

Appendix 2-1 *Equations*

2.1 *U.S. Employment (USEMP)*

UNEMPLOYMENT RATES, PRELIMINARY

[Full estimation details for these equations are available upon request.]

MALE

$$RM1617_P = RM1617_P(-1) + [-31.52172*D(RTP) - 24.81520*D(RTP(-1)) - 14.72058*D(RTP(-2)) \\ - 31.33966*D(RTP(-3))]$$

$$RM1819_P = RM1819_P(-1) + [-56.74492*D(RTP) - 24.87344*D(RTP(-1)) - 35.84160*D(RTP(-2)) \\ - 0.70217*D(RTP(-3))]$$

$$RM2024_P = RM2024_P(-1) + [-52.29093*D(RTP) - 19.73984*D(RTP(-1)) - 15.03600*D(RTP(-2)) \\ - 13.47522*D(RTP(-3))]$$

$$RM2529_P = RM2529_P(-1) + [-39.13841*D(RTP) - 24.46060*D(RTP(-1)) - 17.51574*D(RTP(-2)) \\ - 0.81036*D(RTP(-3))]$$

$$RM3034_P = RM3034_P(-1) + [-23.76350*D(RTP) - 22.76416*D(RTP(-1)) - 8.88851*D(RTP(-2)) \\ - 11.24022*D(RTP(-3))]$$

$$RM3539_P = RM3539_P(-1) + [-28.26931*D(RTP) - 9.02630*D(RTP(-1)) - 14.93420*D(RTP(-2)) \\ - 9.03795*D(RTP(-3))]$$

$$RM4044_P = RM4044_P(-1) + [-18.16004*D(RTP) - 23.06573*D(RTP(-1)) - 9.94244*D(RTP(-2)) \\ - 4.34840*D(RTP(-3))]$$

$$RM4549_P = RM4549_P(-1) + [-22.41979*D(RTP) - 16.69081*D(RTP(-1)) - 11.82097*D(RTP(-2)) \\ - 1.04890*D(RTP(-3))]$$

$$RM5054_P = RM5054_P(-1) + [-23.03219*D(RTP) - 11.75062*D(RTP(-1)) - 8.80293*D(RTP(-2)) \\ - 10.36992*D(RTP(-3))]$$

$$RM5559_P = RM5559_P(-1) + [-25.47548*D(RTP) - 14.31543*D(RTP(-1)) - 6.15894*D(RTP(-2)) \\ - 1.00513*D(RTP(-3))]$$

$$RM6064_P = RM6064_P(-1) + [-2.10594*D(RTP) - 17.27891*D(RTP(-1)) - 4.87379*D(RTP(-2)) \\ - 15.36088*D(RTP(-3))]$$

$$RM6569_P = RM6569_P(-1) + [-13.51567*D(RTP) - 2.41017*D(RTP(-1)) - 17.92290*D(RTP(-2)) \\ + 1.48482*D(RTP(-3))]$$

$$RM7074_P = RM7074_P(-1) + [-9.76394*D(RTP) - 7.44785*D(RTP(-1)) - 15.23719*D(RTP(-2)) \\ + 7.17596*D(RTP(-3))]$$

$$RM75O_P = RM75O_P(-1) + [2.47935*D(RTP) - 27.63188*D(RTP(-1)) + 8.35078*D(RTP(-2)) \\ - 3.11058*D(RTP(-3))]$$

FEMALE

$$RF1617_P = RF1617_P(-1) + [-13.33857*D(RTP) - 1.17140*D(RTP(-1)) - 69.40326*D(RTP(-2)) \\ + 9.53209*D(RTP(-3))]$$

$$RF1819_P = RF1819_P(-1) + [-42.47852*D(RTP) - 11.03359*D(RTP(-1)) - 0.89011*D(RTP(-2)) \\ - 33.04213*D(RTP(-3))]$$

$$RF2024_P = RF2024_P(-1) + [-23.03635*D(RTP) - 17.33653*D(RTP(-1)) - 10.59182*D(RTP(-2)) \\ - 7.73281*D(RTP(-3))]$$

$$RF2529_P = RF2529_P(-1) + [-15.61692*D(RTP) - 12.87215*D(RTP(-1)) - 15.16923*D(RTP(-2)) \\ - 3.55380*D(RTP(-3))]$$

$$RF3034_P = RF3034_P(-1) + [-14.71130*D(RTP) - 6.25917*D(RTP(-1)) - 18.72755*D(RTP(-2)) \\ - 2.42329*D(RTP(-3))]$$

$$RF3539_P = RF3539_P(-1) + [-19.78502*D(RTP) - 7.31538*D(RTP(-1)) - 8.69549*D(RTP(-2)) \\ - 5.45418*D(RTP(-3))]$$

$$\begin{aligned} \text{RF4044_P} &= \text{RF4044_P}(-1) + [-8.62310 * \text{D}(\text{RTP}) - 10.87758 * \text{D}(\text{RTP}(-1)) - 6.86064 * \text{D}(\text{RTP}(-2)) \\ &\quad - 4.08914 * \text{D}(\text{RTP}(-3))] \\ \text{RF4549_P} &= \text{RF4549_P}(-1) + [-9.41764 * \text{D}(\text{RTP}) - 14.45854 * \text{D}(\text{RTP}(-1)) - 0.04687 * \text{D}(\text{RTP}(-2)) \\ &\quad - 4.15977 * \text{D}(\text{RTP}(-3))] \\ \text{RF5054_P} &= \text{RF5054_P}(-1) + [-11.37880 * \text{D}(\text{RTP}) - 4.16526 * \text{D}(\text{RTP}(-1)) - 12.32611 * \text{D}(\text{RTP}(-2)) \\ &\quad - 5.79074 * \text{D}(\text{RTP}(-3))] \\ \text{RF5559_P} &= \text{RF5559_P}(-1) + [-9.11833 * \text{D}(\text{RTP}) - 2.89447 * \text{D}(\text{RTP}(-1)) - 17.40333 * \text{D}(\text{RTP}(-2)) \\ &\quad + 0.37368 * \text{D}(\text{RTP}(-3))] \\ \text{RF6064_P} &= \text{RF6064_P}(-1) + [-21.93195 * \text{D}(\text{RTP}) + 2.80763 * \text{D}(\text{RTP}(-1)) - 11.61244 * \text{D}(\text{RTP}(-2)) \\ &\quad - 1.60187 * \text{D}(\text{RTP}(-3))] \\ \text{RF6569_P} &= \text{RF6569_P}(-1) + [6.59281 * \text{D}(\text{RTP}) + 5.16431 * \text{D}(\text{RTP}(-1)) - 35.27026 * \text{D}(\text{RTP}(-2)) \\ &\quad + 8.58449 * \text{D}(\text{RTP}(-3))] \\ \text{RF7074_P} &= \text{RF7074_P}(-1) + [-4.25967 * \text{D}(\text{RTP}) + 10.26851 * \text{D}(\text{RTP}(-1)) - 19.18862 * \text{D}(\text{RTP}(-2)) \\ &\quad + 6.93390 * \text{D}(\text{RTP}(-3))] \\ \text{RF75O_P} &= \text{RF75O_P}(-1) + [-40.60841 * \text{D}(\text{RTP}) + 42.55417 * \text{D}(\text{RTP}(-1)) - 29.60376 * \text{D}(\text{RTP}(-2)) \\ &\quad - 14.09088 * \text{D}(\text{RTP}(-3))] \end{aligned}$$

UNEMPLOYMENT RATES, AGE-SEX ADJUSTED, PRELIMINARY

$$\begin{aligned} \text{RUM_ASA_P} &= (\text{RM1617_P} * \text{LM1617_BY} + \text{RM1819_P} * \text{LM1819_BY} + \text{RM2024_P} * \text{LM2024_BY} \\ &\quad + \text{RM2529_P} * \text{LM2529_BY} + \text{RM3034_P} * \text{LM3034_BY} + \text{RM3539_P} * \text{LM3539_BY} \\ &\quad + \text{RM4044_P} * \text{LM4044_BY} + \text{RM4549_P} * \text{LM4549_BY} + \text{RM5054_P} * \text{LM5054_BY} \\ &\quad + \text{RM5559_P} * \text{LM5559_BY} + \text{RM6064_P} * \text{LM6064_BY} + \text{RM6569_P} * \text{LM6569_BY} \\ &\quad + \text{RM7074_P} * \text{LM7074_BY} + \text{RM75O_P} * \text{LM75O_BY}) / \text{LCM_BY} \\ \text{RUF_ASA_P} &= (\text{RF1617_P} * \text{LF1617_BY} + \text{RF1819_P} * \text{LF1819_BY} + \text{RF2024_P} * \text{LF2024_BY} \\ &\quad + \text{RF2529_P} * \text{LF2529_BY} + \text{RF3034_P} * \text{LF3034_BY} + \text{RF3539_P} * \text{LF3539_BY} \\ &\quad + \text{RF4044_P} * \text{LF4044_BY} + \text{RF4549_P} * \text{LF4549_BY} + \text{RF5054_P} * \text{LF5054_BY} \\ &\quad + \text{RF5559_P} * \text{LF5559_BY} + \text{RF6064_P} * \text{LF6064_BY} + \text{RF6569_P} * \text{LF6569_BY} \\ &\quad + \text{RF7074_P} * \text{LF7074_BY} + \text{RF75O_P} * \text{LF75O_BY}) / \text{LCF_BY} \\ \text{RU_ASA_P} &= (\text{RUM_ASA_P} * \text{LCM_BY} + \text{RUF_ASA_P} * \text{LCF_BY}) / \text{LC_BY} \end{aligned}$$

UNEMPLOYMENT RATES

MALE

$$\begin{aligned} \text{RM1617} &= \text{RM1617_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM1819} &= \text{RM1819_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM2024} &= \text{RM2024_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM2529} &= \text{RM2529_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM3034} &= \text{RM3034_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM3539} &= \text{RM3539_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM4044} &= \text{RM4044_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM4549} &= \text{RM4549_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM5054} &= \text{RM5054_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM5559} &= \text{RM5559_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM6064} &= \text{RM6064_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM6569} &= \text{RM6569_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM7074} &= \text{RM7074_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RM75O} &= \text{RM75O_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \end{aligned}$$

FEMALE

$$\begin{aligned} \text{RF1617} &= \text{RF1617_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RF1819} &= \text{RF1819_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \\ \text{RF2024} &= \text{RF2024_P} * (1 + \text{RU_ASA_ADJ} / \text{RU_ASA_P}) \end{aligned}$$

