2.2 *U.S. Earnings (MODSOL2)*

Equation numbers identify the corresponding equations in the Fortran program EconModSol2EquationsMod.f90.

Quarterly Employment Equations

Agricultural Workers
EA = IF LONGRANGE = 0
THEN GDPPF09 / (1.125 * 1.138 * EXP (-0.20541 + 0.03254 * YEAR - 0.07829 + 0.37854))
ELSE E * EA.1/E.1 (20)

Nonagricultural workers
ENA = E – EA (21)

Nonagricultural Self-employed workers

EF1617NAS = (0.12015 * RTP.1 - 0.10551) * EF1617 (3)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef1617nas/ef1617	=	0.12015 * rtp.1 -	0.10551
		(1.96868)	(1.73441)

Sum Sq	0.0000
Std Error	0.0030
LHS Mean	0.0142
R-Squared	0.5637
R Bar Squared	0.4182
F-stat 1, 3	3.8757
D.W. (1)	1.5620
D.W. (2)	2.3626

EF1819NAS = (0.11184 * RTP.1 - 0.10241) * EF1819 (4)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef1819nas/ef1819	=	0.11184 * rtp.1 -	0.10241
		(2.99537)	(2.75170)

Sum Sq	0.0000
Std Error	0.0018
LHS Mean	0.0090
R-Squared	0.7494
R Bar Squared	0.6659
F-STAT 1, 3	8.9722
D.W. (1)	3.2586
D.W. (2)	0.9766

EF2024NAS = (0.08908 * RTP.1 - 0.07176) * EF2024 (5)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef2024nas/ef2024	=	0.08908 * rtp.1 -	0.07176
		(2.54605)	(2.05763)

Sum Sq	0.0000
Std Error	0.0017
LHS Mean	0.0170
R-Squared	0.6836
R Bar Squared	0.5782
F-STAT 1, 3	6.4824
D.W. (1)	2.6600
D.W. (2)	1.5247

EF2534NAS = (0.00906 * RTP.1 + 0.03539) * EF2534 (6)
Ordinary Least Squares

ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef2534nas/ef2534	=	0.00906 * rtp.1 +	0.03539
		(0.34277)	(1.34366)

Sum Sq	0.0000
Std Error	0.0013
LHS Mean	0.0444
R-Squared	0.0377
R Bar Squared	0.2831
F-STAT 1, 3	0.1175
D.W. (1)	3.0818
D.W. (2)	1.1094

EF3544NAS = (-0.01869 * RTP.1 + 0.08087) * EF3544 (7)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef3544nas/ef3544	=	-0.01869 * rtp.1 +	0.08087
		(0.70565)	(3.06320)

Sum Sq	0.0000
Std Error	0.0013
LHS Mean	0.0622
R-Squared	0.1424
R Bar Squared	0.1435
F-STAT 1, 3	0.4979
D.W. (1)	2.2440
D.W. (2)	2.1852

EF4554NAS = (0.07232 * RTP.1 - 0.00701) * EF4554 (8)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef4554nas/ef4554	=	0.07232 * rtp.1 -	0.00701
		(2.86756)	(0.27876)

Sum Sq	0.0000
Std Error	0.0012
LHS Mean	0.0651
R-Squared	0.7327
R Bar Squared	0.6436
F-STAT 1, 3	8.2229
D.W. (1)	1.7821
D.W. (2)	2.7029

EF5564NAS = (0.07872 * RTP.1 + 0.00466) * EF5564 (9)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef5564nas/ef5564	=	0.07872 * rtp.1 +	0.00466
		(1.38159)	(0.08196)

Sum Sq	0.0000
Std Error	0.0028
LHS Mean	0.0831
R-Squared	0.3889
R Bar Squared	0.1851
F-STAT 1, 3	1.9088
D.W. (1)	2.6092
D.W. (2)	2.2686

EF65ONAS = (0.10940 * EF6569 + 0.12265 * EF7074 + 0.14137 * EF75O) (10)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef6569nas/ef6569 = 0.10940
(37.7493)

Sum Sq	0.0002
Std Error	0.0065
LHS Mean	0.1094
R-Squared	0.0000
R Bar Squared	0.0000
F 0, 4	NC
D.W. (1)	3.0431
D.W. (2)	1.2204

Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef7074nas/ef7074 = 0.12265
(16.4939)

Sum Sq	0.0011
Std Error	0.0166
LHS Mean	0.1226
R-Squared	0.0000
R Bar Squared	0.0000
F 0, 4	NC
D.W. (1)	1.0289
D.W. (2)	1.7188

Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

ef75onas/ef75o = 0.14137
(17.7500)

Sum Sq	0.0013
Std Error	0.0178
LHS Mean	0.1414
R-Squared	0.0000
R Bar Squared	0.0000
F 0, 4	NC
D.W. (1)	1.6889
D.W. (2)	1.2345

EM1617NAS = (-0.23035 * RTP.1 + 0.24985) * EM1617 (2)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em1617nas/em1617 = -0.23035 * rtp.1 + 0.24985
(5.08538) (5.53372)

Sum Sq	0.0000
Std Error	0.0022
LHS Mean	0.0203
R-Squared	0.8961
R Bar Squared	0.8614
F-STAT 1, 3	25.8611
D.W. (1)	2.4658
D.W. (2)	1.6839

EM1819NAS = (-0.05782 * RTP.1 + 0.07265) * EM1819 (11)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em1819nas/em1819 = -0.05782 * rtp.1 + 0.07265
(3.43044) (4.32458)

Sum Sq	0.0000
Std Error	0.0008
LHS Mean	0.0150
R-Squared	0.7969
R Bar Squared	0.7291
F-STAT 1, 3	11.7679
D.W. (1)	3.3262
D.W. (2)	1.0399

EM2024NAS = (-0.09206 * RTP.1 + 0.11567) * EM2024 (12)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em2024nas/em2024	=	-0.09206 * rtp.1 +	0.11567
		(2.44839)	(3.08618)

Sum Sq	0.0000
Std Error	0.0018
LHS Mean	0.0239
R-Squared	0.6665
R Bar Squared	0.5553
F-STAT 1, 3	5.9946
D.W. (1)	2.1493
D.W. (2)	1.7046

EM2534NAS = (-0.09661 * RTP.1 + 0.14843) * EM2534 (13)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em2534nas/em2534	=	-0.09661 * rtp.1 +	0.14843
		(2.81478)	(4.33847)

Sum Sq	0.0000
Std Error	0.0017
LHS Mean	0.0522
R-Squared	0.7254
R Bar Squared	0.6338
F-STAT 1, 3	7.9230
D.W. (1)	1.8300
D.W. (2)	2.9632

EM3544NAS = (0.02739 * RTP.1 + 0.05236) * EM3544 (14)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em3544nas/em3544	=	0.02739 * rtp.1 +	0.05236
		(0.61129)	(1.17241)

Sum Sq	0.0000
Std Error	0.0022
LHS Mean	0.0797
R-Squared	0.1108
R Bar Squared	0.1857
F-STAT 1, 3	0.3737
D.W. (1)	2.5508
D.W. (2)	2.2676

EM4554NAS = (0.06217 * RTP.1 + 0.03411) * EM4554 (15)
Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em4554nas/em4554	=	0.06217 * rtp.1 +	0.03411
		(1.91738)	(1.05544)

Sum Sq	0.0000
Std Error	0.0016

LHS Mean	0.0961
R-Squared	0.5507
R Bar Squared	0.4009
F-STAT 1, 3	3.6764
D.W. (1)	2.5497
D.W. (2)	1.5554

EM5564NAS = (-0.04776 * RTP.1 + 0.16626) * EM5564 (16)

Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em5564nas/em5564	=	-0.04776 * rtp.1 +	0.16626
		(0.60480)	(2.11226)

Sum Sq	0.0000
Std Error	0.0039
LHS Mean	0.1187
R-Squared	0.1087
R Bar Squared	0.1884
F-STAT 1, 3	0.3658
D.W. (1)	2.9234
D.W. (2)	1.9432

