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Net Migration of the Older Population in the United States, 1995-2000

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I examine the net migration rate for the 50 United States and the District of Columbia for the period 1995-2000. The empirical results for the 1995-2000 period suggest that economic conditions are important determinants of net migration of the older population. Specifically, income, unemployment, and the rate of growth of employment have been shown to be highly significant determinants of net migration. These results are consistent with Miller's (1973) earlier findings for the 1955-1960 period and with those obtained by Leahy (1997) for 1965-1970. **JEL**: **J14**, **J62.**

Introduction and Background

A recent article in Where to Retire reports that older Americans have been moving in record numbers to the South and the West (Longino, 2005). According to this article, the top five states where Americans over 60 moved between 1995 and 2000 are Florida, Arizona, North Carolina, Nevada, and South Carolina. The top five states where these older Americans have moved from over the same period are New York, California, Illinois, New Jersey, and Michigan. The South

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♣ The views expressed are those of the author and do not necessarily represent the views of the Internal Revenue Service or the United States. Helpful comments were received from William P. O'Dea.

had the greatest net migration gain of older people (U.S. Census Bureau). But what determines these migration patterns?

Sjaastad (1962) postulated that people evaluate the costs and benefits associated with moving and that they will move when the discounted value of real income available at a potential destination is greater than at their current location by more than their moving costs. Moving costs can be substantial, including, along with direct costs, foregone earnings and the psychic costs associated with moving away from family and friends. Life-cycle factors, such as age and education, also play a prominent role (Yankow 1999). Differences in climate must also be considered (Gabriel and Schmitz, 1995).

Miller (1973) examines the hypothesis that out-migration will be reduced by high wages and rapidly growing employment, and increased by high rates of unemployment. Specifically, he looks at the gross out-migration rate for the contiguous United States and the District of Columbia during the period 1955-1960. The results of Miller's study of out-migration for the period 1955-1960 indicated that income, education, size of population, the rate of growth of employment, and either the percent of the population born in a different state or the in-migration rate used as a proxy for the propensity to migrate of a state's population were all significant determinants of out-migration during this period, and all had the expected signs. The 1960 unemployment rate was found to be insignificant. Miller discussed the possible problems with this variable. The 1960 unemployment rate may be a poor indicator of the average unemployment rate during the period 1955-1960. Also, "the variance among state unemployment rates is appreciably smaller than between parts of states such as state economic areas or metropolitan areas" (Miller, p. 401).

In a study of the 1965-1970 period, Leahy (1997) found results consistent with Miller's findings. Specifically, the rate of growth of employment and median family income were shown to be highly significant determinants of out-migration. In addition, age was shown to have a significant effect on out-migration as would be predicted from the theory of human capital.

Other work in this area has been more specific in nature, focusing on a particular economic variable such as employment, or on a given age or race cohort. In a study of interregional employment distribution in the U.S., Greenwood and Hunt (1984) estimate a time-series model of migration and employment growth in 171 regions using a sample of all persons employed in positions covered by Social Security from 1958 to 1975. Their results suggest that both in- and out-migration are influenced by employment opportunities and that the results of out-migration are cumulative, i.e., having a tendency to increase over time. Further support for the latter result is contained in Yankow's study. In that study, Yankow finds that pecuniary rewards generally accumulate over a five-year period after migration.

Enchautegui (1993) examines the effects of education and location on the employment and wages of Puerto Rican men in the U.S. during the 1980s. Her results suggest that there is a close relationship between regional labor market changes and the economic status of this group. Krieg (1993) investigates the determinants of migration within the U.S. for the periods 1965-70 and 1975-80. His results indicate that both race and education influence migration patterns.

In another study focusing on a particular economic variable, i.e., state per capita income, Sherwood-Call (1996) finds that over the previous twenty-five to thirty-five years, differences in income levels were not correlated with interstate migration. On the other hand, changes in relative incomes were positively correlated with changes in migration flows.