RF2529= RF2529_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF3034= RF3034_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF3539= RF3539_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF4044= RF4044_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF4549= RF4549_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF5054= RF5054_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF5559= RF5559_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF6064= RF6064_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF6569= RF6569_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF7074= RF7074_P * (1 + RU_ASA_ADJ / RU_ASA_P)
 RF750 = RF750_P * (1 + RU_ASA_ADJ / RU_ASA_P)

UNEMPLOYMENT RATES, AGE-SEX ADJUSTED

RUM_ASA = (RM1617 * LM1617_BY + RM1819 * LM1819_BY + RM2024 * LM2024_BY + RM2529 * LM2529_BY
 + RM3034 * LM3034_BY + RM3539 * LM3539_BY + RM4044 * LM4044_BY + RM4549 * LM4549_BY
 + RM5054 * LM5054_BY + RM5559 * LM5559_BY + RM6064 * LM6064_BY + RM6569 * LM6569_BY
 + RM7074 * LM7074_BY + RM750 * LM750_BY) / LCM_BY

RUF_ASA = (RF1617 * LF1617_BY + RF1819 * LF1819_BY + RF2024 * LF2024_BY + RF2529 * LF2529_BY
 + RF3034 * LF3034_BY + RF3539 * LF3539_BY + RF4044 * LF4044_BY + RF4549 * LF4549_BY
 + RF5054 * LF5054_BY + RF5559 * LF5559_BY + RF6064 * LF6064_BY + RF6569 * LF6569_BY
 + RF7074 * LF7074_BY + RF750 * LF750_BY) / LCF_BY

RU_ASA = (RUM_ASA * LCM_BY + RUF_ASA * LCF_BY) / LC_BY

UNEMPLOYMENT RATES, FULL EMPLOYMENT DIFFERENTIALS

MALE

DRM1617_FE = -31.52172*(1 - RTP) - 24.81520*(1 - RTP(-1)) - 14.72058*(1 - RTP(-2)) - 31.33966*(1 - RTP(-3))
 DRM1819_FE = -56.74492*(1 - RTP) - 24.87344*(1 - RTP(-1)) - 35.84160*(1 - RTP(-2)) - 0.70217*(1 - RTP(-3))
 DRM2024_FE = -52.29093*(1 - RTP) - 19.73984*(1 - RTP(-1)) - 15.03600*(1 - RTP(-2)) - 13.47522*(1 - RTP(-3))
 DRM2529_FE = -39.13841*(1 - RTP) - 24.46060*(1 - RTP(-1)) - 17.51574*(1 - RTP(-2)) - 0.81036*(1 - RTP(-3))
 DRM3034_FE = -23.76350*(1 - RTP) - 22.76416*(1 - RTP(-1)) - 8.88851*(1 - RTP(-2)) - 11.24022*(1 - RTP(-3))
 DRM3539_FE = -28.26931*(1 - RTP) - 9.02630*(1 - RTP(-1)) - 14.93420*(1 - RTP(-2)) - 9.03795*(1 - RTP(-3))
 DRM4044_FE = -18.16004*(1 - RTP) - 23.06573*(1 - RTP(-1)) - 9.94244*(1 - RTP(-2)) - 4.34840*(1 - RTP(-3))
 DRM4549_FE = -22.41979*(1 - RTP) - 16.69081*(1 - RTP(-1)) - 11.82097*(1 - RTP(-2)) - 1.04890*(1 - RTP(-3))
 DRM5054_FE = -23.03219*(1 - RTP) - 11.75062*(1 - RTP(-1)) - 8.80293*(1 - RTP(-2)) - 10.36992*(1 - RTP(-3))
 DRM5559_FE = -25.47548*(1 - RTP) - 14.31543*(1 - RTP(-1)) - 6.15894*(1 - RTP(-2)) - 1.00513*(1 - RTP(-3))
 DRM6064_FE = -2.10594*(1 - RTP) - 17.27891*(1 - RTP(-1)) - 4.87379*(1 - RTP(-2)) - 15.36088*(1 - RTP(-3))
 DRM6569_FE = -13.51567*(1 - RTP) - 2.41017*(1 - RTP(-1)) - 17.92290*(1 - RTP(-2)) + 1.48482*(1 - RTP(-3))
 DRM7074_FE = -9.76394*(1 - RTP) - 7.44785*(1 - RTP(-1)) - 15.23719*(1 - RTP(-2)) + 7.17596*(1 - RTP(-3))
 DRM750_FE = 2.47935*(1 - RTP) - 27.63188*(1 - RTP(-1)) + 8.35078*(1 - RTP(-2)) - 3.11058*(1 - RTP(-3))

FEMALE

DRF1617_FE = -13.33857*(1 - RTP) - 1.17140*(1 - RTP(-1)) - 69.40326*(1 - RTP(-2)) + 9.53209*(1 - RTP(-3))
 DRF1819_FE = -42.47852*(1 - RTP) - 11.03359*(1 - RTP(-1)) - 0.89011*(1 - RTP(-2)) - 33.04213*(1 - RTP(-3))
 DRF2024_FE = -23.03635*(1 - RTP) - 17.33653*(1 - RTP(-1)) - 10.59182*(1 - RTP(-2)) - 7.73281*(1 - RTP(-3))
 DRF2529_FE = -15.61692*(1 - RTP) - 12.87215*(1 - RTP(-1)) - 15.16923*(1 - RTP(-2)) - 3.55380*(1 - RTP(-3))
 DRF3034_FE = -14.71130*(1 - RTP) - 6.25917*(1 - RTP(-1)) - 18.72755*(1 - RTP(-2)) - 2.42329*(1 - RTP(-3))
 DRF3539_FE = -19.78502*(1 - RTP) - 7.31538*(1 - RTP(-1)) - 8.69549*(1 - RTP(-2)) - 5.45418*(1 - RTP(-3))
 DRF4044_FE = -8.62310*(1 - RTP) - 10.87758*(1 - RTP(-1)) - 6.86064*(1 - RTP(-2)) - 4.08914*(1 - RTP(-3))
 DRF4549_FE = -9.41764*(1 - RTP) - 14.45854*(1 - RTP(-1)) - 0.04687*(1 - RTP(-2)) - 4.15977*(1 - RTP(-3))
 DRF5054_FE = -11.37880*(1 - RTP) - 4.16526*(1 - RTP(-1)) - 12.32611*(1 - RTP(-2)) - 5.79074*(1 - RTP(-3))
 DRF5559_FE = -9.11833*(1 - RTP) - 2.89447*(1 - RTP(-1)) - 17.40333*(1 - RTP(-2)) + 0.37368*(1 - RTP(-3))
 DRF6064_FE = -21.93195*(1 - RTP) + 2.80763*(1 - RTP(-1)) - 11.61244*(1 - RTP(-2)) - 1.60187*(1 - RTP(-3))

$DRF6569_FE = 6.59281*(1 - RTP) + 5.16431*(1 - RTP(-1)) - 35.27026*(1 - RTP(-2)) + 8.58449*(1 - RTP(-3))$
 $DRF7074_FE = -4.25967*(1 - RTP) + 10.26851*(1 - RTP(-1)) - 19.18862*(1 - RTP(-2)) + 6.93390*(1 - RTP(-3))$
 $DRF75O_FE = -40.60841*(1 - RTP) + 42.55417*(1 - RTP(-1)) - 29.60376*(1 - RTP(-2)) - 14.09088*(1 - RTP(-3))$

UNEMPLOYMENT RATES, FULL EMPLOYMENT DIFFERENTIALS TOTALS

MALE

$RM1617_FE = RM1617 + DRM1617_FE$
 $RM1819_FE = RM1819 + DRM1819_FE$
 $RM2024_FE = RM2024 + DRM2024_FE$
 $RM2529_FE = RM2529 + DRM2529_FE$
 $RM3034_FE = RM3034 + DRM3034_FE$
 $RM3539_FE = RM3539 + DRM3539_FE$
 $RM4044_FE = RM4044 + DRM4044_FE$
 $RM4549_FE = RM4549 + DRM4549_FE$
 $RM5054_FE = RM5054 + DRM5054_FE$
 $RM5559_FE = RM5559 + DRM5559_FE$
 $RM6064_FE = RM6064 + DRM6064_FE$
 $RM6569_FE = RM6569 + DRM6569_FE$
 $RM7074_FE = RM7074 + DRM7074_FE$
 $RM75O_FE = RM75O + DRM75O_FE$

FEMALE

$RF1617_FE = RF1617 + DRF1617_FE$
 $RF1819_FE = RF1819 + DRF1819_FE$
 $RF2024_FE = RF2024 + DRF2024_FE$
 $RF2529_FE = RF2529 + DRF2529_FE$
 $RF3034_FE = RF3034 + DRF3034_FE$
 $RF3539_FE = RF3539 + DRF3539_FE$
 $RF4044_FE = RF4044 + DRF4044_FE$
 $RF4549_FE = RF4549 + DRF4549_FE$
 $RF5054_FE = RF5054 + DRF5054_FE$
 $RF5559_FE = RF5559 + DRF5559_FE$
 $RF6064_FE = RF6064 + DRF6064_FE$
 $RF6569_FE = RF6569 + DRF6569_FE$
 $RF7074_FE = RF7074 + DRF7074_FE$
 $RF75O_FE = RF75O + DRF75O_FE$

LABOR FORCE PARTICIPATION RATES (LFPR)

[Full estimation details for these equations are available upon request.]

