SNW_PARAM Examples: Get Parameters

back to Fan's Intro Math for Econ, Matlab Examples, or Dynamic Asset Repositories

This is the example vignette for function: **snw_mp_param** from the **PrjOptiSNW Package.** This function sets and gets different parameters

Test SNW_PARAM Defaults

Call the function with defaults.

```
mp_params = snw_mp_param('default_base', true, 50, 6);
```

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CONTAINER NAME: mp_params_preftechpricegov Scalars
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                           i    idx     value
                           _    ___    _______

    a2                     1     1       3.664
    beta                   2     2     0.96077
    cons_allocation_rule   3     3           2
    g_cons                 4     4     0.17576
    g_n                    5     5      0.0201
    gamma                  6     6           1
    r                      7     7      0.0816
    theta                  8     8     0.42315

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CONTAINER NAME: mp_params_intlen Scalars
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                     i    idx    value
                     _    ___    _____

    n_agrid          1     1      40
    n_educgrid       2     2       2
    n_etagrid        3     3       7
    n_jgrid          4     4      42
    n_kidsgrid       5     5       6
    n_marriedgrid    6     6       2

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CONTAINER NAME: mp_params_statesgrid ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                 i    idx    ndim    numel    rowN    colN     mean      std      coefvari      min       max
                 _    ___    ____    _____    ____    ____    ______    ______    ________    _______    ______

    agrid        1     1      2       40       40      1      12.821    14.881     1.1607           0        50
    eta_grid     2     2      2        7        7      1           0    1.2535        Inf      -1.7408    1.7408

