

Comments on Francis Lui
“Demographic Transition, Childless Families and Economic Growth”

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The paper seeks to identify significant factors affecting fertility choices, in particular, study the causes of low fertility and childless families in Hong Kong. The theoretical framework is a variation of the Ehrlich-Lui model that accommodates zero fertility. The empirical evidence is based on the author’s survey data. The paper presents reasons to expect zero fertility, discusses a theoretical framework generating both demographic transition and corner solution for fertility, and performs an empirical analysis to verify the following testable hypotheses arising from the model:

- Total fertility rate (TFR) of the potential parent is negatively related to her human capital
- If an adult likes children, it is less likely that she will have very few or no children.
- The parent’s fertility rate is positively related to how efficient she is in educating her children.
- When a parent finds it costly to raise children, she will have fewer of them.

In the paper’s empirical analysis, the main dependent variable is TFR, defined as actual number of children + expected number of future children. A Tobit model for TFR is estimated, based on HK survey data described in Appendix 1. Tobit is the appropriate model here since TFR is censored at zero. The explanatory variables used in the Tobit regression are:

- years of schooling (squared schooling)
- years of work experience (squared experience)
- marital status
- income
- age
- siblings
- traffic time
- house size
- 8 dummy variables

In this empirical analysis, the author brings up the potential endogeneity of income. In the context of this study, it should be pointed out that income would be endogenous in the model not because of its correlation with other explanatory variables (e.g., schooling and experience) but rather because of its correlation with the error term in the Tobit model.

Furthermore, the explanatory variable Schooling is a prime candidate to be endogenous – TFR affects Schooling – and such endogeneity should be accounted for in the estimation of the Tobit model.

The paper also studies a logit model for childless families. In a way, there is no need to do this. The estimated Tobit model delivers a more efficient estimate of the probability of the occurrence of childless families:

$$\Pr(y_i = 0) = \Pr(y_i^* < 0) = \Pr(e_i < -x_i'b).$$