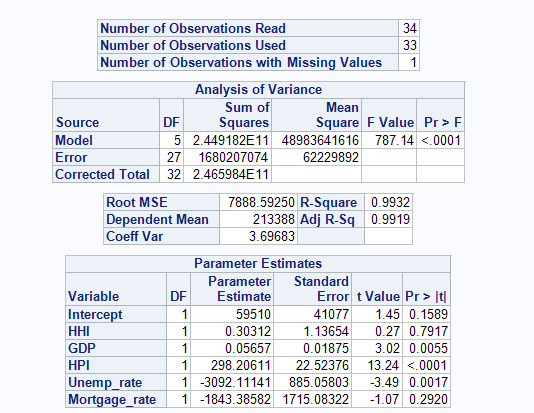
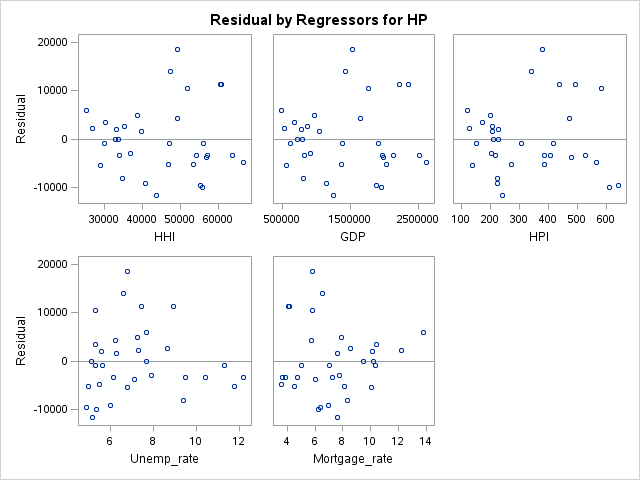
1. Model (common one)

**proc** **reg** data=CA\_model;

model HP=HHI GDP HPI Unemp\_rate Mortgage\_rate;

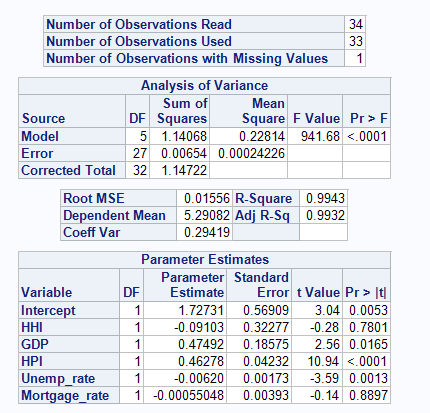
**run**;

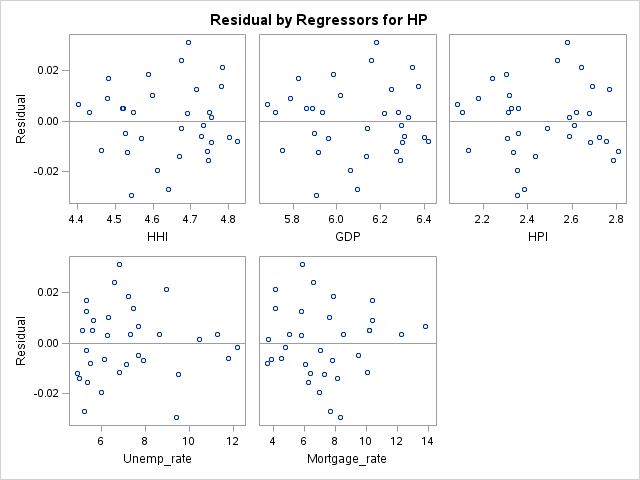




Residual is too large while estimate is too vary for factor

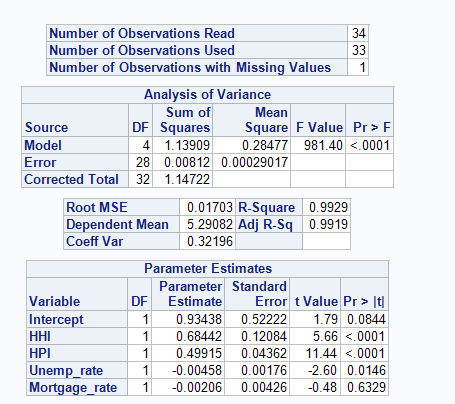
1. Model 2 (adjusted HP,HHI, GDP, HPI with Log10)





P value of HHI is too large. Maybe GDP or HPI are high related with HHI

1. Model 3( remove GDP to get rid of correlation)



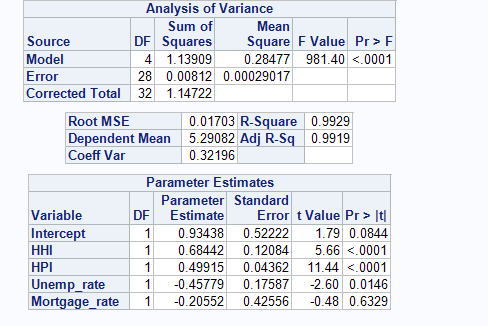
Rate have too small P value

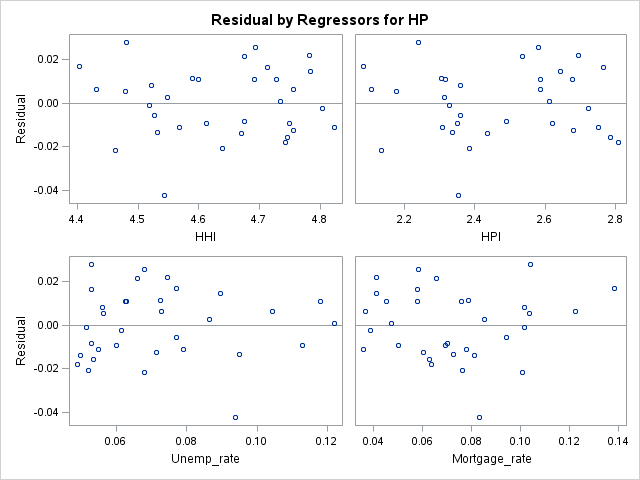
1. Model 4 (adjusted rate with unemp\_rate/100 and mortgage\_rate/100)

**proc** **reg** data=CA\_model;

model HP=HHI HPI Unemp\_rate Mortgage\_rate;

**run**;



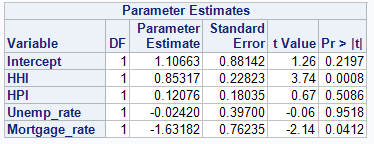


It seams that Mortgage rate has very limited effection for HP

**proc** **reg** data=IL\_model;

model HP=HHI HPI Unemp\_rate Mortgage\_rate;

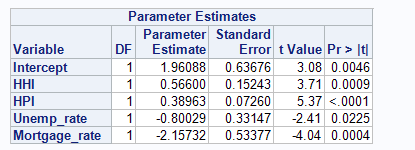
**run**;



**proc** **reg** data=NY\_model;

model HP=HHI HPI Unemp\_rate Mortgage\_rate;

**run**;



**proc** **reg** data=NC\_model;

model HP=HHI HPI Unemp\_rate Mortgage\_rate;

**run**;