MALE LFPR EQUATIONS

MALE 1617 AND 1819

$PM1617_P = [(-0.00134*RM1617 - 0.00167*RM1617(-1) - 0.00132*RM1617(-2) - 0.00065*RM1617(-3) + 0.00003*RM1617(-4) + 0.00035*RM1617(-5)) - 0.01009 * TR_M1617 + 0.49638 + 0.98199] / (1 + RM1617DI)$

$PM1819_P = [(-0.00068*RM1819 - 0.00092*RM1819(-1) - 0.00083*RM1819(-2) - 0.00056*RM1819(-3) - 0.00025*RM1819(-4) - 0.00002*RM1819(-5)) - 0.00780 * TR_M1819 + 0.47128 + 0.97741] / (1 + RM1819DI)$

$PM1617 = PM1617_P$

PM1819 = PM1819_P

MALE 20 TO 54, NEVER MARRIED

PM2024NM_P = [(- 0.00053*RM2024 - 0.00074*RM2024(-1) - 0.00071*RM2024(-2) - 0.00054*RM2024(-3)
- 0.00030*RM2024(-4) - 0.00010*RM2024(-5))
- 0.00310 * TR_M2024
+ 1.12658] / (1 + RM2024DI)

PM2529NM_P = [(- 0.00031*RM2529 - 0.00053*RM2529(-1) - 0.00066*RM2529(-2) - 0.00068*RM2529(-3)
- 0.00058*RM2529(-4) - 0.00036*RM2529(-5))
- 0.00091 * TR_M2529
+ 0.99893] / (1 + RM2529DI)

PM3034NM_P = [(- 0.00001*RM3034 - 0.00018*RM3034(-1) - 0.00040*RM3034(-2) - 0.00058*RM3034(-3)
- 0.00064*RM3034(-4) - 0.00047*RM3034(-5))
+ 0.89877] / (1 + RM3034DI)

PM3539NM_P = [(0.00048*RM3539 + 0.00037*RM3539(-1) - 0.00007*RM3539(-2) - 0.00058*RM3539(-3)
- 0.00091*RM3539(-4) - 0.00080*RM3539(-5))
+ 0.87015] / (1 + RM3539DI)

PM4044NM_P = [(- 0.00018*RM4044 - 0.00026*RM4044(-1) - 0.00027*RM4044(-2) - 0.00022*RM4044(-3)
- 0.00014*RM4044(-4) - 0.00006*RM4044(-5))
+ 0.83848] / (1 + RM4044DI)

PM4549NM_P = [(0.00004*RM4549 - 0.00011*RM4549(-1) - 0.00036*RM4549(-2) - 0.00059*RM4549(-3)
- 0.00068*RM4549(-4) - 0.00052*RM4549(-5))
+ 0.80657] / (1 + RM4549DI)

PM5054NM_P = [(0.00115*RM5054 + 0.00089*RM5054(-1) - 0.00017*RM5054(-2) - 0.00141*RM5054(-3)
- 0.00220*RM5054(-4) - 0.00194*RM5054(-5))
+ 0.77113] / (1 + RM5054DI)

MALE 20 TO 54, MARRIED, SPOUSE PRESENT

PM2024MS_P = [(- 0.00053*RM2024 - 0.00074*RM2024(-1) - 0.00071*RM2024(-2) - 0.00054*RM2024(-3)
- 0.00030*RM2024(-4) - 0.00010*RM2024(-5))
- 0.00141 * TR_M2024
+ 1.10245] / (1 + RM2024DI)

PM2529MS_P = [(- 0.00031*RM2529 - 0.00053*RM2529(-1) - 0.00066*RM2529(-2) - 0.00068*RM2529(-3)
- 0.00058*RM2529(-4) - 0.00036*RM2529(-5))
- 0.00048 * TR_M2529
+ 1.02497] / (1 + RM2529DI)

PM3034MS_P = [(- 0.00001*RM3034 - 0.00018*RM3034(-1) - 0.00040*RM3034(-2) - 0.00058*RM3034(-3)
- 0.00064*RM3034(-4) - 0.00047*RM3034(-5))
+ 0.97980] / (1 + RM3034DI)

PM3539MS_P = [(0.00048*RM3539 + 0.00037*RM3539(-1) - 0.00007*RM3539(-2) - 0.00058*RM3539(-3)
- 0.00091*RM3539(-4) - 0.00080*RM3539(-5))
+ 0.98104] / (1 + RM3539DI)

PM4044MS_P = [(- 0.00018*RM4044 - 0.00026*RM4044(-1) - 0.00027*RM4044(-2) - 0.00022*RM4044(-3)
- 0.00014*RM4044(-4) - 0.00006*RM4044(-5))
+ 0.98178] / (1 + RM4044DI)

PM4549MS_P = [(0.00004*RM4549 - 0.00011*RM4549(-1) - 0.00036*RM4549(-2) - 0.00059*RM4549(-3)
- 0.00068*RM4549(-4) - 0.00052*RM4549(-5))
+ 0.98395] / (1 + RM4549DI)

PM5054MS_P = [(0.00115*RM5054 + 0.00089*RM5054(-1) - 0.00017*RM5054(-2) - 0.00141*RM5054(-3)

$$- 0.00220*RM5054(-4) - 0.00194*RM5054(-5)) \\ + 0.97763] / (1 + RM5054DI)$$

MALE 20 TO 54, MARRIED, SPOUSE ABSENT

$$PM2024MA_P = [(- 0.00053*RM2024 - 0.00074*RM2024(-1) - 0.00071*RM2024(-2) - 0.00054*RM2024(-3) \\ - 0.00030*RM2024(-4) - 0.00010*RM2024(-5)) \\ - 0.00441 * TR_M2024 \\ + 1.33014] / (1 + RM2024DI)$$

$$PM2529MA_P = [(- 0.00031*RM2529 - 0.00053*RM2529(-1) - 0.00066*RM2529(-2) - 0.00068*RM2529(-3) \\ - 0.00058*RM2529(-4) - 0.00036*RM2529(-5)) \\ - 0.00061 * TR_M2529 \\ + 0.98620] / (1 + RM2529DI)$$

$$PM3034MA_P = [(- 0.00001*RM3034 - 0.00018*RM3034(-1) - 0.00040*RM3034(-2) - 0.00058*RM3034(-3) \\ - 0.00064*RM3034(-4) - 0.00047*RM3034(-5)) \\ + 0.93031] / (1 + RM3034DI)$$

$$PM3539MA_P = [(0.00048*RM3539 + 0.00037*RM3539(-1) - 0.00007*RM3539(-2) - 0.00058*RM3539(-3) \\ - 0.00091*RM3539(-4) - 0.00080*RM3539(-5)) \\ + 0.92144] / (1 + RM3539DI)$$

$$PM4044MA_P = [(- 0.00018*RM4044 - 0.00026*RM4044(-1) - 0.00027*RM4044(-2) - 0.00022*RM4044(-3) \\ - 0.00014*RM4044(-4) - 0.00006*RM4044(-5)) \\ + 0.90958] / (1 + RM4044DI)$$

$$PM4549MA_P = [(0.00004*RM4549 - 0.00011*RM4549(-1) - 0.00036*RM4549(-2) - 0.00059*RM4549(-3) \\ - 0.00068*RM4549(-4) - 0.00052*RM4549(-5)) \\ + 0.88963] / (1 + RM4549DI)$$

$$PM5054MA_P = [(0.00115*RM5054 + 0.00089*RM5054(-1) - 0.00017*RM5054(-2) - 0.00141*RM5054(-3) \\ - 0.00220*RM5054(-4) - 0.00194*RM5054(-5)) \\ + 0.85714] / (1 + RM5054DI)$$

MALE AGE 20 TO 54

$$PM2024_P = (PM2024NM_P * NM2024NM + PM2024MS_P * NM2024MS + PM2024MA_P * NM2024MA) / NM2024 \\ PM2529_P = (PM2529NM_P * NM2529NM + PM2529MS_P * NM2529MS + PM2529MA_P * NM2529MA) / NM2529 \\ PM3034_P = (PM3034NM_P * NM3034NM + PM3034MS_P * NM3034MS + PM3034MA_P * NM3034MA) / NM3034 \\ PM3539_P = (PM3539NM_P * NM3539NM + PM3539MS_P * NM3539MS + PM3539MA_P * NM3539MA) / NM3539 \\ PM4044_P = (PM4044NM_P * NM4044NM + PM4044MS_P * NM4044MS + PM4044MA_P * NM4044MA) / NM4044 \\ PM4549_P = (PM4549NM_P * NM4549NM + PM4549MS_P * NM4549MS + PM4549MA_P * NM4549MA) / NM4549 \\ PM5054_P = (PM5054NM_P * NM5054NM + PM5054MS_P * NM5054MS + PM5054MA_P * NM5054MA) / NM5054$$

$$PM2024 = PM2024_P \\ PM2529 = PM2529_P \\ PM3034 = PM3034_P \\ PM3539 = PM3539_P \\ PM4044 = PM4044_P \\ PM4549 = PM4549_P \\ PM5054 = PM5054_P$$

$$PM2024NM = PM2024NM_P * PM2024 / PM2024_P \\ PM2529NM = PM2529NM_P * PM2529 / PM2529_P \\ PM3034NM = PM3034NM_P * PM3034 / PM3034_P \\ PM3539NM = PM3539NM_P * PM3539 / PM3539_P \\ PM4044NM = PM4044NM_P * PM4044 / PM4044_P \\ PM4549NM = PM4549NM_P * PM4549 / PM4549_P \\ PM5054NM = PM5054NM_P * PM5054 / PM5054_P$$

$$PM2024MS = PM2024MS_P * PM2024 / PM2024_P \\ PM2529MS = PM2529MS_P * PM2529 / PM2529_P$$

$PM3034MS = PM3034MS_P * PM3034 / PM3034_P$
 $PM3539MS = PM3539MS_P * PM3539 / PM3539_P$
 $PM4044MS = PM4044MS_P * PM4044 / PM4044_P$
 $PM4549MS = PM4549MS_P * PM4549 / PM4549_P$
 $PM5054MS = PM5054MS_P * PM5054 / PM5054_P$

$PM2024MA = PM2024MA_P * PM2024 / PM2024_P$
 $PM2529MA = PM2529MA_P * PM2529 / PM2529_P$
 $PM3034MA = PM3034MA_P * PM3034 / PM3034_P$
 $PM3539MA = PM3539MA_P * PM3539 / PM3539_P$
 $PM4044MA = PM4044MA_P * PM4044 / PM4044_P$
 $PM4549MA = PM4549MA_P * PM4549 / PM4549_P$
 $PM5054MA = PM5054MA_P * PM5054 / PM5054_P$

MALE AGE 55 TO 74

$PM55_P = [0.00197*EDSCOREM55 - 0.09058*MSSSHARE_M55 + 0.95174] / (1 + RM55DI)$

$PM56_P = [-0.01821*EDSCOREM56 - 0.10617*MSSSHARE_M56 + 0.98672] / (1 + RM56DI)$

$PM57_P = [-0.01861*EDSCOREM57 - 0.21015*MSSSHARE_M57 + 1.05211] / (1 + RM57DI)$

$PM58_P = [0.01509*EDSCOREM58 - 0.22982*MSSSHARE_M58 + 0.99265] / (1 + RM58DI)$

$PM59_P = [0.00952*EDSCOREM59 - 0.30748*MSSSHARE_M59 + 1.04218] / (1 + RM59DI)$

$PM60_P = [0.03704*EDSCOREM60 - 0.32468*MSSSHARE_M60 + 0.96171] / (1 + RM60DI)$

$PM61_P = [0.00718*EDSCOREM61 - 0.44317*MSSSHARE_M61 + 1.07617] / (1 + RM61DI)$

$PM62_P = [-0.60*RRADJ_M62 - 0.02*POT_ET_TXRT_62$
 $+ 0.10092*EDSCOREM62 - 0.55927*MSSSHARE_M62 + 1.09868] / (1 + RM62DI)$