xxx TABLE:agrid xxxxxxxxxxxxxxxxx
              c1
           _________

    r1            0
    r2    0.0008429
    r3    0.0067432
    r4     0.022758
```

r5	0.053946
r6	0.10536
r7	0.18207
r8	0.28911
r9	0.43156
r10	0.61447
r11	0.8429
r12	1.1219
r13	1.4565
r14	1.8519
r15	2.3129
r16	2.8448
r17	3.4525
r18	4.1412
r19	4.9158
r20	5.7815
r21	6.7432
r22	7.8061
r23	8.9752
r24	10.256
r25	11.652
r26	13.17
r27	14.815
r28	16.591
r29	18.503
r30	20.557
r31	22.758
r32	25.111
r33	27.62
r34	30.291
r35	33.129
r36	36.139
r37	39.326
r38	42.695
r39	46.252
r40	50

xxx TABLE:eta_grid xxxxxxxxxxxxxxxxx

	c1
r1	-1.7408
r2	-1.1605
r3	-0.58026
r4	0
r5	0.58026
r6	1.1605
r7	1.7408

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CONTAINER NAME: mp_params_exotrans ND Array (Matrix etc)
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	i	**idx**	**ndim**	**numel**	**rowN**	**colN**	**mean**	**std**	**coefvari**	**min**	**max**
pi_eta	1	1	2	49	7	7	0.14286	0.33001	2.3101	1e-12	0.94234
pi_kids	2	2	4	2952	6	492	0.16667	0.25167	1.51	0	1
psi	3	3	2	42	42	1	0.89299	0.19761	0.22129	0	0.99857

xxx TABLE:pi_eta xxxxxxxxxxxxxxxxx

	c1	**c2**	**c3**	**c5**	**c6**	**c7**
r1	0.94148	0.057059	0.0014409	1.4702e-07	5.94e-10	1e-12

r2	0.0095099	0.94196	0.047559	9.7035e-06	4.9006e-08	9.9e-11
r3	9.606e-05	0.019024	0.94225	0.00057644	3.8814e-06	9.801e-09
r4	9.703e-07	0.00028821	0.028538	0.028538	0.00028821	9.703e-07
r5	9.801e-09	3.8814e-06	0.00057644	0.94225	0.019024	9.606e-05
r6	9.9e-11	4.9006e-08	9.7035e-06	0.047559	0.94196	0.0095099
r7	1e-12	5.94e-10	1.4702e-07	0.0014409	0.057059	0.94148

xxx TABLE:pi_kids xxxxxxxxxxxxxxxxx

	c1	**c2**	**c3**	**c490**	**c491**	**c492**
r1	0.81478	0.16949	0.015153	0	0	0
r2	0.96006	0.03702	0.0028103	0	0	0
r3	0.44129	0.47697	0.078528	0	0	0
r4	0.080853	0.47493	0.41609	0	0	0
r5	0.0062597	0.075965	0.62991	0	0	0
r6	0.00062709	0.0082186	0.18887	0	0	0

xxx TABLE:psi xxxxxxxxxxxxxxxxx

	c1
r1	0.99853
r2	0.99853
r3	0.99845
r4	0.99851
r5	0.99857
r6	0.99851
r7	0.99834
r8	0.9981
r9	0.99775
r10	0.99733
r11	0.99683
r12	0.99626
r13	0.99567
r14	0.99503
r15	0.99432
r16	0.99366
r17	0.99293
r18	0.99183
r19	0.99023
r20	0.98819
r21	0.98578
r22	0.98285
r23	0.97918
r24	0.97462
r25	0.96915
r26	0.96304
r27	0.95564
r28	0.94713
r29	0.93766
r30	0.92515
r31	0.90988
r32	0.89031
r33	0.86484
r34	0.8327
r35	0.79417
r36	0.74957
r37	0.69903
r38	0.64301
r39	0.5832
r40	0.52581
r41	0.47541
r42	0

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CONTAINER NAME: mp_params_typelife ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	ndim	numel	rowN	colN	mean	std	coefvari	min	max
SS	1	1	2	84	42	2	0.11506	0.1346	1.1698	0	0.29263
epsilon	2	2	2	84	42	2	0.96873	0.89659	0.92553	0	2.2609

xxx TABLE:SS xxxxxxxxxxxxxxxxx

	c1	c2
r1	0	0
r2	0	0
r3	0	0
r4	0	0
r5	0	0
r6	0	0
r7	0	0
r8	0	0
r9	0	0
r10	0	0
r11	0	0
r12	0	0
r13	0	0
r14	0	0
r15	0	0
r16	0	0
r17	0	0
r18	0	0
r19	0	0
r20	0	0
r21	0	0
r22	0	0
r23	0	0
r24	0	0
r25	0.24433	0.29263
r26	0.24433	0.29263
r27	0.24433	0.29263
r28	0.24433	0.29263
r29	0.24433	0.29263
r30	0.24433	0.29263
r31	0.24433	0.29263
r32	0.24433	0.29263
r33	0.24433	0.29263
r34	0.24433	0.29263
r35	0.24433	0.29263
r36	0.24433	0.29263
r37	0.24433	0.29263
r38	0.24433	0.29263
r39	0.24433	0.29263
r40	0.24433	0.29263
r41	0.24433	0.29263
r42	0.24433	0.29263

xxx TABLE:epsilon xxxxxxxxxxxxxxxxx

	c1	c2
r1	1.0199	1.0461
r2	1.0199	1.0461
r3	1.0978	1.2302
r4	1.1712	1.409

r5	1.2396	1.5765
r6	1.3024	1.7281
r7	1.3594	1.8606
r8	1.4105	1.9724
r9	1.4555	2.0633
r10	1.4946	2.1343
r11	1.5278	2.187
r12	1.5553	2.2236
r13	1.5773	2.2466
r14	1.594	2.2583
r15	1.6054	2.2609
r16	1.6118	2.2562
r17	1.6131	2.2458
r18	1.6094	2.2308
r19	1.6007	2.2118
r20	1.5869	2.1892
r21	1.5678	2.1626
r22	1.5435	2.1315
r23	1.5136	2.0951
r24	1.4781	2.052
r25	0	0
r26	0	0
r27	0	0
r28	0	0
r29	0	0
r30	0	0
r31	0	0
r32	0	0
r33	0	0
r34	0	0
r35	0	0
r36	0	0
r37	0	0
r38	0	0
r39	0	0
r40	0	0
r41	0	0
r42	0	0

Test SNW_PARAM Tiny

Call the function with defaults.