Clark, Knapp, and White (1996) examine the determinants of interstate migration of the elderly retiree population using data from the 1990 U.S. Census of Population 5% Public Use Microdata Sample. The results of this study suggest that both personal and locational characteristics are important determinants of elderly interstate migration, such as local tax burdens and service levels. Rogerson (1996) finds that it is the younger elderly who are most likely to be interstate movers. These younger elderly who are interstate migrants to the Sunbelt tend to have high income and to be well-educated (Hazelrigg and Hardy, 1995).

Methodology

I examine the net migration rate for the 50 United States and the District of Columbia for the period 1995-2000. The equation estimated was the following:

$$NET = b_0 + b_1\,LPOP + b_2\,ED + b_3\,MFY + b_4\,UE + b_5\,ST + b_6 EMP + e \qquad (1)$$

where:

NET	=	net migrants (in-migration minus out-migration), 65 and over, as percent of 1995 population
LPOP	=	natural logarithm of total state population in 2000
ED	=	percent of state population having at least a high school diploma in 1995
MFY	=	median family income of state in 1999
UE	=	state unemployment rate in 1999
ST	=	percent of 2000 population born in a different state
EMP	=	rate of growth of employment. This is the growth in employment from 1994-1999 divided by the 1999 employment of the state.
e	=	an error term with mean zero and constant variance

In order to control for the propensity to migrate, Miller and Leahy use both the percent of the population born in a different state and the in-migration rate as independent variables. People who have moved once before should have a higher propensity to migrate than those who have not, and therefore, states that have a large proportion of people who have moved in the past should have relatively high out-migration rates. Miller discussed the various reasons for the high propensity to migrate of those who have moved in the past. The group of people who have moved before includes a large proportion of soldiers, students, young people, and executives in large corporations. Also, length of residence in an area is a measure of the investment in human capital that a potential migrant has accumulated in terms of knowledge of an area and friends made. Because most of this investment is made worthless by out-migration, people who have lived in an area for a long time are less likely to migrate than those who have not. This information effect also works in the opposite direction for people who have moved previously in that they have information about another area and this lowers the cost of moving to the area of previous residence (Miller, p. 397).

Miller and Leahy also take the size of the state into account. Miller's hypothesis is that the larger the state's population, the less likely it would be that a resident would have to move out of the state to locate a suitable job or environment. "If state size is not controlled for, the more populous states will have unusually low out-migration rates" (Miller, p. 399). Thus, the logarithm of state population was used to control for the effect of state size on out-migration.

Miller uses the percent of the population over twenty-five years old who have completed one or more years of college and Leahy uses the median years of education to control for the high mobility of the highly educated. They both use median family income in a state as a proxy for the level of wages. The expectation is that out-migration would be less from states with high income than from those with low income. In this study, however, it is expected that the older population is moving from higher cost to lower cost (and presumably lower income states). Because the ED and INC variables are positively correlated (r=.54), it is expected that both the ED and INC variables would have a negative impact on net migration.

The regression results are as follows (t statistics in parentheses):

$$\underset{(4.69)}{NET = 2.13} + \underset{(1.91)}{.269\ POP} - \underset{(3.02)}{1.71\ ED} - \underset{(2.74)}{.00001\ MFY} - \underset{(3.24)}{7.82\ UE} + \underset{(5.85)}{.011\ ST} + \underset{(7.32)}{3.70\ EMP}, \qquad (2)$$

$$R^2 = .76,\ F = 23.3$$

These results for the period 1995-2000 are consistent with those found by Miller for 1955-1960 and Leahy for 1965-1970. All variables have the expected signs and the ED, MFY, UE, ST, and EMP variables are all significant at the one percent level.[1]

[1] Three additional variables were included in the equation. There variables are: TEMP = average yearly temperature of state's capital city; HOUSE = per-capita median value of owner-occupied housing; and TAX = a dummy variable equal to 1 if the state taxes social security income, and 0 otherwise. None of these variables proved to be significant. The results were as follows (t statistics in parentheses):

Summary and Conclusions

In conclusion, the empirical results for the 1995-2000 period suggest that economic conditions are important determinants of net migration of the older population. Specifically, income, unemployment, and the rate of growth of employment have been shown to be highly significant determinants of net migration. These results are consistent with Miller's earlier findings for the 1955-1960 period and with those obtained by Leahy for 1965-1970. Furthermore, with the possible exception of the study by Sherwood-Call, that finds interstate migration flows to be correlated with changes in relative incomes and not with differences in state income levels, these results agree with those obtained in other recent studies. In addition, this study suggests that weather, housing costs, and taxes are not significant determinants of elderly migration (see footnote 1).

