47096	0.47417	0.47622	0.49056	0.50312	0.51419
4	1	1	0.43207	0.42791	0.42268	0.44067	0.45575	0.46857

```
% Aprime Choice
tb_az_ap = ff_summ_nd_array("MEAN(ap(EM,J) - ap(EM,J|CARESActChecks))", ap_VFI_wthtrumpchk_drop
```

xxx MEAN(ap(EM,J) - ap(EM,J|CARESActChecks)) xxxxxxxxxxxxxxxxxxxxxxxxxxx

group	edu	marry	mean_age_18	mean_age_19	mean_age_20	mean_age_21	mean_age_22	mean_age_23
1	0	0	0.50968	0.50781	0.5056	0.52855	0.55094	0.57274
2	1	0	0.4889	0.48319	0.4769	0.53008	0.58377	0.63734
3	0	1	0.87848	0.90799	0.93781	0.99554	1.0531	1.1101
4	1	1	0.94848	0.98264	1.017	1.1164	1.2169	1.3174

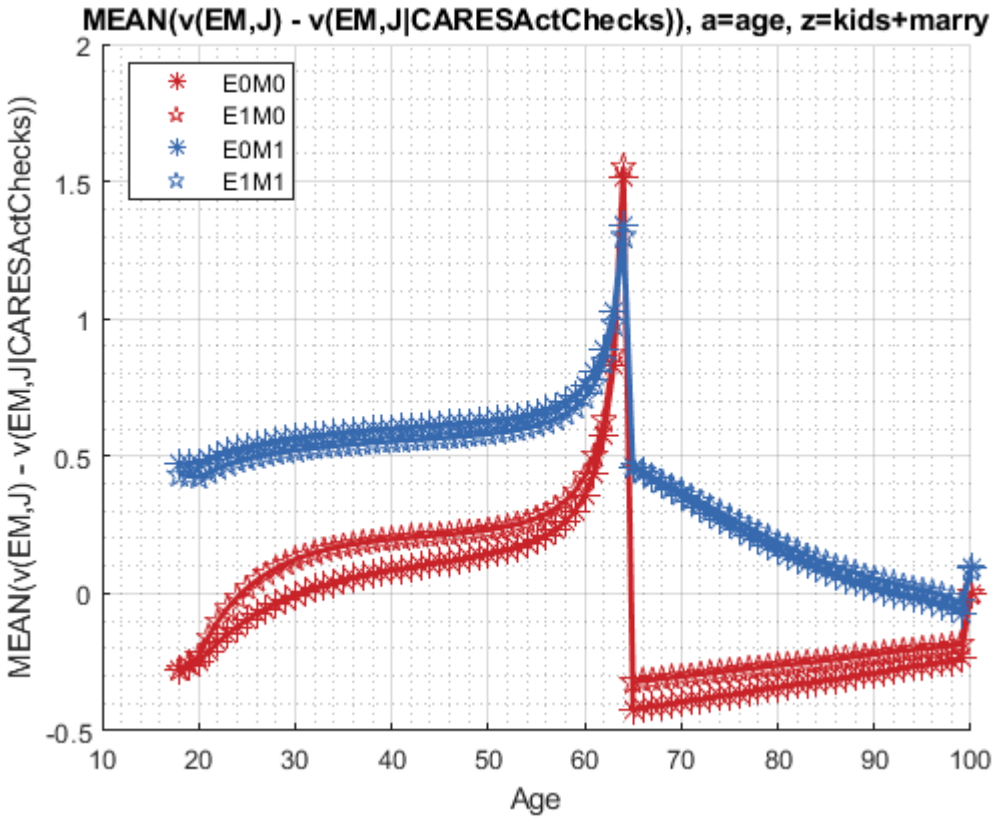
```
% Consumption Choices
tb_az_c = ff_summ_nd_array("MEAN(c(EM,J) - c(EM,J|CARESActChecks))", cons_VFI_wthtrumpchk_drop,
```