EM65ONAS = (0.16527 * EM6569 + 0.17798 * EM7074 + 0.19058 * EM75O) (17)

Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em6569nas/em6569	=	0.16527
		(53.9126)

Sum Sq	0.0002
Std Error	0.0069
LHS Mean	0.1653
R-Squared	0.0000
R Bar Squared	0.0000
F-stat 0, 4	NC
D.W. (1)	1.7716
D.W. (2)	2.9645

Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em7074nas/em7074	=	0.17798
		(22.9265)

Sum Sq	0.0012
Std Error	0.0174
LHS Mean	0.1780
R-Squared	0.0000
R Bar Squared	0.0000
F-stat 0, 4	NC
D.W. (1)	1.7116
D.W. (2)	2.1991

Ordinary Least Squares
ANNUAL data for 5 periods from 2000 to 2004
Date: 9 NOV 2005

em75onas/em75o	=	0.19058
		(20.1892)

Sum Sq	0.0018
Std Error	0.0211
LHS Mean	0.1906
R-Squared	0.0000
R Bar Squared	0.0000
F-stat 0, 4	NC
D.W. (1)	2.7330

D.W. (2) 0.9992

Nonagricultural Self-employed Workers:

"Raw" equations (before scaling the totals):

Female

EF1617NAS_R = (0.12015 * RTP.1 - 0.10551) * EF1617 + EF1617NAS.ADJ (3)

EF1819NAS_R = (0.11184 * RTP.1 - 0.10241) * EF1819 + EF1819NAS.ADJ (4)

EF2024NAS_R = (0.08908 * RTP.1 - 0.07176) * EF2024 + EF2024NAS.ADJ (5)

EF2534NAS_R = (0.00906 * RTP.1 + 0.03539) * EF2534 + EF2534NAS.ADJ (6)

EF3544NAS_R = (-0.01869 * RTP.1 + 0.08087) * EF3544 + EF3544NAS.ADJ (7)

EF4554NAS_R = (0.07232 * RTP.1 - 0.00701) * EF4554 + EF4554NAS.ADJ (8)

EF5564NAS_R = (0.07872 * RTP.1 + 0.00466) * EF5564 + EF5564NAS.ADJ (9)

EF65ONAS_R = (0.10940 * EF6569 + 0.12265 * EF7074 + 0.14137 * EF75O) + EF65ONAS.ADJ (10)

Male

EM1617NAS_R = (-0.23035 * RTP.1 + 0.24985) * EM1617 + EM1617NAS.ADJ (2)

EM1819NAS_R = (-0.05782 * RTP.1 + 0.07265) * EM1819 + EM1819NAS.ADJ (11)

EM2024NAS_R = (-0.09206 * RTP.1 + 0.11567) * EM2024 + EM2024NAS.ADJ (12)

EM2534NAS_R = (-0.09661 * RTP.1 + 0.14843) * EM2534 + EM2534NAS.ADJ (13)

EM3544NAS_R = (0.02739 * RTP.1 + 0.05236) * EM3544 + EM3544NAS.ADJ (14)

EM4554NAS_R = (0.06217 * RTP.1 + 0.03411) * EM4554 + EM4554NAS.ADJ (15)

EM5564NAS_R = (-0.04776 * RTP.1 + 0.16626) * EM5564 + EM5564NAS.ADJ (16)

EM65ONAS_R = (0.16527 * EM6569 + 0.17798 * EM7074 + 0.19058 * EM75O) + EM65ONAS.ADJ (17)

ENAS_R = EF1617NAS_R + EF1819NAS_R + EF2024NAS_R + EF2534NAS_R + EF3544NAS_R + EF4554NAS_R + EF5564NAS_R + EF65ONAS_R + EM1617NAS_R + EM1819NAS_R + EM2024NAS_R + EM2534NAS_R + EM3544NAS_R + EM4554NAS_R + EM5564NAS_R + EM65ONAS_R (18)

Total nonagricultural SE workers:

ENAS = IF LONGRANGE = 0
THEN ENAS_R
ELSE ENA * (ENAS.1/ENA.1) (22)

Final (scaled) equations:

Male

EM1617NAS = EM1617NAS_R * (ENAS/ENAS_R) (23)

EM1819NAS = EM1819NAS_R * (ENAS/ENAS_R) (102)

EM2024NAS = EM2024NAS_R * (ENAS/ENAS_R) (109)

EM2534NAS = EM2534NAS_R * (ENAS/ENAS_R) (116)

EM3544NAS = EM3544NAS_R * (ENAS/ENAS_R) (123)

EM4554NAS = EM4554NAS_R * (ENAS/ENAS_R) (130)

EM5564NAS = EM5564NAS_R * (ENAS/ENAS_R) (137)

EM65ONAS = EM65ONAS_R * (ENAS/ENAS_R) (144)

Female

EF1617NAS = EF1617NAS_R * (ENAS/ENAS_R) (157)

EF1819NAS = EF1819NAS_R * (ENAS/ENAS_R) (164)

EF2024NAS = EF2024NAS_R * (ENAS/ENAS_R) (171)

EF2534NAS = EF2534NAS_R * (ENAS/ENAS_R) (178)
EF3544NAS = EF3544NAS_R * (ENAS/ENAS_R) (185)
EF4554NAS = EF4554NAS_R * (ENAS/ENAS_R) (192)
EF5564NAS = EF5564NAS_R * (ENAS/ENAS_R) (199)
EF65ONAS = EF65ONAS_R * (ENAS/ENAS_R) (206)

EFNAS = EF1617NAS + EF1819NAS + EF2024NAS + EF2534NAS + EF3544NAS + EF4554NAS + EF5564NAS + EF65ONAS (212)

EMNAS = EM1617NAS + EM1819NAS + EM2024NAS + EM2534NAS + EM3544NAS + EM4554NAS + EM5564NAS + EM65ONAS (150)

Nonagricultural Unpaid Family Workers

"Raw" equations (before scaling the totals):

Female (25-32)
EF1617NAU_R = 0.00012 * ENAS + EF1617NAU.ADJ
EF1819NAU_R = 0.00025 * ENAS + EF1819NAU.ADJ
EF2024NAU_R = 0.00024 * ENAS + EF2024NAU.ADJ
EF2534NAU_R = 0.00117 * ENAS + EF2534NAU.ADJ
EF3544NAU_R = 0.00218 * ENAS + EF3544NAU.ADJ
EF4554NAU_R = 0.00226 * ENAS + EF4554NAU.ADJ
EF5564NAU_R = 0.00083 * ENAS + EF5564NAU.ADJ
EF65ONAU_R = (0.00027 + 0.00021 + 0.00008) * ENAS + EF65ONAU.ADJ

Male
EM1617NAU_R = 0.00028 * ENAS + EM1617NAU.ADJ (24)
EM1819NAU_R = 0.00033 * ENAS + EM1819NAU.ADJ (33)
EM2024NAU_R = 0.00050 * ENAS + EM2024NAU.ADJ (34)
EM2534NAU_R = 0.00044 * ENAS + EM2534NAU.ADJ (35)
EM3544NAU_R = 0.00043 * ENAS + EM3544NAU.ADJ (36)
EM4554NAU_R = 0.00052 * ENAS + EM4554NAU.ADJ (37)
EM5564NAU_R = 0.00037 * ENAS + EM5564NAU.ADJ (38)
EM65ONAU_R = (0.00023 + 0.00010 + 0.00011) * ENAS + EM65ONAU.ADJ (39)

ENAU_R = EF1617NAU_R + EF1819NAU_R + EF2024NAU_R + EF2534NAU_R + EF3544NAU_R + EF4554NAU_R + EF5564NAU_R + EF65ONAU_R + EM1617NAU_R + EM1819NAU_R + EM2024NAU_R + EM2534NAU_R + EM3544NAU_R + EM4554NAU_R + EM5564NAU_R + EM65ONAU_R (40)

Total Nonagricultural Unpaid Family Workers:
ENAU = ENAU_R (41)

Final (scaled) equations:

EM1617NAU = EM1617NAU_R * (ENAU/ENAU_R) (42)
EM1819NAU = EM1819NAU_R * (ENAU/ENAU_R) (103)
EM2024NAU = EM2024NAU_R * (ENAU/ENAU_R) (110)
EM2534NAU = EM2534NAU_R * (ENAU/ENAU_R) (117)
EM3544NAU = EM3544NAU_R * (ENAU/ENAU_R) (124)
EM4554NAU = EM4554NAU_R * (ENAU/ENAU_R) (131)
EM5564NAU = EM5564NAU_R * (ENAU/ENAU_R) (138)
EM65ONAU = EM65ONAU_R * (ENAU/ENAU_R) (145)

EF1617NAU = EF1617NAU_R * (ENAU/ENAU_R) (158)
EF1819NAU = EF1819NAU_R * (ENAU/ENAU_R) (165)
EF2024NAU = EF2024NAU_R * (ENAU/ENAU_R) (172)
EF2534NAU = EF2534NAU_R * (ENAU/ENAU_R) (179)
EF3544NAU = EF3544NAU_R * (ENAU/ENAU_R) (186)
EF4554NAU = EF4554NAU_R * (ENAU/ENAU_R) (193)
EF5564NAU = EF5564NAU_R * (ENAU/ENAU_R) (200)
EF65ONAU = EF65ONAU_R * (ENAU/ENAU_R) (207)

EFNAU = EF1617NAU + EF1819NAU + EF2024NAU + EF2534NAU + EF3544NAU + EF4554NAU + EF5564NAU + EF65ONAU (213)

EMNAU = EM1617NAU + EM1819NAU + EM2024NAU + EM2534NAU + EM3544NAU + EM4554NAU + EM5564NAU + EM65ONAU (151)

Agricultural Wage Workers

Total Agricultural Wage Workers

EAW = IF LONGRANGE = 0
THEN EA * (0.00893 * YEAR + 0.33159 * RTP - 0.67943)
ELSE EA*(EAW.1/EA.1) (43)

Raw Disaggregation of EAW:

Male

EM1617AW_R = MAX (0, EAW * (-0.00594 - 0.09353 * MOVAVG (2, RTP.1) + 5.28754 * EM1617/E + 0.08116) + EM1617AW.ADJ) (44)

EM1819AW_R = MAX (0, EAW * (-0.00131 - 0.18120 * MOVAVG (2, RTP.1) + 3.87151 * EM1819/E + 0.16636) + EM1819AW.ADJ) (53)

EM2024AW_R = MAX (0, EAW * (-0.00664 + 0.10493 * MOVAVG (2, RTP.1) + 2.00153 * EM2024/E - 0.08191) + EM2024AW.ADJ) (54)

EM2534AW_R = MAX (0, EAW * (-0.02065 + 0.38358 * MOVAVG (2, RTP.1) - 0.98380 * EM2534/E + 0.00751) + EM2534AW.ADJ) (55)

EM3544AW_R = MAX (0, EAW * (0.00402 - 0.15663 * MOVAVG (2, RTP.1) + 1.72119 * EM3544/E + 0.05679) + EM3544AW.ADJ) (56)

EM4554AW_R = MAX (0, EAW * (0.00834 + 0.03746 * MOVAVG (2, RTP.1) + 0.46522 * EM4554/E + 0.00144) + EM4554AW.ADJ) (57)

EM5564AW_R = MAX (0, EAW * (-0.00655 + 0.03521 * MOVAVG (2, RTP.1) + 0.46852 * EM5564/E - 0.00037) + EM5564AW.ADJ) (58)

EM65OAW_R = MAX (0, EAW * (-0.00114 + 0.07640 * MOVAVG (2, RTP.1) + 3.25911 * EM65O/E - 0.10058) + EM65OAW.ADJ) (59)

Female (45-52)

EF1617AW_R = MAX (0, EAW * (-0.00055 - 0.05470 * MOVAVG (2, RTP.1) + 1.41760 * EF1617/E + 0.04979) + EF1617AW.ADJ)

EF1819AW_R = MAX (0, EAW * (0.00102 - 0.07375 * MOVAVG (2, RTP.1) + 0.78394 * EF1819/E + 0.07226) + EF1819AW.ADJ)

EF2024AW_R = MAX (0, EAW * (0.00112 - 0.05971 * MOVAVG (2, RTP.1) + 0.57256 * EF2024/E + 0.05907) + EF2024AW.ADJ)

EF2534AW_R = MAX (0, EAW * (0.00623 + 0.08868 * MOVAVG (2, RTP.1) + 1.00897 * EF2534/E - 0.15142) + EF2534AW.ADJ)

EF3544AW_R = MAX (0, EAW * (0.00687 - 0.00259 * MOVAVG (2, RTP.1) + 0.51319 * EF3544/E - 0.00937) + EF3544AW.ADJ)

EF4554AW_R = MAX (0, EAW * (0.00185 + 0.08747 * MOVAVG (2, RTP.1) + 0.28022 * EF4554/E - 0.08053) + EF4554AW.ADJ)

EF5564AW_R = MAX (0, EAW * (-0.00140 - 0.03001 * MOVAVG (2, RTP.1) - 0.59383 * EF5564/E + 0.07088) + EF5564AW.ADJ)

EF65OAW_R = MAX (0, EAW * (0.00096 + 0.06768 * MOVAVG (2, RTP.1) + 1.04213 * EF65O/E - 0.07359) + EF65OAW.ADJ)

EAW_R = EF1617AW_R + EF1819AW_R + EF2024AW_R + EF2534AW_R + EF3544AW_R + EF4554AW_R + EF5564AW_R + EF65OAW_R + EM1617AW_R + EM1819AW_R+ EM2024AW_R + EM2534AW_R + EM3544AW_R + EM4554AW_R + EM5564AW_R + EM65OAW_R (60)

Final (scaled) equations:

EM1617AW = EM1617AW_R * (EAW/EAW_R) (61)

EM1819AW = EM1819AW_R * (EAW/EAW_R) (104)

EM2024AW = EM2024AW_R * (EAW/EAW_R) (111)

EM2534AW = EM2534AW_R * (EAW/EAW_R) (118)

EM3544AW = EM3544AW_R * (EAW/EAW_R) (125)

EM4554AW = EM4554AW_R * (EAW/EAW_R) (132)

EM5564AW = EM5564AW_R * (EAW/EAW_R) (139)

EM65OAW = EM65OAW_R * (EAW/EAW_R) (146)

EF1617AW = EF1617AW_R * (EAW/EAW_R) (159)

EF1819AW = EF1819AW_R * (EAW/EAW_R) (166)

EF2024AW = EF2024AW_R * (EAW/EAW_R) (173)

EF2534AW = EF2534AW_R * (EAW/EAW_R) (180)

EF3544AW = EF3544AW_R * (EAW/EAW_R) (187)

EF4554AW = EF4554AW_R * (EAW/EAW_R) (194)

EF5564AW = EF5564AW_R * (EAW/EAW_R) (201)

EF65OAW = EF65OAW_R * (EAW/EAW_R) (208)

EFAW = EF1617AW+ EF1819AW+ EF2024AW+ EF2534AW+ EF3544AW+ EF4554AW+ EF5564AW+ EF65OAW (214)

EMAW = EM1617AW+ EM1819AW+ EM2024AW+ EM2534AW+ EM3544AW+ EM4554AW+ EM5564AW+ EM65OAW (152)

Unpaid Agricultural Family Workers

Raw equations:

Male (71-78)

EM1617AU_R = MAX (0, 0.002 + EM1617AU.ADJ)
EM1819AU_R = MAX (0, 0.001 + EM1819AU.ADJ)
EM2024AU_R = MAX (0, 0.001 + EM2024AU.ADJ)
EM2534AU_R = MAX (0, 0.003 + EM2534AU.ADJ)
EM3544AU_R = MAX (0, 0.004 + EM3544AU.ADJ)
EM4554AU_R = MAX (0, 0.005 + EM4554AU.ADJ)
EM5564AU_R = MAX (0, 0.003 + EM5564AU.ADJ)
EM65OAU_R = MAX (0, 0.001 + EM65OAU.ADJ)