$PM63_P = [-0.55*RRADJ_M63 - 0.02*POT_ET_TXRT_63$
 $+ 0.06427*EDSCOREM63 - 0.95029*MSSSHARE_M63 + 1.39001] / (1 + RM63DI)$

$PM64_P = [-0.50*RRADJ_M64 - 0.02*POT_ET_TXRT_64$
 $+ 0.05462*EDSCOREM64 - 1.01565*MSSSHARE_M64 + 1.40427] / (1 + RM64DI)$

$PM65_P = [-0.45*RRADJ_M65 - 0.02*POT_ET_TXRT_65$
 $+ 0.14092*EDSCOREM65 - 0.56959*MSSSHARE_M65 + 0.83637] / (1 + RM65DI)$

$PM66_P = [-0.40*RRADJ_M66 - 0.02*POT_ET_TXRT_66$
 $+ 0.08401*EDSCOREM66 - 0.71602*MSSSHARE_M66 + 0.99009] / (1 + RM66DI)$

$PM67_P = [-0.35*RRADJ_M67 - 0.02*POT_ET_TXRT_67$
 $+ 0.09458*EDSCOREM67 - 0.80679*MSSSHARE_M67 + 0.98465] / (1 + RM67DI)$

$PM68_P = [-0.30*RRADJ_M68 - 0.02*POT_ET_TXRT_68$
 $+ 0.11230*EDSCOREM68 - 0.91881*MSSSHARE_M68 + 0.99375] / (1 + RM68DI)$

$PM69_P = [-0.30*RRADJ_M69 - 0.02*POT_ET_TXRT_69$
 $+ 0.09610*EDSCOREM69 - 0.83697*MSSSHARE_M69 + 0.93415] / (1 + RM69DI)$

$PM70_P = [0.09997*EDSCOREM70 - 0.22828*MSSSHARE_M70 + 0.28131] / (1 + RM70DI)$

$PM71_P = [0.12351*EDSCOREM71 + 0.13152*MSSSHARE_M71 - 0.04761] / (1 + RM71DI)$

$PM72_P = [0.13620*EDSCOREM72 - 0.19020*MSSSHARE_M72 + 0.15703] / (1 + RM72DI)$

$PM73_P = [0.13710*EDSCOREM73 + 0.26157*MSSSHARE_M73 - 0.20437] / (1 + RM73DI)$

$PM74_P = [0.13464*EDSCOREM74 + 0.42963*MSSSHARE_M74 - 0.34404] / (1 + RM74DI)$

MALE AGE 75 TO 79

$$PM75_P = PM74(-4) * 0.92$$

$$PM76_P = PM75(-4) * 0.92$$

$$PM77_P = PM76(-4) * 0.92$$

$$PM78_P = PM77(-4) * 0.92$$

$$PM79_P = PM78(-4) * 0.92$$

MALE AGE 55 TO 79

$$PM55 = PM55_P$$

$$PM56 = PM56_P$$

$$PM57 = PM57_P$$

$$PM58 = PM58_P$$

$$PM59 = PM59_P$$

$$PM60 = PM60_P$$

$$PM61 = PM61_P$$

$$PM62 = PM62_P$$

$$PM63 = PM63_P$$

$$PM64 = PM64_P$$

$$PM65 = PM65_P$$

$$PM66 = PM66_P$$

$$PM67 = PM67_P$$

$$PM68 = PM68_P$$

$$PM69 = PM69_P$$

$$PM70 = PM70_P$$

$$PM71 = PM71_P$$

$$PM72 = PM72_P$$

$$PM73 = PM73_P$$

$$PM74 = PM74_P$$

$$PM75 = PM75_P$$

$$PM76 = PM76_P$$

$$PM77 = PM77_P$$

$$PM78 = PM78_P$$

$$PM79 = PM79_P$$

MALE AGE 80 AND OVER

$$PM80_P = PM79(-4) * 0.965^1$$

$$PM81_P = PM79(-8) * 0.965^2$$

$$PM82_P = PM79(-12) * 0.965^3$$

$$PM83_P = PM79(-16) * 0.965^4$$

$$PM84_P = PM79(-20) * 0.965^5$$

$PM85_P = MOVAVG(8, PM79(-24)) * 0.965^6$
 $PM86_P = MOVAVG(8, PM79(-28)) * 0.965^7$
 $PM87_P = MOVAVG(8, PM79(-32)) * 0.965^8$
 $PM88_P = MOVAVG(8, PM79(-36)) * 0.965^9$
 $PM89_P = MOVAVG(8, PM79(-40)) * 0.965^{10}$
 $PM90_P = MOVAVG(8, PM79(-44)) * 0.965^{11}$
 $PM91_P = MOVAVG(8, PM79(-48)) * 0.965^{12}$
 $PM92_P = MOVAVG(8, PM79(-52)) * 0.965^{13}$
 $PM93_P = MOVAVG(8, PM79(-56)) * 0.965^{14}$
 $PM94_P = MOVAVG(8, PM79(-60)) * 0.965^{15}$
 $PM95_P = PM94_P * 0.965$
 $PM96_P = PM95_P * 0.965$
 $PM97_P = PM96_P * 0.965$
 $PM98_P = PM97_P * 0.965$
 $PM99_P = PM98_P * 0.965$
 $PM100_P = PM99_P * 0.965$

$PM80O_P = (PM80_P * NM80 + PM81_P * NM81 + PM82_P * NM82 + PM83_P * NM83 + PM84_P * NM84$
 $+ PM85_P * NM85 + PM86_P * NM86 + PM87_P * NM87 + PM88_P * NM88 + PM89_P * NM89$
 $+ PM90_P * NM90 + PM91_P * NM91 + PM92_P * NM92 + PM93_P * NM93 + PM94_P * NM94$
 $+ PM95_P * NM95 + PM96_P * NM96 + PM97_P * NM97 + PM98_P * NM98 + PM99_P * NM99$
 $+ PM100_P * NM100) / NM80O$

$PM80O = PM80O_P$
 $PM80 = PM80_P * PM80O / PM80O_P$
 $PM81 = PM81_P * PM80O / PM80O_P$
 $PM82 = PM82_P * PM80O / PM80O_P$
 $PM83 = PM83_P * PM80O / PM80O_P$
 $PM84 = PM84_P * PM80O / PM80O_P$
 $PM85 = PM85_P * PM80O / PM80O_P$
 $PM86 = PM86_P * PM80O / PM80O_P$
 $PM87 = PM87_P * PM80O / PM80O_P$
 $PM88 = PM88_P * PM80O / PM80O_P$
 $PM89 = PM89_P * PM80O / PM80O_P$
 $PM90 = PM90_P * PM80O / PM80O_P$
 $PM91 = PM91_P * PM80O / PM80O_P$
 $PM92 = PM92_P * PM80O / PM80O_P$
 $PM93 = PM93_P * PM80O / PM80O_P$
 $PM94 = PM94_P * PM80O / PM80O_P$
 $PM95 = PM95_P * PM80O / PM80O_P$
 $PM96 = PM96_P * PM80O / PM80O_P$
 $PM97 = PM97_P * PM80O / PM80O_P$

$PM98 = PM98_P * PM80O / PM80O_P$
 $PM99 = PM99_P * PM80O / PM80O_P$
 $PM100 = PM100_P * PM80O / PM80O_P$

FEMALE LFPR EQUATIONS

FEMALE 1617 AND 1819

$PF1617_P = [- 0.00214*RF1617 - 0.00256*RF1617(-1) - 0.00184*RF1617(-2) - 0.00062*RF1617(-3)$
 $+ 0.00050*RF1617(-4) + 0.00091*RF1617(-5)$
 $- 0.33769 * RF1617CU6 + 0.01223$
 $- 0.00981 * TR_F1617 + 0.50143$
 $+ 0.98698] / (1 + RF1617DI)$

$PF1819_P = [- 0.00118*RF1819 - 0.00145*RF1819(-1) - 0.00112*RF1819(-2) - 0.00050*RF1819(-3)$
 $+ 0.00010*RF1819(-4) + 0.00037*RF1819(-5)$
 $- 0.42102 * RF1819CU6 - 0.01160$
 $- 0.00829 * TR_F1819 + 0.55840$
 $+ 0.98042] / (1 + RF1819DI)$

$PF1617 = PF1617_p$
 $PF1819 = PF1819_p$

FEMALE 20 TO 44, NEVER MARRIED WITH AT LEAST ONE CHILD UNDER 6:

$PF2024NMC6U_P = [- 0.00006*RF2024 - 0.00026*RF2024(-1) - 0.00050*RF2024(-2) - 0.00070*RF2024(-3)$
 $- 0.00075*RF2024(-4) - 0.00055*RF2024(-5)$
 $+ 0.69322] / (1 + RF2024DI)$

$PF2529NMC6U_P = [0.00056*RF2529 + 0.00034*RF2529(-1) - 0.00030*RF2529(-2) - 0.00101*RF2529(-3)$
 $- 0.00143*RF2529(-4) - 0.00121*RF2529(-5)$
 $+ 0.72672] / (1 + RF2529DI)$

$PF3034NMC6U_P = [0.00078*RF3034 + 0.00075*RF3034(-1) + 0.00024*RF3034(-2) - 0.00042*RF3034(-3)$
 $- 0.00090*RF3034(-4) - 0.00087*RF3034(-5)$
 $+ 0.72034] / (1 + RF3034DI)$

$PF3539NMC6U_P = [0.00040*RF3539 + 0.00032*RF3539(-1) - 0.00004*RF3539(-2) - 0.00046*RF3539(-3)$
 $- 0.00074*RF3539(-4) - 0.00066*RF3539(-5)$
 $+ 0.72644] / (1 + RF3539DI)$

$PF4044NMC6U_P = [0.00113*RF4044 + 0.00097*RF4044(-1) + 0.00007*RF4044(-2) - 0.00102*RF4044(-3)$
 $- 0.00176*RF4044(-4) - 0.00160*RF4044(-5)$
 $+ 0.71893] / (1 + RF4044DI)$

FEMALE 20 TO 44, NEVER MARRIED WITH NO CHILDREN UNDER 6:

$PF2024NMNC6_P = [- 0.00006*RF2024 - 0.00026*RF2024(-1) - 0.00050*RF2024(-2) - 0.00070*RF2024(-3)$
 $- 0.00075*RF2024(-4) - 0.00055*RF2024(-5)$
 $- 0.00297 * TR_F2024$
 $+ 1.07188] / (1 + RF2024DI)$

$PF2529NMNC6_P = [0.00056*RF2529 + 0.00034*RF2529(-1) - 0.00030*RF2529(-2) - 0.00101*RF2529(-3)$
 $- 0.00143*RF2529(-4) - 0.00121*RF2529(-5)$
 $- 0.00077 * TR_F2529$
 $+ 0.94654] / (1 + RF2529DI)$

$PF3034NMNC6_P = [0.00078*RF3034 + 0.00075*RF3034(-1) + 0.00024*RF3034(-2) - 0.00042*RF3034(-3)$
 $- 0.00090*RF3034(-4) - 0.00087*RF3034(-5)$
 $+ 0.84866] / (1 + RF3034DI)$

$$\text{PF3539NMNC6_P} = [0.00040 \cdot \text{RF3539} + 0.00032 \cdot \text{RF3539}(-1) - 0.00004 \cdot \text{RF3539}(-2) - 0.00046 \cdot \text{RF3539}(-3) \\ - 0.00074 \cdot \text{RF3539}(-4) - 0.00066 \cdot \text{RF3539}(-5) \\ + 0.83195] / (1 + \text{RF3539DI})$$

$$\text{PF4044NMNC6_P} = [0.00113 \cdot \text{RF4044} + 0.00097 \cdot \text{RF4044}(-1) + 0.00007 \cdot \text{RF4044}(-2) - 0.00102 \cdot \text{RF4044}(-3) \\ - 0.00176 \cdot \text{RF4044}(-4) - 0.00160 \cdot \text{RF4044}(-5) \\ + 0.82513] / (1 + \text{RF4044DI})$$

FEMALE 20 TO 44, MARRIED, SPOUSE PRESENT, WITH AT LEAST ONE CHILD UNDER 6:

$$\text{PF2024MSC6U_P} = [- 0.00006 \cdot \text{RF2024} - 0.00026 \cdot \text{RF2024}(-1) - 0.00050 \cdot \text{RF2024}(-2) - 0.00070 \cdot \text{RF2024}(-3) \\ - 0.00075 \cdot \text{RF2024}(-4) - 0.00055 \cdot \text{RF2024}(-5) \\ + 0.53561] / (1 + \text{RF2024DI})$$

$$\text{PF2529MSC6U_P} = [0.00056 \cdot \text{RF2529} + 0.00034 \cdot \text{RF2529}(-1) - 0.00030 \cdot \text{RF2529}(-2) - 0.00101 \cdot \text{RF2529}(-3) \\ - 0.00143 \cdot \text{RF2529}(-4) - 0.00121 \cdot \text{RF2529}(-5) \\ + 0.61916] / (1 + \text{RF2529DI})$$

$$\text{PF3034MSC6U_P} = [0.00078 \cdot \text{RF3034} + 0.00075 \cdot \text{RF3034}(-1) + 0.00024 \cdot \text{RF3034}(-2) - 0.00042 \cdot \text{RF3034}(-3) \\ - 0.00090 \cdot \text{RF3034}(-4) - 0.00087 \cdot \text{RF3034}(-5) \\ + 0.65485] / (1 + \text{RF3034DI})$$

$$\text{PF3539MSC6U_P} = [0.00040 \cdot \text{RF3539} + 0.00032 \cdot \text{RF3539}(-1) - 0.00004 \cdot \text{RF3539}(-2) - 0.00046 \cdot \text{RF3539}(-3) \\ - 0.00074 \cdot \text{RF3539}(-4) - 0.00066 \cdot \text{RF3539}(-5) \\ + 0.66673] / (1 + \text{RF3539DI})$$

$$\text{PF4044MSC6U_P} = [0.00113 \cdot \text{RF4044} + 0.00097 \cdot \text{RF4044}(-1) + 0.00007 \cdot \text{RF4044}(-2) - 0.00102 \cdot \text{RF4044}(-3) \\ - 0.00176 \cdot \text{RF4044}(-4) - 0.00160 \cdot \text{RF4044}(-5) \\ + 0.67612] / (1 + \text{RF4044DI})$$

FEMALE 20 TO 44, MARRIED, SPOUSE PRESENT WITH NO CHILDREN UNDER 6:

$$\text{PF2024MSNC6_P} = [- 0.00006 \cdot \text{RF2024} - 0.00026 \cdot \text{RF2024}(-1) - 0.00050 \cdot \text{RF2024}(-2) - 0.00070 \cdot \text{RF2024}(-3) \\ - 0.00075 \cdot \text{RF2024}(-4) - 0.00055 \cdot \text{RF2024}(-5) \\ - 0.00175 \cdot \text{TR_F2024} \\ + 0.98277] / (1 + \text{RF2024DI})$$

$$\text{PF2529MSNC6_P} = [0.00056 \cdot \text{RF2529} + 0.00034 \cdot \text{RF2529}(-1) - 0.00030 \cdot \text{RF2529}(-2) - 0.00101 \cdot \text{RF2529}(-3) \\ - 0.00143 \cdot \text{RF2529}(-4) - 0.00121 \cdot \text{RF2529}(-5) \\ - 0.00050 \cdot \text{TR_F2529} \\ + 0.88519] / (1 + \text{RF2529DI})$$

$$\text{PF3034MSNC6_P} = [0.00078 \cdot \text{RF3034} + 0.00075 \cdot \text{RF3034}(-1) + 0.00024 \cdot \text{RF3034}(-2) - 0.00042 \cdot \text{RF3034}(-3) \\ - 0.00090 \cdot \text{RF3034}(-4) - 0.00087 \cdot \text{RF3034}(-5) \\ + 0.80007] / (1 + \text{RF3034DI})$$

$$\text{PF3539MSNC6_P} = [0.00040 \cdot \text{RF3539} + 0.00032 \cdot \text{RF3539}(-1) - 0.00004 \cdot \text{RF3539}(-2) - 0.00046 \cdot \text{RF3539}(-3) \\ - 0.00074 \cdot \text{RF3539}(-4) - 0.00066 \cdot \text{RF3539}(-5) \\ + 0.79025] / (1 + \text{RF3539DI})$$

$$\text{PF4044MSNC6_P} = [0.00113 \cdot \text{RF4044} + 0.00097 \cdot \text{RF4044}(-1) + 0.00007 \cdot \text{RF4044}(-2) - 0.00102 \cdot \text{RF4044}(-3) \\ - 0.00176 \cdot \text{RF4044}(-4) - 0.00160 \cdot \text{RF4044}(-5) \\ + 0.81064] / (1 + \text{RF4044DI})$$

FEMALE 20 TO 44, MARRIED, SPOUSE ABSENT, WITH AT LEAST ONE CHILD UNDER 6:

$$\text{PF2024MAC6U_P} = [- 0.00006 \cdot \text{RF2024} - 0.00026 \cdot \text{RF2024}(-1) - 0.00050 \cdot \text{RF2024}(-2) - 0.00070 \cdot \text{RF2024}(-3) \\ - 0.00075 \cdot \text{RF2024}(-4) - 0.00055 \cdot \text{RF2024}(-5)$$

$$+ 0.73283] / (1 + RF2024DI)$$

$$PF2529MAC6U_P = [0.00056*RF2529 + 0.00034*RF2529(-1) - 0.00030*RF2529(-2) - 0.00101*RF2529(-3) \\ - 0.00143*RF2529(-4) - 0.00121*RF2529(-5) \\ + 0.76433] / (1 + RF2529DI)$$

$$PF3034MAC6U_P = [0.00078*RF3034 + 0.00075*RF3034(-1) + 0.00024*RF3034(-2) - 0.00042*RF3034(-3) \\ - 0.00090*RF3034(-4) - 0.00087*RF3034(-5) \\ + 0.77183] / (1 + RF3034DI)$$

$$PF3539MAC6U_P = [0.00040*RF3539 + 0.00032*RF3539(-1) - 0.00004*RF3539(-2) - 0.00046*RF3539(-3) \\ - 0.00074*RF3539(-4) - 0.00066*RF3539(-5) \\ + 0.77156] / (1 + RF3539DI)$$

$$PF4044MAC6U_P = [0.00113*RF4044 + 0.00097*RF4044(-1) + 0.00007*RF4044(-2) - 0.00102*RF4044(-3) \\ - 0.00176*RF4044(-4) - 0.00160*RF4044(-5) \\ + 0.76058] / (1 + RF4044DI)$$

FEMALE 20 TO 44, MARRIED, SPOUSE ABSENT WITH NO CHILDREN UNDER 6:

$$PF2024MANC6_P = [- 0.00006*RF2024 - 0.00026*RF2024(-1) - 0.00050*RF2024(-2) - 0.00070*RF2024(-3) \\ - 0.00075*RF2024(-4) - 0.00055*RF2024(-5) \\ - 0.00223 * TR_F2024 \\ + 0.97444] / (1 + RF2024DI)$$

$$PF2529MANC6_P = [0.00056*RF2529 + 0.00034*RF2529(-1) - 0.00030*RF2529(-2) - 0.00101*RF2529(-3) \\ - 0.00143*RF2529(-4) - 0.00121*RF2529(-5) \\ + 0.00025 * TR_F2529 \\ + 0.79370] / (1 + RF2529DI)$$

$$PF3034MANC6_P = [0.00078*RF3034 + 0.00075*RF3034(-1) + 0.00024*RF3034(-2) - 0.00042*RF3034(-3) \\ - 0.00090*RF3034(-4) - 0.00087*RF3034(-5) \\ + 0.83788] / (1 + RF3034DI)$$

$$PF3539MANC6_P = [0.00040*RF3539 + 0.00032*RF3539(-1) - 0.00004*RF3539(-2) - 0.00046*RF3539(-3) \\ - 0.00074*RF3539(-4) - 0.00066*RF3539(-5) \\ + 0.84820] / (1 + RF3539DI)$$

$$PF4044MANC6_P = [0.00113*RF4044 + 0.00097*RF4044(-1) + 0.00007*RF4044(-2) - 0.00102*RF4044(-3) \\ - 0.00176*RF4044(-4) - 0.00160*RF4044(-5) \\ + 0.85568] / (1 + RF4044DI)$$