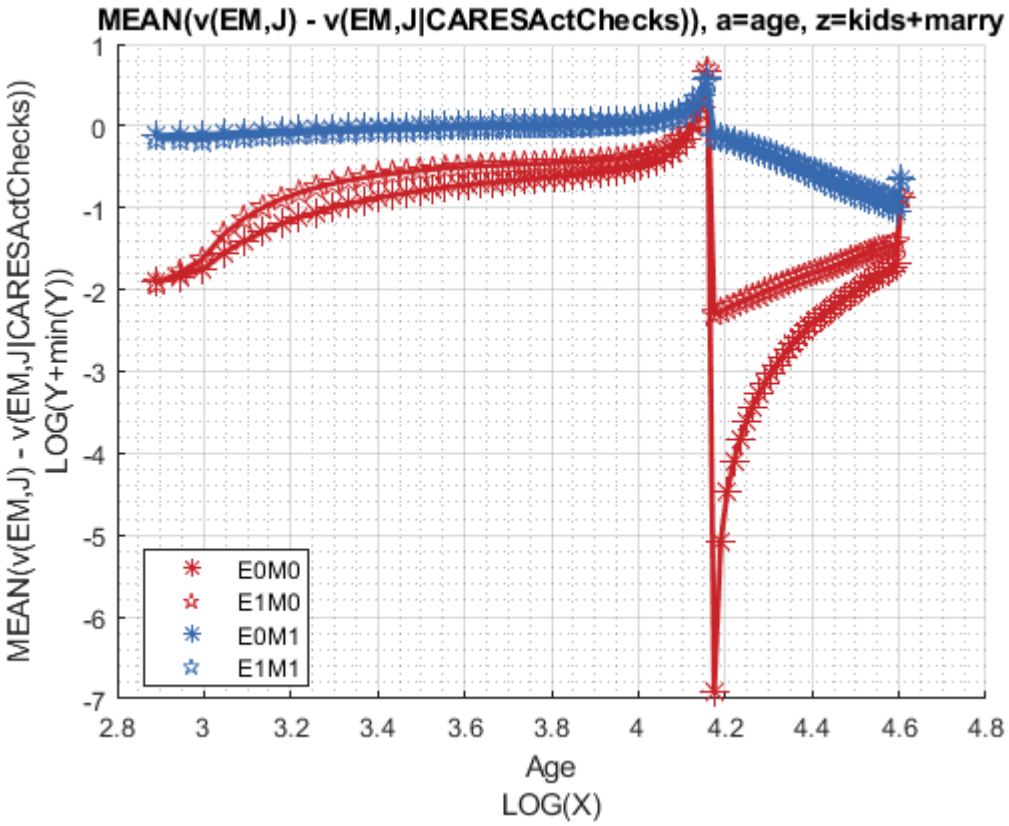
xxx MEAN(c(EM,J) - c(EM,J|CARESActChecks)) xxxxxxxxxxxxxxxxxxxxxxxxxxx

group	edu	marry	mean_age_18	mean_age_19	mean_age_20	mean_age_21	mean_age_22	mean_age_23
1	0	0	0.04361	0.04548	0.047693	0.048561	0.049409	0.050185
2	1	0	0.064392	0.070104	0.076391	0.078292	0.079562	0.080342
3	0	1	0.067965	0.071392	0.075084	0.077897	0.080615	0.083302
4	1	1	0.094691	0.10096	0.10766	0.11271	0.11694	0.12075

Graph Mean Values Change:

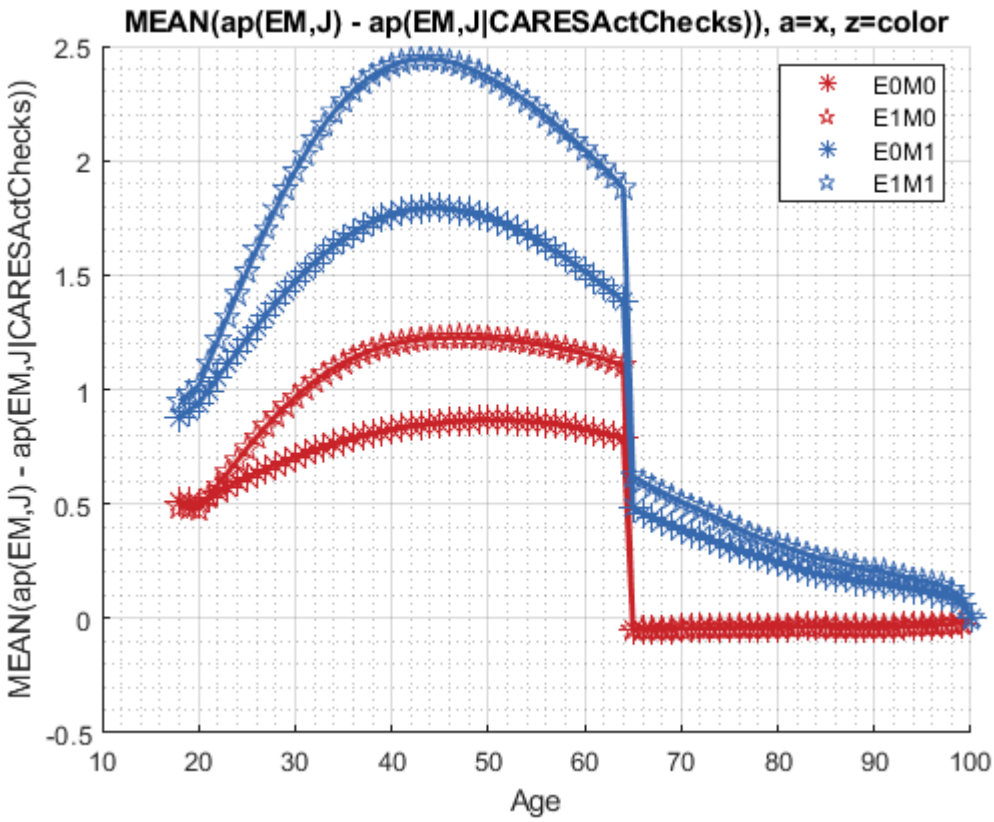
```
mp_support_graph('cl_st_graph_title') = {'MEAN(v(EM,J) - v(EM,J|CARESActChecks)), a=age, z=kids
mp_support_graph('cl_st_ytitle') = {'MEAN(v(EM,J) - v(EM,J|CARESActChecks))'};
ff_graph_grid((tb_az_v{1:end, 4:end}), ar_row_grid, age_grid, mp_support_graph);
```