Female (63-70)
EF1617AU_R = MAX (0, 0.006 + EM1617AU.ADJ)
EF1819AU_R = MAX (0, 0.005 + EF1819AU.ADJ)
EF2024AU_R = MAX (0, 0.005 + EF2024AU.ADJ)
EF2534AU_R = MAX (0, 0.002 + EF2534AU.ADJ)
EF3544AU_R = MAX (0, 0.002 + EF3544AU.ADJ)
EF4554AU_R = MAX (0, 0.001 + EF4554AU.ADJ)
EF5564AU_R = MAX (0, 0.001 + EF5564AU.ADJ)
EF65OAU_R = MAX (0, 0.002 + EF65OAU.ADJ)

EAU_R = EF1617AU_R + EF1819AU_R + EF2024AU_R + EF2534AU_R + EF3544AU_R + EF4554AU_R + EF5564AU_R + EF65OAU_R + EM1617AU_R + EM1819AU_R + EM2024AU_R + EM2534AU_R + EM3544AU_R + EM4554AU_R + EM5564AU_R + EM65OAU_R (79)

Total Unpaid Agricultural Family Workers :
EAU = IF LONGRANGE = 0
THEN EAU_R
ELSE EAU.1/EA.1 * EA (80)

Final (scaled) equations :
EM1617AU = EM1617AU_R * (EAU/EAU_R) (99)
EM1819AU = EM1819AU_R * (EAU/EAU_R) (106)
EM2024AU = EM2024AU_R * (EAU/EAU_R) (113)
EM2534AU = EM2534AU_R * (EAU/EAU_R) (120)
EM3544AU = EM3544AU_R * (EAU/EAU_R) (127)
EM4554AU = EM4554AU_R * (EAU/EAU_R) (134)
EM5564AU = EM5564AU_R * (EAU/EAU_R) (141)
EM65OAU = EM65OAU_R * (EAU/EAU_R) (148)

EF1617AU = EF1617AU_R * (EAU/EAU_R) (161)
EF1819AU = EF1819AU_R * (EAU/EAU_R) (168)
EF2024AU = EF2024AU_R * (EAU/EAU_R) (175)
EF2534AU = EF2534AU_R * (EAU/EAU_R) (182)
EF3544AU = EF3544AU_R * (EAU/EAU_R) (189)
EF4554AU = EF4554AU_R * (EAU/EAU_R) (196)
EF5564AU = EF5564AU_R * (EAU/EAU_R) (203)
EF65OAU = EF65OAU_R * (EAU/EAU_R) (210)

EFAU = EF1617AU + EF1819AU + EF2024AU + EF2534AU + EF3544AU + EF4554AU + EF5564AU + EF65OAU (216)
EMAU = EM1617AU + EM1819AU + EM2024AU + EM2534AU + EM3544AU + EM4554AU + EM5564AU + EM65OAU (154)

Self-employed Agricultural Workers

Total
EAS = EA - EAU - EAW (81)

Raw disaggregation:
EM1617AS_R = MAX (0, NM1617 * (0.00528 + 0.00404) + EM1617AS.ADJ) (62)
EM1819AS_R = MAX (0, NM1819 * (0.00309 + 0.28448 * EA / (NM16O+ NF16O) - 0.00165) + EM1819AS.ADJ) (90)
EM2024AS_R = MAX (0, NM2024 * (-0.00181 + 0.97958 * EA / (NM16O+ NF16O) - 0.01093) + EM2024AS.ADJ) (91)
EM2534AS_R = MAX (0, NM2534 * (-0.00263 + 1.23186 * EA / (NM16O+ NF16O) - 0.01021) + EM2534AS.ADJ) (92)
EM3544AS_R = MAX (0, NM3544 * (-0.00151 + 1.66765 * EA / (NM16O+ NF16O) - 0.01450) + EM3544AS.ADJ) (93)
EM4554AS_R = MAX (0, NM4554 * (-0.00381 + 2.86654 * EA / (NM16O+ NF16O) - 0.03175) + EM4554AS.ADJ) (94)
EM5564AS_R = MAX (0, NM5564 * (-0.00460 + 2.78817 * EA / (NM16O+ NF16O) - 0.02398) + EM5564AS.ADJ) (95)
EM65OAS_R = MAX (0, NM65O * (0.00079 + 1.76904 * EA / (NM16O+ NF16O) - 0.01437) + EM65OAS.ADJ) (96)

EF1617AS_R = MAX (0, NF1617 * (0.00181 + 0.00030) + EF1617AS.ADJ) (82)

EF1819AS_R = MAX (0, EM1819AS.1 * (-0.02393 + 0.63672 * MOVAVG (2, RTP.1) + 0.98791 * EF1819/EM1819 - 4.43926) + EF1819AS.ADJ) (83)

EF2024AS_R = MAX (0, EM2024AS.1 * (0.07353 - 0.40207 * MOVAVG (2, RTP.1) + 0.57572 * EF2024/EM2024 - 0.01117) + EF2024AS.ADJ) (84)

EF2534AS_R = MAX (0, EM2534AS.1 * (0.16575 + 0.16967 * MOVAVG (2, RTP.1) + 0.55503 * EF2534/EM2534 - 0.43412) + EF2534AS.ADJ) (85)

EF3544AS_R = MAX (0, EM3544AS.1 * (0.15848 + 0.37839 * MOVAVG (2, RTP.1) + 0.37764 * EF3544/EM3544 - 0.45362) + EF3544AS.ADJ) (86)

EF4554AS_R = MAX (0, EM4554AS.1 * (0.21947 + 0.29497 * MOVAVG (2, RTP.1) + 0.58974 * EF4554/EM4554 - 0.51966) + EF4554AS.ADJ) (87)

EF5564AS_R = MAX (0, EM5564AS.1 * (0.20892 + 0.36294 * MOVAVG (2, RTP.1) + 0.65320 * EF5564/EM5564 - 0.66626) + EF5564AS.ADJ) (88)

EF65OAS_R = MAX (0, EM65OAS.1 * (0.16242 + 0.54916 * MOVAVG (2, RTP.1) + 0.06199 * EF65O/EM65O- 0.47556) + EF65OAS.ADJ) (89)

EAS_R = EF1617AS_R + EF1819AS_R + EF2024AS_R + EF2534AS_R + EF3544AS_R + EF4554AS_R + EF5564AS_R + EF65OAS_R + EM1617AS_R + EM1819AS_R+ EM2024AS_R + EM2534AS_R + EM3544AS_R + EM4554AS_R + EM5564AS_R + EM65OAS_R (97)

Final (scaled) equations:

EM1617AS = EM1617AS_R * (EAS/EAS_R) (98)

EM1819AS = EM1819AS_R * (EAS/EAS_R) (105)

EM2024AS = EM2024AS_R * (EAS/EAS_R) (112)

EM2534AS = EM2534AS_R * (EAS/EAS_R) (119)

EM3544AS = EM3544AS_R * (EAS/EAS_R) (126)

EM4554AS = EM4554AS_R * (EAS/EAS_R) (133)

EM5564AS = EM5564AS_R * (EAS/EAS_R) (140)

EM65OAS = EM65OAS_R * (EAS/EAS_R) (147)

EF1617AS = EF1617AS_R * (EAS/EAS_R) (160)

EF1819AS = EF1819AS_R * (EAS/EAS_R) (167)

EF2024AS = EF2024AS_R * (EAS/EAS_R) (174)

EF2534AS = EF2534AS_R * (EAS/EAS_R) (181)

EF3544AS = EF3544AS_R * (EAS/EAS_R) (188)

EF4554AS = EF4554AS_R * (EAS/EAS_R) (195)

EF5564AS = EF5564AS_R * (EAS/EAS_R) (202)

EF65OAS = EF65OAS_R * (EAS/EAS_R) (209)

EFAS = EF1617AS + EF1819AS + EF2024AS + EF2534AS + EF3544AS + EF4554AS + EF5564AS + EF65OAS (215)

EMAS = EM1617AS + EM1819AS + EM2024AS + EM2534AS + EM3544AS + EM4554AS + EM5564AS + EM65OAS (153)

