**主成分分析**

**proc** **princomp** data=tmp1.economic n=**2** out=aa plot=score plot=pattern;

id region;

**run**;

**相关分析**

**proc** **corr** data=tmp1.vregex01;

**run**;

**回归分析，OLS，并做共线性诊断**

**proc** **reg** data=tmp1.vregex01 outest=os;

model y=x1-x7/collin vif tol;

**run**;

**岭回归**

**proc** **reg** data=tmp1.vregex01 outest=os1;

model y=x1-x7/ridge=**0** to **0.5** by **0.001**;

**run**;

**quit**;

**逐步回归（向前逐步）**

**proc** **reg** data=tmp1.vregex01 outest=os2;

model y=x1-x7/slection=stepwise;

**run**;

**逐步回归（向后逐步）**

**proc** **reg** data=tmp1.vregex01 outest=os3;

model y=x1-x7/slection=backward;

**run**;

**主成分回归**

**proc** **reg** data=tmp1.vregex01 outest=os4;

model y=x1-x7/pcomit=**0** to **6**;

**run**;

**proc** **print**;

**run**;

**主成分回归：（1）对自变量进行主成分分析**

**proc** **princomp** data=tmp1.vregex01 out=vo;

var x1-x7;

**run**;

**主成分回归：（2）以主成分为自变量，拟合回归方程**

**proc** **reg** data=vo;

model y=prin1 prin2;

**run**;

**主成分回归：（3）主成分的表达式代入上一步拟合得到的回归方程，运算得到最终的回归方程**