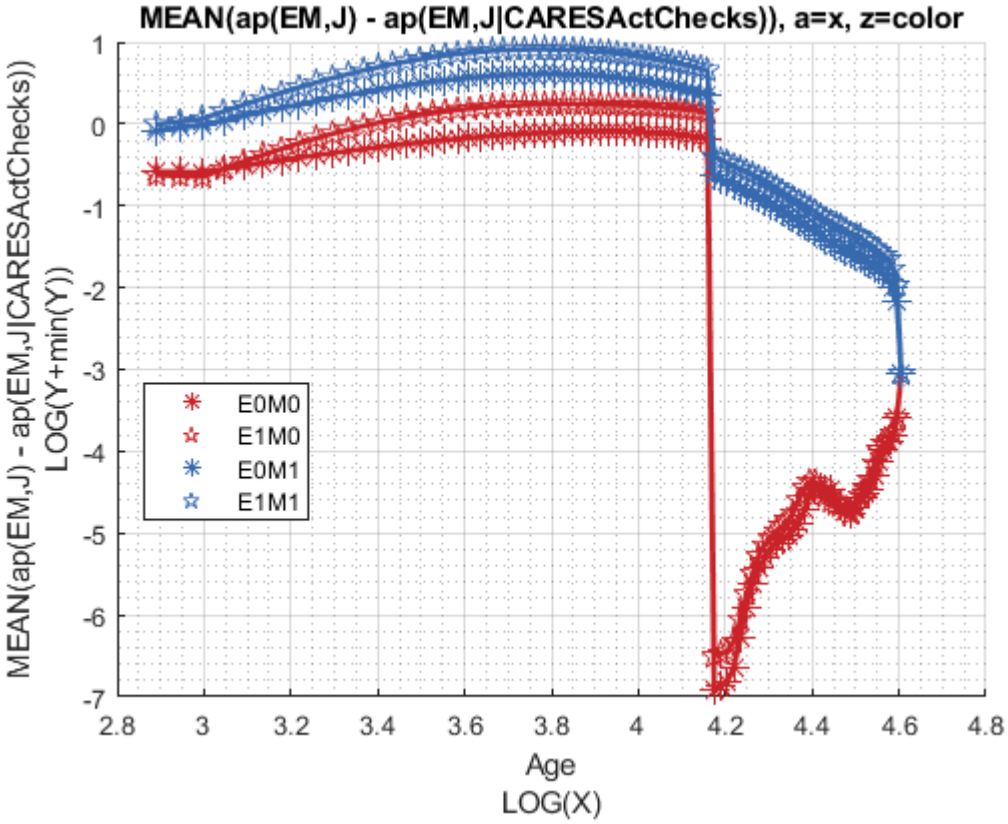




Graph Mean Savings Choices Change:

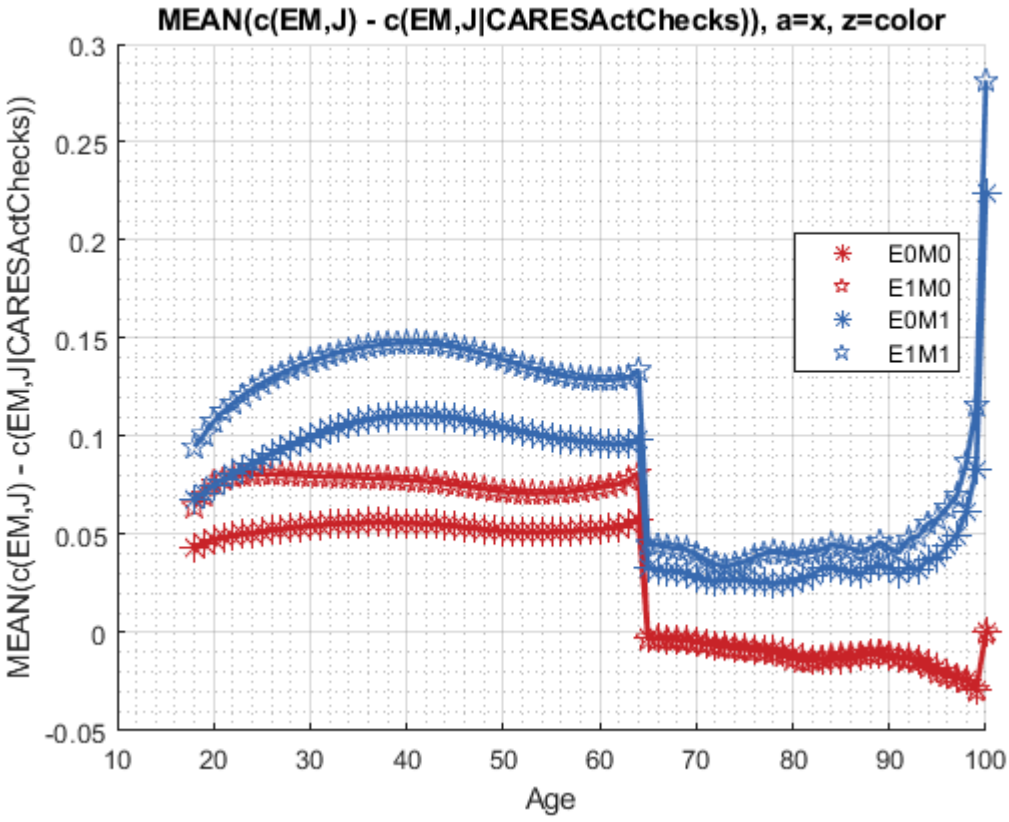
```
mp_support_graph('cl_st_graph_title') = {'MEAN(ap(EM,J) - ap(EM,J|CARESActChecks)), a=x, z=colo
mp_support_graph('cl_st_ytitle') = {'MEAN(ap(EM,J) - ap(EM,J|CARESActChecks))'};
ff_graph_grid((tb_az_ap{1:end, 4:end}), ar_row_grid, age_grid, mp_support_graph);
```