Nonagricultural Private Household Wage Workers:

"Raw" equations (before scaling the totals): (229-244)

EF1617NAWPH_R = MAX (0.001, -0.20802 * MOVAVG (4, RTP.1) - 0.40988 * MOVAVG (4, RTP.5) + 0.01015 + 61.2465 * 1/YEAR - 0.00965 * MINW/CPIW_U + 0.01561 * NU10/NF1617 - 0.13398) * EF1617 + EF1617NAWPH.ADJ

EF1819NAWPH_R = MAX (0.001, -0.03363 * MOVAVG (4, RTP.1) - 0.12989 * MOVAVG (4, RTP.5) - 0.00661 + 8.44701 * 1/YEAR - 0.00539 * MINW/CPIW_U + 0.00345 * NU10/NF1819 + 0.07597) * EF1819 + EF1819NAWPH.ADJ

EF2024NAWPH_R = MAX (0.001, -0.18707 * MOVAVG (20, RTP.1) - 0.00223 + 2.12060 * 1/YEAR + 0.00820 * NU10/NF2024 + 0.14537) * EF2024 + EF2024NAWPH.ADJ

EF2534NAWPH_R = MAX (0.001, 0.01874 * MOVAVG (4, RTP.1) - 0.04167 * MOVAVG (20, RTP.5) - 0.00090 + 1.55167 * 1/YEAR + 0.01021 * NU10/NF2534 - 0.00170) * EF2534 + EF2534NAWPH.ADJ

EF3544NAWPH_R = (0.00622 * MOVAVG (4, RTP.1) - 0.06062 * MOVAVG (20, RTP.5) + 0.00008 + 0.29372 * MOVAVG (12, EF2534NAWPH.36/EF2534.36) + 0.06187) * EF3544 + EF3544NAWPH.ADJ

EF4554NAWPH_R = (0.02788 * MOVAVG (4, RTP.1) - 0.10996 * MOVAVG (20, RTP.5) - 0.00349 + 0.53068 * MOVAVG (12, EF3544NAWPH.36/EF3544.36) + 0.08883) * EF4554 + EF4554NAWPH.ADJ

EF5564NAWPH_R = (0.05939 * MOVAVG (4, RTP.1) - 0.10618 * MOVAVG (8, RTP.5) - 0.00579 + 0.66195 * MOVAVG (12, EF4554NAWPH.36/EF4554.36) + 0.05966) * EF5564 + EF5564NAWPH.ADJ

EF65ONAWPH_R = (0.22642 * MOVAVG (4, RTP.1) - 0.02069 + 0.33505 * MOVAVG (12, EF5564NAWPH.36) - 0.19707) + EF65ONAWPH.ADJ

EM1617NAWPH_R = MAX (0.001, -0.05284 * MOVAVG (4, RTP.1) - 0.17833 * MOVAVG (4, RTP.5) - 0.00768 + 9.19738 * 1/YEAR - 0.00588 * MINW/CPIW_U + 0.16862) * EM1617+ EM1617NAWPH.ADJ

EM1819NAWPH_R = MAX (0.001, -0.07122 * MOVAVG (4, RTP.1) - 0.03737 * MOVAVG (4, RTP.5) - 0.00282 + 3.76796 * 1/YEAR -

0.00499 * MINW/CPIW_U + 0.08727) * EM1819+ EM1819NAWPH.ADJ

EM2024NAWPH_R = MAX (0.001, -0.00450 * MOVAVG (4, RTP.1) - 0.02345 * MOVAVG (4, RTP.5) - 0.00113 - 0.00057 * MINW/CPIW_U + 0.03265) * EM2024 + EM2024NAWPH.ADJ

EM2534NAWPH_R = MAX (0.001, - 0.00490 * MOVAVG (4, RTP.5) - 0.00054 - 0.00051 * MINW/CPIW_U + 0.00789) * EM2534 + EM2534NAWPH.ADJ

EM3544NAWPH_R = (-0.00446 * MOVAVG (4, RTP.5) - 0.00041 - 0.00053 * MINW/CPIW_U + 0.00726) * EM3544 + EM3544NAWPH.ADJ

EM4554NAWPH_R = (-0.00039 + 0.00129) * EM4554 + EM4554NAWPH.ADJ

EM5564NAWPH_R = (-0.00015 + 0.00200) * EM5564 + EM5564NAWPH.ADJ

EM65ONAWPH_R = (-0.00679 + 0.64405 * MOVAVG (12, EM5564NAWPH.36) + 0.00231) + EM65ONAWPH.ADJ

ENAWPH_R = EF1617NAWPH_R + EF1819NAWPH_R + EF2024NAWPH_R + EF2534NAWPH_R + EF3544NAWPH_R + EF4554NAWPH_R + EF5564NAWPH_R + EF65ONAWPH_R + EM1617NAWPH_R + EM1819NAWPH_R + EM2024NAWPH_R + EM2534NAWPH_R + EM3544NAWPH_R + EM4554NAWPH_R + EM5564NAWPH_R + EM65ONAWPH_R (245)

Total Private Household Wage Workers:

ENAWPH = IF LONGRANGE = 0
THEN ENAWPH_R
ELSE ENAWPH.1 * (E_FE/E_FE.1) (246)

Final (scaled) equations:

Male (260-267)

EM1617NAWPH = EM1617NAWPH_R * (ENAWPH/ENAWPH_R)
EM1819NAWPH = EM1819NAWPH_R * (ENAWPH/ENAWPH_R)
EM2024NAWPH = EM2024NAWPH_R * (ENAWPH/ENAWPH_R)
EM2534NAWPH = EM2534NAWPH_R * (ENAWPH/ENAWPH_R)
EM3544NAWPH = EM3544NAWPH_R * (ENAWPH/ENAWPH_R)
EM4554NAWPH = EM4554NAWPH_R * (ENAWPH/ENAWPH_R)
EM5564NAWPH = EM5564NAWPH_R * (ENAWPH/ENAWPH_R)
EM65ONAWPH = EM65ONAWPH_R * (ENAWPH/ENAWPH_R)

Female (247-254)

EF1617NAWPH = EF1617NAWPH_R * (ENAWPH/ENAWPH_R)
EF1819NAWPH = EF1819NAWPH_R * (ENAWPH/ENAWPH_R)
EF2024NAWPH = EF2024NAWPH_R * (ENAWPH/ENAWPH_R)
EF2534NAWPH = EF2534NAWPH_R * (ENAWPH/ENAWPH_R)
EF3544NAWPH = EF3544NAWPH_R * (ENAWPH/ENAWPH_R)
EF4554NAWPH = EF4554NAWPH_R * (ENAWPH/ENAWPH_R)
EF5564NAWPH = EF5564NAWPH_R * (ENAWPH/ENAWPH_R)
EF65ONAWPH = EF65ONAWPH_R * (ENAWPH/ENAWPH_R)

EFNAWPH = EF1617NAWPH + EF1819NAWPH + EF2024NAWPH + EF2534NAWPH + EF3544NAWPH + EF4554NAWPH + EF5564NAWPH + EF65ONAWPH (255)

EMNAWPH = EM1617NAWPH + EM1819NAWPH + EM2024NAWPH + EM2534NAWPH + EM3544NAWPH + EM4554NAWPH + EM5564NAWPH + EM65ONAWPH (268)

OTHER EMPLOYMENT MEASURES

Federal Civilian Government and Government Enterprises

EGFC = IF LONGRANGE = 0
THEN (EGFC.1 * $1.0094^{0.25}$)
ELSE (EGFC.1 * (E_FE/E_FE.1)) (257)

EGEFCPS = IF LONGRANGE = 0
THEN (EGEFCPS.1 * $1.0075^{0.25}$)
ELSE (EGEFCPS.1 * (E_FE/E_FE.1)) (256)

EGGEFC = EGFC + EGEFCPS (258)

State and Local Government and Government Enterprises

EGGESL = IF LONGRANGE = 0
THEN EGGESL.1 * $(LC\_FE/LC\_FE.4)^{0.25}$
ELSE EGGESL.1 * (E_FE/E_FE.1) (259)

