Analysis of Elderly In-migrants In Tennessee

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Introduction
The idea of elderly in-migrants as an important factor or stimulus to local economic development (Serow, 2001) has found support in a number of empirical studies (e.g., Bennett, 1993; Day & Barlett, 2000; Hodge, 1991). Large-scale elderly in-migration can benefit local economies in a number of ways:
• Increase property and sales tax revenues (counties’ largest source of revenues) without directly increasing public education expenditure (counties’ greatest expense) or competing with local residents for jobs (Day & Barlett, 2000; Glasgow, 1991; Graff & Wiseman, 1990; Rowles & Watkins, 1993; Schneider & Green, 1992);
• Increase local sales and capital pool through investments and savings (Campbell, 2005); and
• Stimulate job creation and service development (Campbell, 2005). Thus, counties are increasing competing for elderly in-migrants as a means of local economic development.

Research Question
The increased competition for elderly in-migrants highlights the question of what factors tend to attract and/or repel elderly in-migrants. However, most previous studies analyzing those factors have been focused from macro levels such as national perspective, southern US, or state level. Little research has been conducted from a micro level of counties which are increasingly competing for elderly in-migrants with each other.

Objective
The objective of this study is to determine the factors that attract elderly in-migrants from the perspective of counties in Tennessee. The main contribution of this study is to identify the county characteristics in Tennessee that attract elderly in-migrants to help identify which counties are likely to have an advantage in attracting elderly in-migrants.

Methods
A linear fixed-effect model is the conceptual model for this paper, instead of the random effect model, because only individuals of the sample obtained are focused on and inferences drawn are restricted to these individuals within the sample (Baltagi, 2005). In other words, the linear fixed-effect model is an appropriate specification for this paper because the sample selected in this paper includes all the counties in Tennessee so that the sample is not randomly selected. Also, only those counties in Tennessee are focused on, and inferences drawn are restricted to those counties in Tennessee. Further, Hausman tests that fixed-effect models should be used instead of random effect models (Baltagi, 2005).

The Conceptual Fixed-Effect Model
\[ y_{it} = \alpha + X'_{it}\beta + u_{it} + v_{it} \quad (i = 1, \ldots, n \text{ & } t = 1, \ldots T) \]
where \( i \) denotes counties; \( t \) denotes time periods; \( \beta \) denotes an unobserved county effect; and \( v_{it} \) is the idiosyncratic error term.

Empirical Models
\[ d_{m50u} = \beta_{0} + \beta_{1} s_{hwy} + \beta_{2} s_{police} + \beta_{3} per65ov + \beta_{4} hs + \beta_{5} peremp + \beta_{6} nonmet \]
\[ + \beta_{7} ln_popdens + \beta_{8} ln_medfinc + \beta_{9} ln_pop + \beta_{10} \]
\[ + \beta_{11} y_{1972} + \beta_{12} y_{1982} + \beta_{13} y_{1992} + u + v \] (1.1)
\[ d_{m67u} = \beta_{0} + \beta_{1} s_{hwy} + \beta_{2} s_{police} + \beta_{3} per65ov + \beta_{4} hs + \beta_{5} peremp + \beta_{6} nonmet \]
\[ + \beta_{7} ln_popdens + \beta_{8} ln_medfinc + \beta_{9} ln_pop + \beta_{10} \]
\[ + \beta_{11} y_{1972} + \beta_{12} y_{1982} + \beta_{13} y_{1992} + u + v \] (1.2)

\[ d_{m650u} \text{ - in migration rate (per 100 persons) of the 60+ cohort} \]
\[ d_{m67u} \text{ - in migration rate (per 100 persons) of the 67+ cohort} \]

\[ \text{Independent variables} \]
\[ \% \text{ share highway expenditure of total in each county} \]
\[ \% \text{ share police expenditure of total in each county} \]
\[ \% \text{ of population 65 plus over the whole population} \]
\[ \text{natural log of property tax per sq mi} \]
\[ \text{natural log of medium family income} \]
\[ \text{natural log of population density} \]
\[ \text{standard errors in parentheses.} \]

Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
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<tbody>
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<td>8.147</td>
<td>13.707</td>
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</tbody>
</table>

Conclusions
This paper uses fixed-effect models to estimate the county characteristics that attract elderly in-migrants. The results indicate that the elderly immigration rate is positively correlated to the share of the population that is elderly or has a high school degree, medium family income, and population (or population density). There is little difference in the results using either population or population density as one of the independent variables. Thus, local government officials considering expending scarce resources to attract elderly in-migrants should consider how their counties compare in terms of these key characteristics.