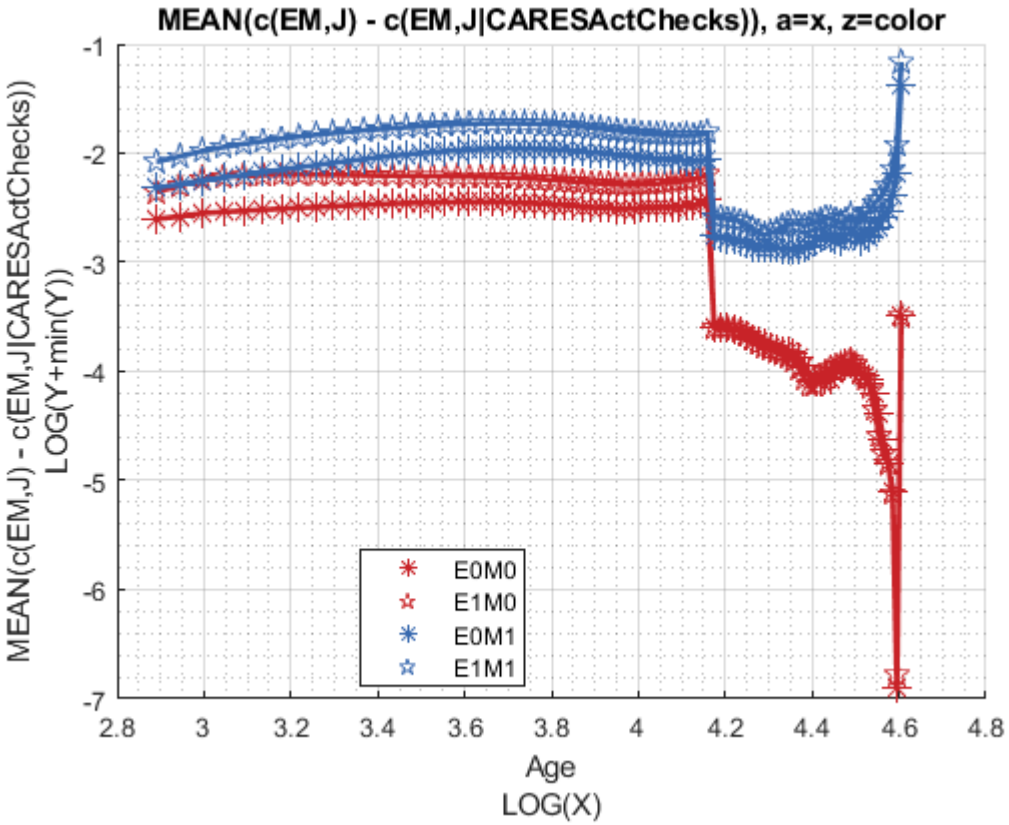




Graph Mean Consumption Change:

```
mp_support_graph('cl_st_graph_title') = {'MEAN(c(EM,J) - c(EM,J|CARESActChecks)), a=x, z=color'
mp_support_graph('cl_st_ytitle') = {'MEAN(c(EM,J) - c(EM,J|CARESActChecks))'};
ff_graph_grid((tb_az_c{1:end, 4:end}), ar_row_grid, age_grid, mp_support_graph);
```


MEAN(c(EM,J) - c(EM,J|CARESActChecks)), a=x, z=color
MEAN(c(EM,J) - c(EM,J|CARESActChecks))
Age
E0M0
E1M0
E0M1
E1M1


MEAN(c(EM,J) - c(EM,J|CARESActChecks)), a=x, z=color
MEAN(c(EM,J) - c(EM,J|CARESActChecks))
LOG(Y+min(Y))
Age
LOG(X)
E0M0
E1M0
E0M1
E1M1