Military

Decrease (if any) in EDMIL compared to a year ago

DNEDMIL = IF (EDMIL-EDMIL.4) < 0
THEN (EDMIL-EDMIL.4)
ELSE 0 (228)

Private employment

EP = E-EGGESL - EGGEFC – EAS – ENAS (269)

Compensation and Output Sectors

Price Deflator for Medical Services

CPIWMS = CPIWMS.1 * (1 + ((CPIW_U/CPIW_U.4)$^{0.25}$ - 1) * CPIWMSWT) (287)

Unemployment Insurance and Workers Compensation Effective Tax Rates

TMAXUI_SL = TMAXUI_SL.1 *AWSUI.1/AWSUI.2 (404)

RELMAX_UI = TMAXUI_SL/AWSUI.1/1000 (405)

CR_UI = 0.775 (402)

TRATIO_UI = 0.96996 * RELMAX_UI-0.13744 * MOVAVG (4, RTP.1) + 0.10368 * MOVAVG (4, RTP.5) + 0.04887 (406)

TRATE_UI = 0.00143 * MOVAVG (4, RU.5) + 0.00128 * MOVAVG (4, RU.9) + 0.00057 * MOVAVG (4, RU.13) + 0.00356 (407)

RUIWS1 = CR_UI * TRATIO_UI * TRATE_UI (408)

RUIWS2 = 0.32476 * MOVAVG (4, RUIWS1.8 * (WSP.8 -WSPRRB.8 +WSGGESL.8)) / (WSP.1 -WSPRR2.1 +WSGGESL.1) (409)

Workers' Compensation

RWCWS = RWCWS.1 - (RWCWS.1 - 0.0144)/12 (311)

Wages

Average lagged private-sector wage

AWSPL = MOVAVG (8, AWSP.1) (272)

Average lagged private-sector compensation

AWSSPL = MOVAVG (8, AWSSP.1) (343)

Average wage in state & local government (incl. gov't enterprises)

AWSGGESL = IF LONGRANGE = 0
THEN AWSGGESL.1 * AWSPL/AWSPL.1
ELSE AWSGGESL.1 * AVG_GDP/AVG_GDP.1 * (1 + WS_TO_WSS_D/100)$^{0.25}$ (273)

Total wages in state & local government (incl. gov't enterprises)

WSGGESL = AWSGGESL * EGGESL (274)

Employer Contribution for Government Social Insurance in State & Local Government Sector

OASDISL_L = (EMPTROASI + EMPTRDI) * 0.978 * CSLA * WSGGESL (307)

HISL_L = EMPTRHI * 1.0 * CSLHI * WSGGESL (308)

SOC_UISL = (-0.02821 * MOVAVG (4, RTP.2) + 0.03145) * WSGGESL (309)

RSOCSL_WC = RSOCSL_WC.1 - (RSOCSL_WC.1 - 0.176)/12 (310)

SOC_WCSL = RSOCSL_WC * RWCWS * WSGGESL (312)

SOC_SL = (OASDISL_L + HISL_L + SOC_UISL + SOC_WCSL) (313)

Employer Contributions for Employee Pension and Insurance funds in State & Local Government Sector

Workers' Compensation - employees and annuitants

OLI_WCSL = (1 - RSOCSL_WC) * RWCWS * WSGGESL (316)

Pensions

OLI_RETSL = WSGGESL * (OLI_RETSL.1/WSGGESL.1) (317)

Life Insurance - employees and annuitants

OLI_GLI_SL = 2.0 * EGGESL * ((WSGGESL/EGGESL) +2.0) * 0.075 * 26/1000 (314)

Health Insurance - employees and annuitants

OLI_GHI_SL = (OLI_GHI_SL.1 / EGGESL.1) * CPIWMS/CPIWMS.1 * EGGESL * RGR_GHI (315)

Total

OLI_SL = (OLI_GLI_SL + OLI_GHI_SL + OLI_WCSL + OLI_RETSL) (318)

RCWSSL = (1 + (SOC_SL + OLI_SL)/WSGGESL) (319)

WSSGGESL = IF LONGRANGE = 0
THEN RCWSSL*WSGGESL
ELSE (WSSGGESL.1/EGGESL.1) * AVG_GDP/AVG_GDP.1 * EGGESL (320)

WSSGSL = WSSGGESL * WSSGSL.1/WSSGGESL.1 (321)

WSSGESL = WSSGGESL – WSSGSL (324)

CFCGSL = IF LONGRANGE = 0
THEN WSSGSL * RCFCGSL
ELSE CFCGSL.1 * WSSGGESL/WSSGGESL.1 (322)

GDPGSL = WSSGSL + CFCGSL (323)

CFCGESL = IF LONGRANGE = 0
THEN WSSGESL * RCFCGESL
ELSE CFCGESL.1 * WSSGGESL/WSSGGESL.1 (325)

GDPGESL = WSSGESL + CFCGESL (326)

GDPGGESL = GDPGSL + GDPGESL (327)

Federal Civilian General Government and Government Enterprises

Wages

General Government and Government Enterprises

Civilian pay raise

CRAZ1 = IF LONGRANGE = 0
THEN ((IF QTR = 1 THEN (0.82429 * (AWSP.6/AWSP.10 - 1) -0.005) ELSE 0))
ELSE (IF QTR = 1 THEN (AWSP.6/AWSP.10 - 1) ELSE 0) (270)

Military pay raise

MRAZ = IF LONGRANGE = 0
THEN ((IF QTR = 1 THEN (0.82429 * (AWSP.6/AWSP.10 - 1) -0.005) ELSE 0))
ELSE (IF QTR = 1 THEN (AWSP.6/AWSP.10 - 1) ELSE 0) (277)

Average wage in Federal Civilian Government

AWSGGEFC = IF LONGRANGE = 0
THEN (AWSGGEFC.1 * (1 +1.0 *CRAZ1 +0.0015))
ELSE AWSGGEFC.1 * AVG_GDP/AVG_GDP.1 * (1 +WS_TO_WSS_D/100)$^{0.25}$ (275)

Total wages in FCG

WSGGEFC = AWSGGEFC * EGGEFC (276)

CSRS workers

AWEFC_N = IF LONGRANGE = 0
THEN (AWEFC_N.1 * (1 +1.0 *CRAZ1 +0.00082))
ELSE AWEFC_N.1 * AVG_GDP/AVG_GDP.1 * (1 +WS_TO_WSS_D/100)$^{0.25}$ (271)

WEFC_N = AWEFC_N * TEFC_N (283)

Government Enterprises (Mostly U.S. Postal Service)

AWSGEFC = IF LONGRANGE = 0
THEN (AWSGEFC.1 * (1 +1.0 *CRAZ1 +0.0015))
ELSE AWSGEFC.1 * AVG_GDP/AVG_GDP.1 * (1 +WS_TO_WSS_D/100)$^{0.25}$ (290)

WSGEFC = AWSGEFC * EGEFCPS (291)

General Government

WSGFC = WSGGEFC -WSGEFC (292)

AWSGFC = WSGFC/EGFC (378)

Employer Contribution for Government Social Insurance

General Government and Government Enterprises

OASDIFC_L = (EMPTROASI + EMPTRDI) * 1.04 * (WSGGEFC - WEFC_N) * ADJ_FSA_FC (284)
HIFC_L = EMPTRHI* 1.055 * WSGGEFC * ADJ_FSA_FC (285)
SOCF_UIFC = (-0.05934 * RTP + 0.06165) * WSGGEFC (281)
SOCF_WC = 0.0159 * WSGGEFC (282)
SOC_FC = (SOCF_UIFC + SOCF_WC + OASDIFC_L + HIFC_L) (286)

Employer Contributions for Employee Pension and Insurance funds

General Government and Government Enterprises

Pensions
OLI_CSRS1 = ((0.174 * WSGEFC + 0.07 * WSGFC) / WSGGEFC) * WEFC_N (293)
OLI_FERS1 = 0.107 * (WSGGEFC * 0.9 -WEFC_N) (294)
OLI_FERSFC = 0.048 * (WSGGEFC * 0.9 -WEFC_N) (295)
OLI_RETFC = OLI_CSRS1 + OLI_FERS1 + OLI_FERSFC + OLIF_RETFCO (296)