$$PF2024NM_P = (PF2024NMC6U_P * NF2024NMC6U + PF2024NMNC6_P * NF2024NMNC6) / NF2024NM$$

$$PF2024MS_P = (PF2024MSC6U_P * NF2024MSC6U + PF2024MSNC6_P * NF2024MSNC6) / NF2024MS$$

$$PF2024MA_P = (PF2024MAC6U_P * NF2024MAC6U + PF2024MANC6_P * NF2024MANC6) / NF2024MA$$

$$PF2529NM_P = (PF2529NMC6U_P * NF2529NMC6U + PF2529NMNC6_P * NF2529NMNC6) / NF2529NM$$

$$PF2529MS_P = (PF2529MSC6U_P * NF2529MSC6U + PF2529MSNC6_P * NF2529MSNC6) / NF2529MS$$

$$PF2529MA_P = (PF2529MAC6U_P * NF2529MAC6U + PF2529MANC6_P * NF2529MANC6) / NF2529MA$$

$$PF3034NM_P = (PF3034NMC6U_P * NF3034NMC6U + PF3034NMNC6_P * NF3034NMNC6) / NF3034NM$$

$$PF3034MS_P = (PF3034MSC6U_P * NF3034MSC6U + PF3034MSNC6_P * NF3034MSNC6) / NF3034MS$$

$$PF3034MA_P = (PF3034MAC6U_P * NF3034MAC6U + PF3034MANC6_P * NF3034MANC6) / NF3034MA$$

$$PF3539NM_P = (PF3539NMC6U_P * NF3539NMC6U + PF3539NMNC6_P * NF3539NMNC6) / NF3539NM$$

$$PF3539MS_P = (PF3539MSC6U_P * NF3539MSC6U + PF3539MSNC6_P * NF3539MSNC6) / NF3539MS$$

$$\begin{aligned} PF3539MA_P &= (PF3539MAC6U_P * NF3539MAC6U + PF3539MANC6_P * NF3539MANC6) / NF3539MA \\ PF4044NM_P &= (PF4044NMC6U_P * NF4044NMC6U + PF4044NMNC6_P * NF4044NMNC6) / NF4044NM \\ PF4044MS_P &= (PF4044MSC6U_P * NF4044MSC6U + PF4044MSNC6_P * NF4044MSNC6) / NF4044MS \\ PF4044MA_P &= (PF4044MAC6U_P * NF4044MAC6U + PF4044MANC6_P * NF4044MANC6) / NF4044MA \end{aligned}$$

FEMALE AGE 45 TO 54

FEMALE 45 TO 54, NEVER MARRIED:

$$PF4549NM_P = [0.00155*RF4549 + 0.00133*RF4549(-1) + 0.00007*RF4549(-2) - 0.00145*RF4549(-3) - 0.00247*RF4549(-4) - 0.00224*RF4549(-5) + 0.80950] / (1 + RF4549DI)$$

$$PF5054NM_P = [0.00093*RF5054 + 0.00074*RF5054(-1) - 0.00008*RF5054(-2) - 0.00104*RF5054(-3) - 0.00168*RF5054(-4) - 0.00149*RF5054(-5) + 0.78085] / (1 + RF5054DI)$$

FEMALE 45 TO 54, MARRIED, SPOUSE PRESENT:

$$PF4549MS_P = [0.00155*RF4549 + 0.00133*RF4549(-1) + 0.00007*RF4549(-2) - 0.00145*RF4549(-3) - 0.00247*RF4549(-4) - 0.00224*RF4549(-5) + 0.81276] / (1 + RF4549DI)$$

$$PF5054MS_P = [0.00093*RF5054 + 0.00074*RF5054(-1) - 0.00008*RF5054(-2) - 0.00104*RF5054(-3) - 0.00168*RF5054(-4) - 0.00149*RF5054(-5) + 0.48809 + 0.16476*EDSCOREF5054] / (1 + RF5054DI)$$

FEMALE 45 TO 54, MARRIED, SPOUSE ABSENT:

$$PF4549MA_P = [0.00155*RF4549 + 0.00133*RF4549(-1) + 0.00007*RF4549(-2) - 0.00145*RF4549(-3) - 0.00247*RF4549(-4) - 0.00224*RF4549(-5) + 0.84789] / (1 + RF4549DI)$$

$$PF5054MA_P = [0.00093*RF5054 + 0.00074*RF5054(-1) - 0.00008*RF5054(-2) - 0.00104*RF5054(-3) - 0.00168*RF5054(-4) - 0.00149*RF5054(-5) + 0.81452] / (1 + RF5054DI)$$

FEMALE AGE 20 TO 54

$$\begin{aligned} PF2024_P &= (PF2024NM_P * NF2024NM + PF2024MS_P * NF2024MS + PF2024MA_P * NF2024MA) / NF2024 \\ PF2529_P &= (PF2529NM_P * NF2529NM + PF2529MS_P * NF2529MS + PF2529MA_P * NF2529MA) / NF2529 \\ PF3034_P &= (PF3034NM_P * NF3034NM + PF3034MS_P * NF3034MS + PF3034MA_P * NF3034MA) / NF3034 \\ PF3539_P &= (PF3539NM_P * NF3539NM + PF3539MS_P * NF3539MS + PF3539MA_P * NF3539MA) / NF3539 \\ PF4044_P &= (PF4044NM_P * NF4044NM + PF4044MS_P * NF4044MS + PF4044MA_P * NF4044MA) / NF4044 \\ PF4549_P &= (PF4549NM_P * NF4549NM + PF4549MS_P * NF4549MS + PF4549MA_P * NF4549MA) / NF4549 \\ PF5054_P &= (PF5054NM_P * NF5054NM + PF5054MS_P * NF5054MS + PF5054MA_P * NF5054MA) / NF5054 \end{aligned}$$

$$\begin{aligned} PF2024 &= PF2024_P \\ PF2529 &= PF2529_P \\ PF3034 &= PF3034_P \\ PF3539 &= PF3539_P \\ PF4044 &= PF4044_P \\ PF4549 &= PF4549_P \\ PF5054 &= PF5054_P \end{aligned}$$

$$\begin{aligned} PF2024NM &= PF2024NM_P * PF2024 / PF2024_P \\ PF2529NM &= PF2529NM_P * PF2529 / PF2529_P \\ PF3034NM &= PF3034NM_P * PF3034 / PF3034_P \\ PF3539NM &= PF3539NM_P * PF3539 / PF3539_P \end{aligned}$$

PF4044NM = PF4044NM_P * PF4044 / PF4044_P
 PF4549NM = PF4549NM_P * PF4549 / PF4549_P
 PF5054NM = PF5054NM_P * PF5054 / PF5054_P

PF2024MS = PF2024MS_P * PF2024 / PF2024_P
 PF2529MS = PF2529MS_P * PF2529 / PF2529_P
 PF3034MS = PF3034MS_P * PF3034 / PF3034_P
 PF3539MS = PF3539MS_P * PF3539 / PF3539_P
 PF4044MS = PF4044MS_P * PF4044 / PF4044_P
 PF4549MS = PF4549MS_P * PF4549 / PF4549_P
 PF5054MS = PF5054MS_P * PF5054 / PF5054_P

PF2024MA = PF2024MA_P * PF2024 / PF2024_P
 PF2529MA = PF2529MA_P * PF2529 / PF2529_P
 PF3034MA = PF3034MA_P * PF3034 / PF3034_P
 PF3539MA = PF3539MA_P * PF3539 / PF3539_P
 PF4044MA = PF4044MA_P * PF4044 / PF4044_P
 PF4549MA = PF4549MA_P * PF4549 / PF4549_P
 PF5054MA = PF5054MA_P * PF5054 / PF5054_P

PF2024NMC6U = PF2024NMC6U_P * PF2024 / PF2024_P
 PF2529NMC6U = PF2529NMC6U_P * PF2529 / PF2529_P
 PF3034NMC6U = PF3034NMC6U_P * PF3034 / PF3034_P
 PF3539NMC6U = PF3539NMC6U_P * PF3539 / PF3539_P
 PF4044NMC6U = PF4044NMC6U_P * PF4044 / PF4044_P

PF2024NMNC6 = PF2024NMNC6_P * PF2024 / PF2024_P
 PF2529NMNC6 = PF2529NMNC6_P * PF2529 / PF2529_P
 PF3034NMNC6 = PF3034NMNC6_P * PF3034 / PF3034_P
 PF3539NMNC6 = PF3539NMNC6_P * PF3539 / PF3539_P
 PF4044NMNC6 = PF4044NMNC6_P * PF4044 / PF4044_P

PF2024MSC6U = PF2024MSC6U_P * PF2024 / PF2024_P
 PF2529MSC6U = PF2529MSC6U_P * PF2529 / PF2529_P
 PF3034MSC6U = PF3034MSC6U_P * PF3034 / PF3034_P
 PF3539MSC6U = PF3539MSC6U_P * PF3539 / PF3539_P
 PF4044MSC6U = PF4044MSC6U_P * PF4044 / PF4044_P

PF2024MSNC6 = PF2024MSNC6_P * PF2024 / PF2024_P
 PF2529MSNC6 = PF2529MSNC6_P * PF2529 / PF2529_P
 PF3034MSNC6 = PF3034MSNC6_P * PF3034 / PF3034_P
 PF3539MSNC6 = PF3539MSNC6_P * PF3539 / PF3539_P
 PF4044MSNC6 = PF4044MSNC6_P * PF4044 / PF4044_P

PF2024MAC6U = PF2024MAC6U_P * PF2024 / PF2024_P
 PF2529MAC6U = PF2529MAC6U_P * PF2529 / PF2529_P
 PF3034MAC6U = PF3034MAC6U_P * PF3034 / PF3034_P
 PF3539MAC6U = PF3539MAC6U_P * PF3539 / PF3539_P
 PF4044MAC6U = PF4044MAC6U_P * PF4044 / PF4044_P

PF2024MANC6 = PF2024MANC6_P * PF2024 / PF2024_P
 PF2529MANC6 = PF2529MANC6_P * PF2529 / PF2529_P
 PF3034MANC6 = PF3034MANC6_P * PF3034 / PF3034_P
 PF3539MANC6 = PF3539MANC6_P * PF3539 / PF3539_P
 PF4044MANC6 = PF4044MANC6_P * PF4044 / PF4044_P

FEMALE 55 TO 74

PF55_P = [0.18398*EDSCOREF55 + 0.24605*MSSHARE_F55 + 0.26185] / (1 + RF55DI)

PF56_P = [0.20704*EDSCOREF56 - 0.12398*MSSHARE_F56 + 0.4493] / (1 + RF56DI)

