$H_0:\beta_{FE}=\beta_{RE}$  (no endogeneity) against  $H_1:\beta_{FE}\neq\beta_{RE}$  (endogeneity)

EXPER $t = \frac{0.0575 - 0.0986}{\sqrt{0.0330^2 - 0.0220^2}} = -1.67$	EXPER <sup>2</sup> $t = \frac{-0.0120 - (-0.0023)}{\sqrt{0.0011^2 - 0.0007^2}} = -1.29$
SOUTH $t = \frac{-0.3261 - (-0.2326)}{\sqrt{0.1258^2 - 0.0317^2}} = -0.77$	UNION $t = \frac{0.0822 - 0.1027}{\sqrt{0.0312^2 - 0.0245^2}} = -1.06$

## Decision and Conclusion (5% Significance Level)

Variable	t-Statistic	Significance
EXPER	-1.67	Not significant
EXPER <sup>2</sup>	-1.29	Not significant
SOUTH	-0.77	Not significant
UNION	-1.06	Not significant

- The critical value at the 5% significance level (two-tailed) is approximately  $\pm 1.96$ .
- Since all t-statistics are within the interval [-1.96, 1.96], we fail to reject the null hypothesis.
- At the 5% significance level, none of the coefficient differences between the fixed effects and random effects models are statistically significant.
- Conclusion: The random effects model is appropriate.