```
mp_params = snw_mp_param('default_tiny', true, 50, 6);
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CONTAINER NAME: mp_params_preftechpricegov Scalars
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	value
a2	1	1	3.664
beta	2	2	0.96077
cons_allocation_rule	3	3	2
g_cons	4	4	0.17576
g_n	5	5	0.0201
gamma	6	6	1
r	7	7	0.0816
theta	8	8	0.42315

```
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```

CONTAINER NAME: mp_params_intlen Scalars
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

	i	idx	value
n_agrid	1	1	10
n_educgrid	2	2	2
n_etagrid	3	3	5
n_jgrid	4	4	7
n_kidsgrid	5	5	3
n_marriedgrid	6	6	2

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CONTAINER NAME: mp_params_statesgrid ND Array (Matrix etc)
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	i	idx	ndim	numel	rowN	colN	mean	std	coefvari	min	max
agrid	1	1	2	10	10	1	13.889	17.236	1.241	0	50
eta_grid	2	2	2	5	5	1	4.4409e-17	1.1237	2.5303e+16	-1.4213	1.4213

xxx TABLE:agrid xxxxxxxxxxxxxxxxx

	c1
r1	0
r2	0.068587
r3	0.5487
r4	1.8519
r5	4.3896
r6	8.5734
r7	14.815
r8	23.525
r9	35.117
r10	50

xxx TABLE:eta_grid xxxxxxxxxxxxxxxxx

	c1
r1	-1.4213
r2	-0.71067
r3	0
r4	0.71067
r5	1.4213

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CONTAINER NAME: mp_params_exotrans ND Array (Matrix etc)
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	i	idx	ndim	numel	rowN	colN	mean	std	coefvari	min	max
pi_eta	1	1	2	25	5	5	0.2	0.38844	1.9422	1e-08	0.96099
pi_kids	2	2	4	126	3	42	0.33333	0.34999	1.05	0	1
psi	3	3	2	7	7	1	0.62404	0.44469	0.71261	0	0.98684

xxx TABLE:pi_eta xxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5
r1	0.9606	0.038812	0.00058806	3.96e-06	1e-08
r2	0.009703	0.96089	0.029112	0.00029404	9.9e-07
r3	9.801e-05	0.019408	0.96099	0.019408	9.801e-05

```
    r4      9.9e-07    0.00029404      0.029112       0.96089     0.009703
    r5        1e-08      3.96e-06    0.00058806      0.038812       0.9606

xxx TABLE:pi_kids xxxxxxxxxxxxxxxxx
            c1          c2          c3         c40    c41    c42
          _______    ________    _________    ___    ___    ___

    r1    0.81525     0.16959     0.015162     1      0      0
    r2    0.96017    0.037024    0.0028106     1      0      0
    r3    0.44271     0.47851     0.078781     1      0      0

xxx TABLE:psi xxxxxxxxxxxxxxxxx
             c1
          _______

    r1     0.98684
    r2     0.98684
    r3     0.96264
    r4      0.8697
    r5     0.52975
    r6    0.032482
    r7           0

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CONTAINER NAME: mp_params_typelife ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
               i    idx    ndim    numel    rowN    colN     mean        std       coefvari     min       max
               _    ___    ____    _____    ____    ____    _______    _______    ________    ___    _______

    SS         1     1      2       14       7       2      0.11506    0.13885     1.2067      0     0.29263
    epsilon    2     2      2       14       7       2      0.94364    0.88779    0.94082      0      2.2266

xxx TABLE:SS xxxxxxxxxxxxxxxxx
            c1         c2
          _______    _______

    r1          0          0
    r2          0          0
    r3          0          0
    r4          0          0
    r5    0.24433    0.29263
    r6    0.24433    0.29263
    r7    0.24433    0.29263

xxx TABLE:epsilon xxxxxxxxxxxxxxxxx
            c1        c2
          ______    ______

    r1     1.257    1.6108
    r2     1.257    1.6108
    r3    1.5724    2.2266
    r4    1.5421    2.1342
    r5         0         0
    r6         0         0
    r7         0         0
```

Test SNW_PARAM Small

Call the function with defaults.