Life Insurance - employees and annuitants
OLI_GLI_FC = 2.0 * EGGEFC * ((WSGGEFC/EGGEFC) + 2.0) * 0.075 * 26/1000 (289)

Health Insurance - employees and annuitants
OLI_GHI_FC = (OLI_GHI_FC.1 / EGGEFC.1) * CPIWMS/CPIWMS.1 * EGGEFC * RGR_GHI (288)
OLI_FC = (OLI_GHI_FC + OLI_GLI_FC + OLI_RETFC) (297)

Compensation

General Government and Government Enterprises
RCWSF = (1 + (SOC_FC + OLI_FC)/WSGGEFC)
(298)
WSSGGEFC = IF LONGRANGE = 0
THEN RCWSF * WSGGEFC
ELSE (WSSGGEFC.1/EGGEFC.1) * AVG_GDP/AVG_GDP.1 * EGGEFC (300)
WSSGFC = IF LONGRANGE = 0
THEN RCWSF * WSGFC
ELSE (WSSGFC.1 / (EGGEFC.1 - EGEFCPS.1)) * AVG_GDP/AVG_GDP.1 * (EGGEFC - EGEFCPS) (299)
WSSGEFC = IF LONGRANGE = 0
THEN RCWSF * WSGEFC
ELSE (WSSGEFC.1/EGEFCPS.1) * AVG_GDP/AVG_GDP.1 * EGEFCPS (303)

Consumption of Fixed Capital

General Government and Government Enterprises
CFCGFC = IF LONGRANGE = 0
THEN WSSGFC * RCFCGFC
ELSE CFCGFC.1 * WSSGGEFC / WSSGGEFC.1 (301)
CFCGEFC = IF LONGRANGE = 0
THEN WSSGEFC * RCFCGEFC
ELSE CFCGEFC.1 * WSSGGEFC / WSSGGEFC.1 (304)

Gross Domestic Product

General Government and Government Enterprises
GDPGFC = WSSGFC + CFCGFC (302)
GDPGEFC = WSSGEFC + CFCGEFC (305)
GDPGGEFC = GDPGFC + GDPGEFC (306)

Federal Government Military
Wages
AWSGFM = IF LONGRANGE = 0
THEN (AWSGFM.1 * (1.0027 +1.0 * MRAZ))
ELSE AWSGFM.1 * AVG_GDP/AVG_GDP.1 * (1 + WS_TO_WSS_D/100) $^{0.25}$ (278)

WSGFM = AWSGFM * (EDMIL+ EDMIL_R) (279)

Employer Contribution for Government Social Insurance

OASDIFM_L = (EMPTROASI + EMPTRDI) * 0.9975 * CML * WSGFM (331)
HIFM_L = EMPTRHI* 1.0 *CML * WSGFM (332)
SOCF_UIFM = MAX (0.001, (-0.05263 * DIFF (EDMIL + EDMIL_R) - 0.03079 * RTP + 0.03310)) * WSGFM (329)
SOCF_MIFM = 0.30 * CPIWMS * (EDMIL + EDMIL_R) (330)
SOC_FM = (SOCF_UIFM + SOCF_MIFM + OASDIFM_L + HIFM_L) (333)

Employer Contributions for Employee Pension and Insurance funds

OLI_RETFM = (OLI_RETFM.1/WSGFM.1 - (OLI_RETFM.1/WSGFM.1 - 0.472)/12) * WSGFM (328)

Compensation

RCWSM = (1 + (OLI_RETFM + SOC_FM)/WSGFM) (334)
WSSGFM = IF LONGRANGE = 0
THEN RCWSM * WSGFM
ELSE (WSSGFM.1/EDMIL.1) * AVG_GDP/AVG_GDP.1 * EDMIL (335)

Consumption of Fixed Capital

CFCGFM = IF LONGRANGE = 0
THEN WSSGFM * RCFCGFM
ELSE CFCGFM.1 * WSSGFM/WSSGFM.1 (336)

Gross Domestic Product

GDPGFM = WSSGFM + CFCGFM (337)
GDPGF = GDPGFC + GDPGFM (387)
GDPGGE = GDPGGEFC + GDPGGESL + GDPGFM (338)

Total (Civilian and Military) Federal General Government and Government Enterprises

WSSGF = WSSGFC + WSSGFM (392)
WSSGE = WSSGEFC + WSSGESL (394)
WSSG = WSSGF + WSSGSL (393)
GDPGE = GDPGEFC + GDPGESL (389)
GDPG = GDPGF + GDPGSL (388)

NIPA Farm Output and Earnings

Real farm output

GDPPF12 = IF LONGRANGE = 0
THEN EXP (- 3.52340 + 0.02055 * YEAR) * N_SSA * 1.125 * 1.138
ELSE GDPPF12.1 * GDP12/GDP12.1 (19)

Farm sector deflator

PGDPAF = IF LONGRANGE = 0
THEN PGDPAF.1 * $((PGDP/PGDP.1)^4 - 0.01)^{0.25}$
ELSE PGDPAF.1 * $((PGDP/PGDP.1)^4)^{0.25}$ (223)

Nominal farm output

GDPPF = GDPPF09 * PGDPAF (339)

Farm compensation and wages

WSSPF = IF LONGRANGE = 0
THEN EAW * MOVAVG (4, WSSP.2/EP.2) * (3.15749 / (YEAR- 65) - 0.43419 * RTP + 0.68725)
ELSE (WSSPF.1/EAW.1) * AVG_GDP/AVG_GDP.1 * EAW (360)
WSPF = IF LONGRANGE = 0
THEN WSSPF * (MOVAVG (12, (WSP.1/WSSP.1)) + 0.015)
ELSE (WSPF.1 /WSSPF.1) * (WSP.1/WSSP.1) / (WSP.2/WSSP.2) * WSSPF (381)
AWSPF = WSPF/EAW (382)

Farm proprietors' income

AYF_K = ((YF.1 /EAS.1) / (WSSPF.1/EAW.1) -5.0)*.8 + 5.0 (395)
YF = AYF_K * (WSSPF/EAW) * EAS (396)

GDP, WSS and WS, Private Households & Nonprofit Institutions

Private Households

Compensation & Wages

```
WSSPH =   IF LONGRANGE = 0
          THEN (((WSSPH.1/ENAWPH.1)/MOVAVG (4, WSSP.3/EP.3) - 0.41) * 0.875 + 0.41)
               * MOVAVG (4, WSSP.2/EP.2) * ENAWPH
          ELSE (AVG_GDP/AVG_GDP.1) * ENAWPH * (WSSPH.1/ENAWPH.1)                    (340)
WSPH =    IF LONGRANGE = 0
          THEN WSSPH / (1 +CPH* 1 * (EMPTROASI + EMPTRDI + EMPTRHI))
          ELSE (AWSPH.1 * ENAWPH.1/WSSPH.1) * (1 + WS_TO_WSS_D/100)^0.25 * WSSPH     (383)
AWSPH =   WSPH / ENAWPH                                                              (384)
```

Owner Occupied Housing

```
OOH =     OOH.1 * (KGDP12 * PGDP) / (KGDP12.1 * PGDP.1)                             (341)
```

Gross Value Added

```
GDPPH =   IF LONGRANGE = 0
          THEN WSSPH + OOH
          ELSE (AVG_GDP/AVG_GDP.1) * ENAWPH * (GDPPH.1/ENAWPH.1)                     (342)
```

Nonprofit Institutions

Health Services

```
EPHS_EST =  IF LONGRANGE = 0
            THEN EPHS_EST.1 + 0.275/4
            ELSE EPHS_EST.1 * (E_FE/E_FE.1)                                          (345)
AWSSPHS =   IF LONGRANGE = 0
            THEN AWSSPHS.1 * AWSSPL/AWSSPL.1
            ELSE AWSSPHS.1 * AVG_GDP/AVG_GDP.1                                       (344)
WSSPHS =    AWSSPHS* EPHS_EST                                                        (346)
```