PF57_P = [0.18422*EDSCOREF57 - 0.08766*MSSHARE_F57 + 0.45094] / (1 + RF57DI)

$$PF58_P = [0.19406*EDSCOREF58 - 0.06963*MSSHARE_F58 + 0.40382] / (1 + RF58DI)$$

$$PF59_P = [0.21112*EDSCOREF59 + 0.10742*MSSHARE_F59 + 0.24105] / (1 + RF59DI)$$

$$PF60_P = [0.20633*EDSCOREF60 - 0.41539*MSSHARE_F60 + 0.54178] / (1 + RF60DI)$$

$$PF61_P = [0.19349*EDSCOREF61 - 0.66676*MSSHARE_F61 + 0.68556] / (1 + RF61DI)$$

$$PF62_P = [- 0.5100*RRADJ_F62 - 0.02*POT_ET_TXRT_62 + 0.21249*EDSCOREF62 + 0.01966*MSSHARE_F62 + 0.32876] / (1 + RF62DI)$$

$$PF63_P = [- 0.4675*RRADJ_F63 - 0.02*POT_ET_TXRT_63 + 0.21116*EDSCOREF63 + 0.02896*MSSHARE_F63 + 0.26792] / (1 + RF63DI)$$

$$PF64_P = [- 0.4250*RRADJ_F64 - 0.02*POT_ET_TXRT_64 + 0.20467*EDSCOREF64 - 0.32725*MSSHARE_F64 + 0.44786] / (1 + RF64DI)$$

$$PF65_P = [- 0.3825*RRADJ_F65 - 0.02*POT_ET_TXRT_65 + 0.20002*EDSCOREF65 - 0.05830*MSSHARE_F65 + 0.22187] / (1 + RF65DI)$$

$$PF66_P = [- 0.3400*RRADJ_F66 - 0.02*POT_ET_TXRT_66 + 0.17479*EDSCOREF66 + 0.22954*MSSHARE_F66 + 0.04361] / (1 + RF66DI)$$

$$PF67_P = [- 0.2975*RRADJ_F67 - 0.02*POT_ET_TXRT_67 + 0.17673*EDSCOREF67 - 0.43942*MSSHARE_F67 + 0.38490] / (1 + RF67DI)$$

$$PF68_P = [- 0.2550*RRADJ_F68 - 0.02*POT_ET_TXRT_68 + 0.15513*EDSCOREF68 + 0.35232*MSSHARE_F68 - 0.07497] / (1 + RF68DI)$$

$$PF69_P = [- 0.2550*RRADJ_F69 - 0.02*POT_ET_TXRT_69 + 0.11603*EDSCOREF69 + 0.87528*MSSHARE_F69 - 0.32696] / (1 + RF69DI)$$

$$PF70_P = [0.09629*EDSCOREF70 + 0.54302*MSSHARE_F70 - 0.25141] / (1 + RF70DI)$$

$$PF71_P = [0.11053*EDSCOREF71 + 0.16137*MSSHARE_F71 - 0.08070] / (1 + RF71DI)$$

$$PF72_P = [0.09151*EDSCOREF72 + 0.25854*MSSHARE_F72 - 0.11711] / (1 + RF72DI)$$

$$PF73_P = [0.08611*EDSCOREF73 + 0.28099*MSSHARE_F73 - 0.12804] / (1 + RF73DI)$$

$$PF74_P = [0.11821*EDSCOREF74 - 0.01277*MSSHARE_F74 - 0.04121] / (1 + RF74DI)$$

FEMALE, AGES 75 TO 79

$$PF75_P = PF74(-4) * 0.9$$

$$PF76_P = PF75(-4) * 0.9$$

$$PF77_P = PF76(-4) * 0.9$$

$$PF78_P = PF77(-4) * 0.9$$

$$PF79_P = PF78(-4) * 0.9$$

FEMALE AGE 55 TO 79

$$PF55 = PF55_P$$

$$PF56 = PF56_P$$

$$PF57 = PF57_P$$

$$PF58 = PF58_P$$

PF59 = PF59_P
 PF60 = PF60_P
 PF61 = PF61_P
 PF62 = PF62_P
 PF63 = PF63_P
 PF64 = PF64_P
 PF65 = PF65_P
 PF66 = PF66_P
 PF67 = PF67_P
 PF68 = PF68_P
 PF69 = PF69_P
 PF70 = PF70_P
 PF71 = PF71_P
 PF72 = PF72_P
 PF73 = PF73_P
 PF74 = PF74_P
 PF75 = PF75_P
 PF76 = PF76_P
 PF77 = PF77_P
 PF78 = PF78_P
 PF79 = PF79_P

FEMALE, AGES 80 AND OVER

PF80_P = PF79(-4) * 0.965 ^ 1
 PF81_P = PF79(-8) * 0.965 ^ 2
 PF82_P = PF79(-12) * 0.965 ^ 3
 PF83_P = PF79(-16) * 0.965 ^ 4
 PF84_P = PF79(-20) * 0.965 ^ 5
 PF85_P = MOVAVG(8,PF79(-24)) * 0.965 ^ 6
 PF86_P = MOVAVG(8,PF79(-28)) * 0.965 ^ 7
 PF87_P = MOVAVG(8,PF79(-32)) * 0.965 ^ 8
 PF88_P = MOVAVG(8,PF79(-36)) * 0.965 ^ 9
 PF89_P = MOVAVG(8,PF79(-40)) * 0.965 ^ 10
 PF90_P = MOVAVG(8,PF79(-44)) * 0.965 ^ 11
 PF91_P = MOVAVG(8,PF79(-48)) * 0.965 ^ 12
 PF92_P = MOVAVG(8,PF79(-52)) * 0.965 ^ 13
 PF93_P = MOVAVG(8,PF79(-56)) * 0.965 ^ 14
 PF94_P = MOVAVG(8,PF79(-60)) * 0.965 ^ 15
 PF95_P = PF94_P * 0.965
 PF96_P = PF95_P * 0.965

$$PF97_P = PF96_P * 0.965$$

$$PF98_P = PF97_P * 0.965$$

$$PF99_P = PF98_P * 0.965$$

$$PF100_P = PF99_P * 0.965$$

$$PF80O_P = (PF80_P * NF80 + PF81_P * NF81 + PF82_P * NF82 + PF83_P * NF83 + PF84_P * NF84 + PF85_P * NF85 + PF86_P * NF86 + PF87_P * NF87 + PF88_P * NF88 + PF89_P * NF89 + PF90_P * NF90 + PF91_P * NF91 + PF92_P * NF92 + PF93_P * NF93 + PF94_P * NF94 + PF95_P * NF95 + PF96_P * NF96 + PF97_P * NF97 + PF98_P * NF98 + PF99_P * NF99 + PF100_P * NF100) / NF80O$$

$$PF80O = PF80O_P$$

$$PF80 = PF80_P * PF80O / PF80O_P$$

$$PF81 = PF81_P * PF80O / PF80O_P$$

$$PF82 = PF82_P * PF80O / PF80O_P$$

$$PF83 = PF83_P * PF80O / PF80O_P$$

$$PF84 = PF84_P * PF80O / PF80O_P$$

$$PF85 = PF85_P * PF80O / PF80O_P$$

$$PF86 = PF86_P * PF80O / PF80O_P$$

$$PF87 = PF87_P * PF80O / PF80O_P$$

$$PF88 = PF88_P * PF80O / PF80O_P$$

$$PF89 = PF89_P * PF80O / PF80O_P$$

$$PF90 = PF90_P * PF80O / PF80O_P$$

$$PF91 = PF91_P * PF80O / PF80O_P$$

$$PF92 = PF92_P * PF80O / PF80O_P$$

$$PF93 = PF93_P * PF80O / PF80O_P$$

$$PF94 = PF94_P * PF80O / PF80O_P$$

$$PF95 = PF95_P * PF80O / PF80O_P$$

$$PF96 = PF96_P * PF80O / PF80O_P$$

$$PF97 = PF97_P * PF80O / PF80O_P$$

$$PF98 = PF98_P * PF80O / PF80O_P$$

$$PF99 = PF99_P * PF80O / PF80O_P$$

$$PF100 = PF100_P * PF80O / PF80O_P$$

LFPR EQUATIONS, AGE 16 AND OVER

$$PM16O_P = (PM1617_P * NM1617 + PM1819_P * NM1819 + PM2024_P * NM2024 + PM2529_P * NM2529 + PM3034_P * NM3034 + PM3539_P * NM3539 + PM4044_P * NM4044 + PM4549_P * NM4549 + PM5054_P * NM5054 +$$

PM55_P * NM55 +
 PM56_P * NM56 +
 PM57_P * NM57 +
 PM58_P * NM58 +
 PM59_P * NM59 +
 PM60_P * NM60 +
 PM61_P * NM61 +
 PM62_P * NM62 +
 PM63_P * NM63 +
 PM64_P * NM64 +
 PM65_P * NM65 +
 PM66_P * NM66 +
 PM67_P * NM67 +
 PM68_P * NM68 +
 PM69_P * NM69 +
 PM70_P * NM70 +
 PM71_P * NM71 +
 PM72_P * NM72 +
 PM73_P * NM73 +
 PM74_P * NM74 +
 PM75_P * NM75 +
 PM76_P * NM76 +
 PM77_P * NM77 +
 PM78_P * NM78 +
 PM79_P * NM79 +
 PM80O_P * NM80O) / NM16O