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$$\underset{(1.95)}{\text{NET} = 1.50} + \underset{(1.93)}{.299\text{ POP}} - \underset{(1.71)}{1.27\text{ ED}} - \underset{(1.18)}{.000007\text{ MFY}} - \underset{(2.41)}{6.74\text{ UE}} + \underset{(5.59)}{.011\text{ ST}} + \underset{(6.38)}{3.49\text{ EMP}} + \underset{(1.14)}{.004\text{ TEMP}}$$

$$- \underset{(.66)}{.049\text{ HOUSE}} - \underset{(.74)}{.033\text{ TAX}}$$

$R^2 = .77$, $F = 15.5$

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Book Review

Arun, Thankom Gopiniath, and John Turner (eds), *Corporate Governance and Development: Reform, financial systems and legal frameworks* (The CRC series on competition, regulation and development). Published by Edward Elgar. Cheltenham, UK, and Northampton, MA. PP 210. 1-84844-420-6.

Any book derived from the proceedings of a conference (in this case at Manchester in November 2007) which claims on its (back) cover that it is "timely and insightful" seems bound to disappoint, particularly one which trumpets itself as a "one-stop reference guide for practitioners, academics, researchers, donor agencies" etc. (both on the cover and in the preface). Indeed the editors' preface is dated one month before the collapse of Lehman Brothers, suggesting that the book is anything but timely. There is no hint of the disaster that was just around the corner in this latest addition to the (unnumbered) monograph series from the University of Manchester's Centre for Regulation and Competition. Indeed as a collection of conference papers it is perhaps not surprising how uneven (and often underdeveloped as well) the book is in general.

The opening editors' preface gives some warning of what is to come when it defines corporate governance exclusively in terms of return on investment. The papers cover a range of countries, from South America and Africa, to Europe (mostly the UK of course) and South Asia, however, which does, in its more international purview, make a refreshing change in corporate governance studies. Nonetheless the opening paper by Omar Chisari and Gustavo Ferro is a rather underwhelming piece, a classical case (it would seem) of "garbage-in, garbage-out" in economic modelling. Chisari and Ferro argue that Argentina doesn't need enhanced corporate governance (by which they mean stricter auditing measures), apparently because it would adversely skew the labour market towards the production of auditors -- this in a paper with no real analysis of the Argentine labour market or the relationship between reporting and performance, and which assumes that auditing costs amount to rule-of-thumb sums that the authors give no proper source or justification for. It is very easy to support the status quo in such a manner, but is this really the role of academic scholarship?

The next paper, by Royston Gustavson, Nicholas Ndegwa Kimani and Donald Atieno Ouma, is a similarly unconvincing justification for inertia in sub-Saharan corporate governance reform. This time the fault is a problematic adoption of a model (Hofstede's cross-cultural metrics) that is usually dismissed as overly simplistic in international business circles these days. It is hard to see what generalisations made from a survey of IBM employees from 30-something years ago has to do with the proclivities of company directors in Botswana, Kenya or Zambia, but it is typical for work such as Hofstede's to feature in such a manner in undercooked business scholarship these days. There is much of interest in this paper, but it could have been much better considered.

Michael Goyer and Rocío Valdivielso del Real then contribute a comparative assessment of the privatisation of electricity utilities in Spain and the UK, employing a Varieties of Capitalism (VoC) approach. Much more could have been said on the role of ideology and its link to the (apparent) public-policy failure inaugurated in the UK by Beesley and Littlechild, and by what criteria privatisation in each country could be considered a success or a failure. What lessons are to be learned by other governments internationally that may be tempted to pursue a comparably Thatcherite scheme of privatisation in the future? The chapter is illustrative of the strengths of the VoC approach, but seems to represent an opportunity lost rather than grasped in several crucial ways.