```
mp_params = snw_mp_param('default_small', true, 50, 6);
```

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CONTAINER NAME: mp_params_preftechpricegov Scalars
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	value
a2	1	1	3.664
beta	2	2	0.96077
cons_allocation_rule	3	3	2
g_cons	4	4	0.17576
g_n	5	5	0.0201
gamma	6	6	1
r	7	7	0.0816
theta	8	8	0.42315

```
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CONTAINER NAME: mp_params_intlen Scalars
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	value
n_agrid	1	1	20
n_educgrid	2	2	2
n_etagrid	3	3	5
n_jgrid	4	4	18
n_kidsgrid	5	5	3
n_marriedgrid	6	6	2

```
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CONTAINER NAME: mp_params_statesgrid ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	ndim	numel	rowN	colN	mean	std	coefvari	min	max
agrid	1	1	2	20	20	1	13.158	15.625	1.1875	0	50
eta_grid	2	2	2	5	5	1	4.4409e-17	1.1237	2.5303e+16	-1.4213	1.4213

```
xxx TABLE:agrid xxxxxxxxxxxxxxxxx
```

	c1
r1	0
r2	0.0072897
r3	0.058318
r4	0.19682
r5	0.46654
r6	0.91121
r7	1.5746
r8	2.5004
r9	3.7323
r10	5.3142
r11	7.2897
r12	9.7026
r13	12.597
r14	16.015
r15	20.003
r16	24.603
r17	29.859
r18	35.814
r19	42.513
r20	50

xxx TABLE:eta_grid xxxxxxxxxxxxxxxxx

	c1
r1	-1.4213
r2	-0.71067
r3	0
r4	0.71067
r5	1.4213

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CONTAINER NAME: mp_params_exotrans ND Array (Matrix etc)
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	i	idx	ndim	numel	rowN	colN	mean	std	coefvari	min	max
pi_eta	1	1	2	25	5	5	0.2	0.38844	1.9422	1e-08	0.96099
pi_kids	2	2	4	324	3	108	0.33333	0.33174	0.99523	0	1
psi	3	3	2	18	18	1	0.79153	0.31243	0.39472	0	0.99635

xxx TABLE:pi_eta xxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5
r1	0.9606	0.038812	0.00058806	3.96e-06	1e-08
r2	0.009703	0.96089	0.029112	0.00029404	9.9e-07
r3	9.801e-05	0.019408	0.96099	0.019408	9.801e-05
r4	9.9e-07	0.00029404	0.029112	0.96089	0.009703
r5	1e-08	3.96e-06	0.00058806	0.038812	0.9606

xxx TABLE:pi_kids xxxxxxxxxxxxxxxxx

	c1	c2	c3	c106	c107	c108
r1	0.81525	0.16959	0.015162	1	0	0
r2	0.96017	0.037024	0.0028106	1	0	0
r3	0.44271	0.47851	0.078781	1	0	0

xxx TABLE:psi xxxxxxxxxxxxxxxxx

	c1
r1	0.99623
r2	0.99623
r3	0.99635
r4	0.99537
r5	0.99299
r6	0.98956
r7	0.98547
r8	0.98022
r9	0.96914
r10	0.95071
r11	0.92082
r12	0.87772
r13	0.81394
r14	0.70638
r15	0.54032
r16	0.34767
r17	0.18848
r18	0

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CONTAINER NAME: mp_params_typelife ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

	i	idx	ndim	numel	rowN	colN	mean	std	coefvari	min	max
SS	1	1	2	36	18	2	0.089493	0.12913	1.443	0	0.29263
epsilon	2	2	2	36	18	2	1.0192	0.8815	0.86489	0	2.2588

xxx TABLE:SS xxxxxxxxxxxxxxxxxx

	c1	c2
r1	0	0
r2	0	0
r3	0	0
r4	0	0
r5	0	0
r6	0	0
r7	0	0
r8	0	0
r9	0	0
r10	0	0
r11	0	0
r12	0	0
r13	0.24433	0.29263
r14	0.24433	0.29263
r15	0.24433	0.29263
r16	0.24433	0.29263
r17	0.24433	0.29263
r18	0.24433	0.29263

xxx TABLE:epsilon xxxxxxxxxxxxxxxxx

	c1	c2
r1	1.0778	1.1836
r2	1.0778	1.1836
r3	1.2546	1.6124
r4	1.397	1.9418
r5	1.5022	2.1452
r6	1.5712	2.2394
r7	1.6064	2.2588
r8	1.6097	2.2341
r9	1.5815	2.182
r10	1.5204	2.1034
r11	1.4243	1.9846
r12	0	0
r13	0	0
r14	0	0
r15	0	0
r16	0	0
r17	0	0
r18	0	0