PF16O_P = (PF1617_P * NF1617 +
 PF1819_P * NF1819 +
 PF2024_P * NF2024 +
 PF2529_P * NF2529 +
 PF3034_P * NF3034 +
 PF3539_P * NF3539 +
 PF4044_P * NF4044 +
 PF4549_P * NF4549 +
 PF5054_P * NF5054 +
 PF55_P * NF55 +
 PF56_P * NF56 +
 PF57_P * NF57 +
 PF58_P * NF58 +
 PF59_P * NF59 +
 PF60_P * NF60 +
 PF61_P * NF61 +
 PF62_P * NF62 +
 PF63_P * NF63 +
 PF64_P * NF64 +
 PF65_P * NF65 +
 PF66_P * NF66 +
 PF67_P * NF67 +
 PF68_P * NF68 +
 PF69_P * NF69 +
 PF70_P * NF70 +
 PF71_P * NF71 +
 PF72_P * NF72 +
 PF73_P * NF73 +
 PF74_P * NF74 +
 PF75_P * NF75 +
 PF76_P * NF76 +
 PF77_P * NF77 +
 PF78_P * NF78 +
 PF79_P * NF79 +
 PF80O_P * NF80O) / NF16O

$$P16O_P = (PM16O_P * NM16O + PF16O_P * NF16O) / (NM16O + NF16O)$$

LABOR FORCE, AGE 16 AND OVER

$$LCM_P = PM16O_P * NM16O$$

$$LCF_P = PF16O_P * NF16O$$

$$LC_P = LCM_P + LCF_P$$

LABOR FORCE PARTICIPATION RATES, FULL EMPLOYMENT

MALE

$$\begin{aligned} DPM1617_FE = & (-0.00134*RM1617_FE - 0.00167*RM1617_FE(-1) - 0.00132*RM1617_FE(-2) \\ & - 0.00065*RM1617_FE(-3) + 0.00003*RM1617_FE(-4) + 0.00035*RM1617_FE(-5)) - \\ & (-0.00134*RM1617 - 0.00167*RM1617(-1) - 0.00132*RM1617(-2) - 0.00065*RM1617(-3) \\ & + 0.00003*RM1617(-4) + 0.00035*RM1617(-5)) \end{aligned}$$

$$\begin{aligned} DPM1819_FE = & (-0.00068*RM1819_FE - 0.00092*RM1819_FE(-1) - 0.00083*RM1819_FE(-2) \\ & - 0.00056*RM1819_FE(-3) - 0.00025*RM1819_FE(-4) - 0.00002*RM1819_FE(-5)) - \\ & (-0.00068*RM1819 - 0.00092*RM1819(-1) - 0.00083*RM1819(-2) - 0.00056*RM1819(-3) \\ & - 0.00025*RM1819(-4) - 0.00002*RM1819(-5)) \end{aligned}$$

$$\begin{aligned} DPM2024_FE = & (-0.00053*RM2024_FE - 0.00074*RM2024_FE(-1) - 0.00071*RM2024_FE(-2) \\ & - 0.00054*RM2024_FE(-3) - 0.00030*RM2024_FE(-4) - 0.00010*RM2024_FE(-5)) - \\ & (-0.00053*RM2024 - 0.00074*RM2024(-1) - 0.00071*RM2024(-2) - 0.00054*RM2024(-3) \\ & - 0.00030*RM2024(-4) - 0.00010*RM2024(-5)) \end{aligned}$$

$$\begin{aligned} DPM2529_FE = & (-0.00031*RM2529_FE - 0.00053*RM2529_FE(-1) - 0.00066*RM2529_FE(-2) \\ & - 0.00068*RM2529_FE(-3) - 0.00058*RM2529_FE(-4) - 0.00036*RM2529_FE(-5)) - \\ & (-0.00031*RM2529 - 0.00053*RM2529(-1) - 0.00066*RM2529(-2) - 0.00068*RM2529(-3) \\ & - 0.00058*RM2529(-4) - 0.00036*RM2529(-5)) \end{aligned}$$

$$\begin{aligned} DPM3034_FE = & (-0.00001*RM3034_FE - 0.00018*RM3034_FE(-1) - 0.00040*RM3034_FE(-2) \\ & - 0.00058*RM3034_FE(-3) - 0.00064*RM3034_FE(-4) - 0.00047*RM3034_FE(-5)) - \\ & (-0.00001*RM3034 - 0.00018*RM3034(-1) - 0.00040*RM3034(-2) - 0.00058*RM3034(-3) \\ & - 0.00064*RM3034(-4) - 0.00047*RM3034(-5)) \end{aligned}$$

$$\begin{aligned} DPM3539_FE = & (0.00048*RM3539_FE + 0.00037*RM3539_FE(-1) - 0.00007*RM3539_FE(-2) \\ & - 0.00058*RM3539_FE(-3) - 0.00091*RM3539_FE(-4) - 0.00080*RM3539_FE(-5)) - \\ & (0.00048*RM3539 + 0.00037*RM3539(-1) - 0.00007*RM3539(-2) - 0.00058*RM3539(-3) \\ & - 0.00091*RM3539(-4) - 0.00080*RM3539(-5)) \end{aligned}$$

$$\begin{aligned} DPM4044_FE = & (-0.00018*RM4044_FE - 0.00026*RM4044_FE(-1) - 0.00027*RM4044_FE(-2) \\ & - 0.00022*RM4044_FE(-3) - 0.00014*RM4044_FE(-4) - 0.00006*RM4044_FE(-5)) - \\ & (-0.00018*RM4044 - 0.00026*RM4044(-1) - 0.00027*RM4044(-2) - 0.00022*RM4044(-3) \\ & - 0.00014*RM4044(-4) - 0.00006*RM4044(-5)) \end{aligned}$$

$$\begin{aligned} DPM4549_FE = & (0.00004*RM4549_FE - 0.00011*RM4549_FE(-1) - 0.00036*RM4549_FE(-2) \\ & - 0.00059*RM4549_FE(-3) - 0.00068*RM4549_FE(-4) - 0.00052*RM4549_FE(-5)) - \\ & (0.00004*RM4549 - 0.00011*RM4549(-1) - 0.00036*RM4549(-2) - 0.00059*RM4549(-3) \\ & - 0.00068*RM4549(-4) - 0.00052*RM4549(-5)) \end{aligned}$$

$$\begin{aligned} DPM5054_FE = & (0.00115*RM5054_FE + 0.00089*RM5054_FE(-1) - 0.00017*RM5054_FE(-2) \\ & - 0.00141*RM5054_FE(-3) - 0.00220*RM5054_FE(-4) - 0.00194*RM5054_FE(-5)) - \\ & (0.00115*RM5054 + 0.00089*RM5054(-1) - 0.00017*RM5054(-2) - 0.00141*RM5054(-3) \\ & - 0.00220*RM5054(-4) - 0.00194*RM5054(-5)) \end{aligned}$$

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$$\begin{aligned} DPF1617_FE = & (-0.00214*RF1617_FE - 0.00256*RF1617_FE(-1) - 0.00184*RF1617_FE(-2) \\ & - 0.00062*RF1617_FE(-3) + 0.00050*RF1617_FE(-4) + 0.00091*RF1617_FE(-5)) - \end{aligned}$$

$$\begin{aligned}
& (-0.00214*RF1617 - 0.00256*RF1617(-1) - 0.00184*RF1617(-2) - 0.00062*RF1617(-3) \\
& + 0.00050*RF1617(-4) + 0.00091*RF1617(-5)) \\
DPF1819_FE = & (-0.00118*RF1819_FE - 0.00145*RF1819_FE(-1) - 0.00112*RF1819_FE(-2) \\
& - 0.00050*RF1819_FE(-3) + 0.00010*RF1819_FE(-4) + 0.00037*RF1819_FE(-5)) - \\
& (-0.00118*RF1819 - 0.00145*RF1819(-1) - 0.00112*RF1819(-2) - 0.00050*RF1819(-3) \\
& + 0.00010*RF1819(-4) + 0.00037*RF1819(-5)) \\
DPF2024_FE = & (-0.00006*RF2024_FE - 0.00026*RF2024_FE(-1) - 0.00050*RF2024_FE(-2) \\
& - 0.00070*RF2024_FE(-3) - 0.00075*RF2024_FE(-4) - 0.00055*RF2024_FE(-5)) - \\
& (-0.00006*RF2024 - 0.00026*RF2024(-1) - 0.00050*RF2024(-2) - 0.00070*RF2024(-3) \\
& - 0.00075*RF2024(-4) - 0.00055*RF2024(-5)) \\
DPF2529_FE = & (0.00056*RF2529_FE + 0.00034*RF2529_FE(-1) - 0.00030*RF2529_FE(-2) \\
& - 0.00101*RF2529_FE(-3) - 0.00143*RF2529_FE(-4) - 0.00121*RF2529_FE(-5)) - \\
& (0.00056*RF2529 + 0.00034*RF2529(-1) - 0.00030*RF2529(-2) - 0.00101*RF2529(-3) \\
& - 0.00143*RF2529(-4) - 0.00121*RF2529(-5)) \\
DPF3034_FE = & (0.00078*RF3034_FE + 0.00075*RF3034_FE(-1) + 0.00024*RF3034_FE(-2) \\
& - 0.00042*RF3034_FE(-3) - 0.00090*RF3034_FE(-4) - 0.00087*RF3034_FE(-5)) - \\
& (0.00078*RF3034 + 0.00075*RF3034(-1) + 0.00024*RF3034(-2) - 0.00042*RF3034(-3) \\
& - 0.00090*RF3034(-4) - 0.00087*RF3034(-5)) \\
DPF3539_FE = & (0.00040*RF3539_FE + 0.00032*RF3539_FE(-1) - 0.00004*RF3539_FE(-2) \\
& - 0.00046*RF3539_FE(-3) - 0.00074*RF3539_FE(-4) - 0.00066*RF3539_FE(-5)) - \\
& (0.00040*RF3539 + 0.00032*RF3539(-1) - 0.00004*RF3539(-2) - 0.00046*RF3539(-3) \\
& - 0.00074*RF3539(-4) - 0.00066*RF3539(-5)) \\
DPF4044_FE = & (0.00113*RF4044_FE + 0.00097*RF4044_FE(-1) + 0.00007*RF4044_FE(-2) \\
& - 0.00102*RF4044_FE(-3) - 0.00176*RF4044_FE(-4) - 0.00160*RF4044_FE(-5)) - \\
& (0.00113*RF4044 + 0.00097*RF4044(-1) + 0.00007*RF4044(-2) - 0.00102*RF4044(-3) \\
& - 0.00176*RF4044(-4) - 0.00160*RF4044(-5)) \\
DPF4549_FE = & (0.00155*RF4549_FE + 0.00133*RF4549_FE(-1) + 0.00007*RF4549_FE(-2) \\
& - 0.00145*RF4549_FE(-3) - 0.00247*RF4549_FE(-4) - 0.00224*RF4549_FE(-5)) - \\
& (0.00155*RF4549 + 0.00133*RF4549(-1) + 0.00007*RF4549(-2) - 0.00145*RF4549(-3) \\
& - 0.00247*RF4549(-4) - 0.00224*RF4549(-5)) \\
DPF5054_FE = & (0.00093*RF5054_FE + 0.00074*RF5054_FE(-1) - 0.00008*RF5054_FE(-2) \\
& - 0.00104*RF5054_FE(-3) - 0.00168*RF5054_FE(-4) - 0.00149*RF5054_FE(-5)) - \\
& (0.00093*RF5054 + 0.00074*RF5054(-1) - 0.00008*RF5054(-2) - 0.00104*RF5054(-3) \\
& - 0.00168*RF5054(-4) - 0.00149*RF5054(-5))
\end{aligned}$$