

[illegible]

```

"                                     ";; $NAMES[YI,.J];;" ACCOUNT
FORMAT /M1 /RD 12,4;
"
"
"      OLS REGRESSION MODEL WITH RAILROAD EFFECTS AND TIME EFFECTS
"      STEP ONE IN GLS ESTIMATION
"
"      COEFFICIENT ESTIMATE      T-RATIO
"
FORMAT 1,8;
"      ";; $NAMES[X1I,.J];;      FORMAT /M1 /RD 12,4;
"      B[1,.J];;      TSTAT[1,.J];
FORMAT 1,8;
"      ";; $NAMES[X2I,.J];;      FORMAT /M1 /RD 12,4;
"      B[2,.J];;      TSTAT[2,.J];
"
"      F5 ";; B[3,.J];;      TSTAT[3,.J];
"      F8 ";; B[4,.J];;      TSTAT[4,.J];
"      F10 ";; B[5,.J];;      TSTAT[5,.J];
"      F18 ";; B[6,.J];;      TSTAT[6,.J];
"      F20 ";; B[7,.J];;      TSTAT[7,.J];
"      F21 ";; B[8,.J];;      TSTAT[8,.J];
"      F22 ";; B[9,.J];;      TSTAT[9,.J];
"      F23 ";; B[10,.J];;      TSTAT[10,.J];
"      F27 ";; B[11,.J];;      TSTAT[11,.J];
"      F30 ";; B[12,.J];;      TSTAT[12,.J];
"      F31 ";; B[13,.J];;      TSTAT[13,.J];
"      F34 ";; B[14,.J];;      TSTAT[14,.J];
"      F35 ";; B[15,.J];;      TSTAT[15,.J];
"      F36 ";; B[16,.J];;      TSTAT[16,.J];
"      F37 ";; B[17,.J];;      TSTAT[17,.J];
"
"      T79      BASE YEAR
"      T80 ";; B[18,.J];;      TSTAT[18,.J];
"      T81 ";; B[19,.J];;      TSTAT[19,.J];
"      T82 ";; B[20,.J];;      TSTAT[20,.J];
"      T83 ";; B[21,.J];;      TSTAT[21,.J];
"      T84 ";; B[22,.J];;      TSTAT[22,.J];
"      T85 ";; B[23,.J];;      TSTAT[23,.J];
"      T86 ";; B[24,.J];;      TSTAT[24,.J];
"      T87 ";; B[25,.J];;      TSTAT[25,.J];
"
"      ERROR VARIANCE ";; S;
"      RSQ ";; RSQ;
"      MODIFIED DW ";; DW;
"      MODIFIED RHO ";; RHO;
"
" \ f";

```

```

@=====
@
@      -----      GLS STEP TWO      -----
@
@      PRAIS-WINSTEN TRANSFORMATION
@      DUMMIES NOT TRANSFORMED
@
@=====

```

CLEAR P;

[illegible]

```

"          F10 ";; B[5,.];; TSTAT[5,.];
"          F18 ";; B[6,.];; TSTAT[6,.];
"          F20 ";; B[7,.];; TSTAT[7,.];
"          F21 ";; B[8,.];; TSTAT[8,.];
"          F22 ";; B[9,.];; TSTAT[9,.];
"          F23 ";; B[10,.];; TSTAT[10,.];
"          F27 ";; B[11,.];; TSTAT[11,.];
"          F30 ";; B[12,.];; TSTAT[12,.];
"          F31 ";; B[13,.];; TSTAT[13,.];
"          F34 ";; B[14,.];; TSTAT[14,.];
"          F35 ";; B[15,.];; TSTAT[15,.];
"          F36 ";; B[16,.];; TSTAT[16,.];
"          F37 ";; B[17,.];; TSTAT[17,.];

```

```

"          T79          BASE YEAR
"          T80 ";; B[18,.];; TSTAT[18,.];
"          T81 ";; B[19,.];; TSTAT[19,.];
"          T82 ";; B[20,.];; TSTAT[20,.];
"          T83 ";; B[21,.];; TSTAT[21,.];
"          T84 ";; B[22,.];; TSTAT[22,.];
"          T85 ";; B[23,.];; TSTAT[23,.];
"          T86 ";; B[24,.];; TSTAT[24,.];
"          T87 ";; B[25,.];; TSTAT[25,.];

```

```

"          ERROR VARIANCE ";; S;
"          RSQ ";; RSQ;
"          MODIFIED DW ";; DW;
"          MODIFIED RHO ";; RHO;

```

```

" \f";

```

```

@=====
@
@ ----- STEP THREE OF GLS -----
@
@          WEIGHTED LEAST-SQUARES TRANSFORMATION
@          DUMMIES NOT TRANSFORMED
@
@=====

```

```

RS      = sqrt(RS);
W       = 1 ./RS;
W       = W .* ONES(T,1);
Y       = Y *~ W;
X       = X[:,1:2];
X       = X *~ W;

X       = X ~ DUMR ~ DUMT;
K3      = COLS(X);

B       = INV(X'X)*X'Y;
E       = Y - X*B;

S3      = E'E;
S       = INV(NT)*S3;
COV     = INV(X'X)*S;
TSTAT   = B./ SQRT(DIAG(COV));

```

```
RHO      = INV(E2'E2)*E1'E2;
DW       = 2*(1 - RHO);
```

[illegible]

```

"
" F21 ";; B[8,.];; TSTAT[8,.];
" F22 ";; B[9,.];; TSTAT[9,.];
" F23 ";; B[10,.];; TSTAT[10,.];
" F27 ";; B[11,.];; TSTAT[11,.];
" F30 ";; B[12,.];; TSTAT[12,.];
" F31 ";; B[13,.];; TSTAT[13,.];
" F34 ";; B[14,.];; TSTAT[14,.];
" F35 ";; B[15,.];; TSTAT[15,.];
" F36 ";; B[16,.];; TSTAT[16,.];
" F37 ";; B[17,.];; TSTAT[17,.];
"

```

```

"
" T79 BASE YEAR
" T80 ";; B[18,.];; TSTAT[18,.];
" T81 ";; B[19,.];; TSTAT[19,.];
" T82 ";; B[20,.];; TSTAT[20,.];
" T83 ";; B[21,.];; TSTAT[21,.];
" T84 ";; B[22,.];; TSTAT[22,.];
" T85 ";; B[23,.];; TSTAT[23,.];
" T86 ";; B[24,.];; TSTAT[24,.];
" T87 ";; B[25,.];; TSTAT[25,.];
"

```

```

"
" ERROR VARIANCE ";; S;
" RSQ ";; RSQ;
" MODIFIED DW ";; DW;
" MODIFIED PHO ";; RHO;
" BREUSCH-PAGAN ";; BP;;
" CHI-SQ(";; FORMAT /RDS 1,0; DFBP;;");
FORMAT /M1 /RD 12,4;
" RESET ";; RESET;;
" F(";; FORMAT /RDS 1,0; 3;; DFR;;");
"\f";
OUTPUT FILE = LPT1 OFF;

```