The first paper to really make the book worth considering consulting in the manner suggested by the editors is that of Sumit K. Majumdar and Kunal Sen on debt structure and firm performance in highly geared India. The paper was written too late to consider the Satyam scandal, but it does discuss some of the problems inherent in the Indian governance environment that clearly facilitated the Raju brothers. The authors' conclusion that government ownership usually entails poorer performance is not particularly challenging, however, but their finding that Indian firms which have secured funding from unsecured creditors usually are noticeably more profitable is rather suggestive. One wonders whether this is a case of *post hoc ergo propter hoc*, though -- surely it would be more likely that better-performed firms might prove more attractive to unsecured creditors rather than (as the authors contend) unsecured finance leads to better monitoring (the authors bring to bear both an information-cost and agency perspective). Nonetheless, this sometimes overly dense paper (a stylistic flaw not uncommon in this collection) does give the kind of overview of Indian corporate financing that a "one-stop reference guide" clearly should, and does so in a considered and illustrative manner.

The next chapter gives a useful overview of the challenges facing the Securities and Exchange Commission of Bangladesh, although if anything the paper is under-referenced. Many of the claims made by the author Faizul Haque seem to stem from anonymous interviews of key stakeholders, but the paper gives no indication when this is so, and refers to scandals (among other matters) that are never named. Haque's somewhat overly elliptical paper is evidently a summary of research undertaken while he completed his PhD under the editor Arun. But the chapter largely represents fundamental research for much of which we are left to take the author at his word.

The editors next reprint their survey paper that first appeared in *Corporate Governance: An international review* in 2004 on the governance role of banks in developing economies. A motherhood statement on financial liberalisation, its conclusions seem rather unlike those one would necessarily reach, say, from a study of the success of the four Asian Tigers. The paper also features the jarring signposting (describing what will happen in each section of the chapter, even to the mind-numbing point of "then follows a conclusion") of the previous papers which has no real place in monographic publications (or even most academic papers). M. Masrur Reaz then contributes a piece on the corporate governance of banks in Bangladesh which makes a useful companion study to that of Haque's, before Blanaid Clarke contributes an overview of corporate governance reform in the area of takeovers in the European Union.

Clarke's paper is largely a critical assessment of the EU's Winter Report and its misguided approach to directorial independence and the longstanding financial-market myth that takeovers have a positive governance role through imposing market discipline on underperforming management teams. Clarke's chapter (again) displays an ongoing problem with several contributions to the book, however, citing “a study” (presumably her own) that she does not give a reference for. Presumably this study has never been published -- one hates to think how a judge would react if Prof. Clarke were to make such an under-substantiated claim in evidence in an Irish court.

The book then finishes with two last papers, one by Priya P. Lele and Mathias M. Siems which was published in the *Journal of Corporate Law Studies* in 2007. Dubbed a “leximetric” (i.e. legal/econometric) approach, the paper makes several useful points, skewering, for example, the naïve and ahistorical American notion that common-law legal systems are somehow innately superior to civil-law regulatory regimes in their protection of the interests of shareholders. But the very concept of “leximetrics” must be a concern. Do we really need quantitative assessments of legal codifications? Surely simplicity, clarity, functionality and above all cultures of enforcement/compliance are more important regulatory features than provision-counts (no matter how sophisticated). The second (and last) paper is another legal study, by Dalvinder Singh, on bank governance with regard to depositors’ rights in the UK. This is the only paper to touch on the recent governance failures in the British banking sector, however, even if this is limited only to a brief consideration of the September 2007 liquidity crisis at Northern Rock. Singh perhaps can’t be faulted for not anticipating the more spectacular events that have since cruelled the industry. Nonetheless, the paper still seems rather antiquarian (rather than “timely”) in light of recent events.

The otherwise well-produced collection is then rounded out with a useful bibliography.

Bernard Mees

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