Educational Services

```
EPES_EST =  IF LONGRANGE = 0
            THEN EPES_EST.1 + 0.075/4
            ELSE EPES_EST.1 * (E_FE/E_FE.1)                                          (348)
AWSSPES =   IF LONGRANGE = 0
            THEN AWSSPES.1 * AWSSPL/AWSSPL.1
            ELSE AWSSPES.1 * AVG_GDP/AVG_GDP.1                                       (347)
WSSPES =    AWSSPES* EPES_EST                                                        (349)
```

Social Services

```
EPSS_EST =  IF LONGRANGE = 0
            THEN EPSS_EST.1 + 0.075/4
            ELSE EPSS_EST.1 * (E_FE/E_FE.1)                                          (351)
AWSSPSS =   IF LONGRANGE = 0
            THEN AWSSPSS.1 * AWSSPL/AWSSPL.1
            ELSE AWSSPSS.1 * AVG_GDP/AVG_GDP.1                                       (350)
WSSPSS =    AWSSPSS* EPSS_EST                                                        (352)
```

Gross Value Added

```
WSSPNI =  WSSPNI.1 * (WSSPHS + WSSPES + WSSPSS) / (WSSPHS.1 + WSSPES.1 + WSSPSS.1) (353)
WSPNI =   IF LONGRANGE = 0
          THEN WSSPNI * (WSPNI.1/WSSPNI.1) * ((WSP.1/WSSP.1) / (WSP.9/WSSP.9))^(1/8)
          ELSE WSSPNI * (WSPNI.1/WSSPNI.1) * (1 +WS_TO_WSS_D/100)^0.25               (391)
GDPPNI =  IF LONGRANGE = 0
          THEN WSSPNI / ((WSSPNI.1/GDPPNI.1 - 0.866) * 0.8 + 0.866)
          ELSE WSSPNI /0.866                                                         (354)
```

Private Output and Compensation

```
ROASDIP_L =  (EMPTROASI + EMPTRDI) * TXRP * CP                                       (365)
RHIP_L =     EMPTRHI * 1.0 * CP                                                      (366)
RSOC_UIP =   0.00109 * MOVAVG (4, RU.2) + 0.00045 * MOVAVG (4, RU.10) + 0.00048 * MOVAVG (4, RU.18) - 0.00331   (367)
```

RSOC_WCP = RWCWS * RSOCSL_WC (368)
RSOCF_PBG = 0.00022 (369)

OLI
ROLI_WCP = RWCWS * (1 - RSOCSL_WC) (370)
ROLI_SU = 0.0005 (371)
OLI_GLI_P = 0.0025 * EP * AWSP.1 (363)
OLI_GHI_P = (OLI_GHI_P.1 / EP.1) * CPIWMS/CPIWMS.1 * EP * RGR_GHI (364)
ROLI_PPPS = MAX (ROLI_PPPS.1, 0.00031 * YEAR + 0.00866) (372)

Employee Compensation and Nonfarm Proprietor Income (WSS and YNF)

WSSGGE = (WSSGGESL + WSSGGEFC + WSSGFM) (374)
GDPPBNFXGE = (GDP – GDPGGE – GDPPF – GDPPH – GDPPNI) (355)
RWSSPBNFXGE = 0.30026 * RTP.1 + 0.31936 + (0.5905 - (0.30026 * 1.0 + 0.31936)) + RWSSPBNFXGE_ADJ (280)
ENAW = ENA-ENAS-ENAU (356)
ENAWPBXGE = ENAW - (ENAWPH + EGGEFC + EGGESL + WSSPNI / (WSSPHS + WSSPES + WSSPSS) * (EPHS_EST + EPES_EST + EPSS_EST)) (357)
ENAWSPBXGE = ENAWPBXGE + ENAS (403)
AYNF_K = ((YNF.1/ENAS.1 / (WSSPBNFXGE.1/ENAWPBXGE.1)) - 1.65) * 0.9 + 1.65 (401)
AYF = YF/EAS (399)
AWSSPF = WSSPF/EAW (398)
AYNF = YNF/ENAS (400)
AWSSPBNFXGE = WSSPBNFXGE/ENAWPBXGE (397)
YNF = YNF.1 * (GDPPBNFXGE / GDPPBNFXGE.1) * (ENAS / (ENAS + ENAWPBXGE)) / (ENAS.1 / (ENAS.1 + ENAWPBXGE.1)) (358)
WSSPBNFXGE = RWSSPBNFXGE * (GDPPBNFXGE - YNF) (359)
WSSP = WSSPBNFXGE+WSSPF+WSSPH +WSSPNI (361)
RCWSP = WSSP / (WSSP - SOCF_RETRR - OLI_GLI_P - OLI_GHI_P) * (1 + ROASDIP_L + RHIP_L + RSOC_UIP + RSOC_WCP + RSOCF_PBG + ROLI_WCP + ROLI_SU+ ROLI_PPPS) (373)
WS = IF WS_TO_WSS_DYR = 0
THEN (WSGGESL + WSGGEFC + WSGFM + WSSP/RCWSP)
ELSE WSS * WS.1/WSS.1 * $(1 + WS\_TO\_WSS\_D/100)^{0.25}$ (376)
WSD = WS (410)
WSP = (WS - WSGGESL - WSGGEFC - WSGFM) (379)
AWSP = WSP/EP (380)
AWSSP = WSSP/EP (385)

Other Variables

WSDP = (WSD –WSGGESL – WSGGEFC – WSGFM) (411)
AWSE = WS / (E + EDMIL – EAS – ENAS) (377)
AWSUI = (WS -WSGGEFC -WSGFM) / (E – EGGEFC – EAS – ENAS) (386)
WSS = (WSSP + WSSGGE) (375)
OLI_GGE = OLI_FC + OLI_SL + OLI_RETFM (412)
OLI_WCP = ROLI_WCP * WSP (413)
OLI_SU = ROLI_SU * WSP (414)
OLI_PPPS = ROLI_PPPS * WSP (415)
OLI_P = OLI_WCP + OLI_SU + OLI_GHI_P + OLI_GLI_P + OLI_PPPS (416)
OLI = OLI_GGE + OLI_P (417)
SOC_GGE = SOC_FC + SOC_FM + SOC_SL (418)
SOC_UIP = RSOC_UIP * WSP (419)
SOC_WCP = RSOC_WCP * WSP (420)
SOCF_PBG = RSOCF_PBG * WSP (423)
SOCF_RETRR = 0.20 * WSPRRB (362)
SOC_P = SOC_UIP + SOC_WCP + OASDIP_L + HIP_L + SOCF_PBG + SOCF_RETRR (424)
SOC = SOC_GGE + SOC_P (425)
OASDIP_L = ROASDIP_L * WSP (421)
HIP_L = RHIP_L * WSP (422)
OLI_PPS = OLI_PPPS + OLI_RETFC + OLI_RETFM + OLI_RETSL (426)
OLI_GHI = OLI_GHI_P + OLI_GHI_FC + OLI_GHI_SL (428)
OLI_GLI = OLI_GLI_P + OLI_GLI_FC + OLI_GLI_SL (429)
OLI_WC = OLI_WCP + OLI_WCSL (427)
SOCSL_WC = SOC_WCSL + SOC_WCP (430)
SOCF_UIFED = SOCF_UIFC + SOCF_UIFM (431)
SOCF_UIS = (SOC_UIP + SOC_UISL) * RUIWS1 / (RUIWS1 + RUIWS2) (432)
SOCF_UIF = (SOC_UIP + SOC_UISL) - SOCF_UIS (433)
SOCF_OASDI = OASDIP_L + OASDISL_L + OASDIFC_L + OASDIFM_L (434)

```
SOCF_HI     =   HIP_L + HISL_L + HIFC_L + HIFM_L                                    (435)
TAXMAX      =   IF (first quarter of the year) THEN
                    300 *NINT(0.5+MOVAVG(4,AWSE.5)/MOVAVG(4,AWSE.9)*1000*TAXMAX.1/300)/1000
                ELSE TAXMAX.1                                                       (390)
```