Living Costs, The Quality of Life, and the "Sunbelt" vs "Frostbelt" Battle in the United States

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LIVING COSTS, THE QUALITY OF LIFE, AND THE "SUNBELT" VS "FROSTBELT" BATTLE IN THE UNITED STATES

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Introduction

The economic tug-of-war between the "Sunbelt" and "Frostbelt" states appears to be continuing through the 1980s and perhaps the 1990s, with the prospect of continuing even beyond that. The implications of this economic conflict are wide and varied, including such items as: state and local government spending, taxation, and finance problems; water resource, education, and highway resource problems; wage/salary, living cost, and unionization problems; and housing, pollution, and quality-of-life problems.

Given the economic, financial, political, quality-of-life, and social aspects of the "North-South" conflict, this paper pursues two simple objectives. First, it focuses upon some of the key factors which, during the 1970s, led to significantly different North-South growth rates. Second, this paper examines the *apparent* resurgence of the Northeast during the early 1980s and the apparent moderation of sharply divergent growth rates as between the Northeast and the South.

Living Cost Levels, the Quality of Life, and Geographic Mobility

One of the allegedly preponderant aspects of the North-South conflict is the presumed attractiveness of the Sunbelt to both people and firms. Numerous studies have found this attractiveness to take at least two forms: (1) generally lower living costs in the Sunbelt than in the Frostbelt and (2) a generally higher quality of life (especially including climate) in the Sunbelt than in the Frostbelt. This is confirmed in the analysis below.

We begin our analysis by postulating the following model of interstate migration for the period 1975–1980:

(1) $Mi = Mi(Si, Ci, Li, Ii, Pi)$

where Mi = net in-migration *rate* to state i, 1975–1980
Si = average percentage of possible sunshine in state i
Ci = annual heating degree days, 65° base, in state i
Li = average annual snow and ice pellets in state i
Ii = per capita income in state i, 1975
Pi = 1975 average annual cost of living for a four-person family living on an intermediate budget, expressed as an index (see McMahon and Melton, 1978).

The equation deals with the 48 contiguous states, but excludes the District of Columbia.

The OLS estimate of the linear version of equation (1) is given by:

$$(2)\quad Mi = -0.059 + \underset{(+3.97)}{0.00258Si} - \underset{(-1.95)}{0.00018Ci} - \underset{(-1.75)}{0.00044Li} + \underset{(+1.08)}{0.00001Ii} - \underset{(-3.15)}{0.00067Pi},$$

$$DF = 42,\ R^2 = .62$$

where terms in parentheses are t− values.

The results in equation (2) are hardly surprising. The quality-of-life variables, as a group, exhibit a statistically significant impact on the interstate migration rate, as does the cost-of-living variable. Moreover, a similar model, by SMSA, yields equivalent results. These results are generally compatible with earlier studies, including Cebula (1979), Renas and Kumar (1978), (1979), and (1981), Alperovich (1979), and Izraeli and Lin (1984).

For example, Renas and Kumar (1978) deal with the determinants of aggregate net in-migration rates to SMSAs in the period

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1960–1970. Their model hypothesizes that net in-migration is a function of: 1) median family income, 2) the cost of living, 3) the rate of change of median family income, 4) the rate of change of the cost of living, 5) the unemployment rate, and 6) several quality-of-life variables.

Renas and Kumar (1978) treat the cost of living as a separate independent variable. Renas and Kumar empirically estimate three alternative specifications of their basic model. The ordinary least-squares results indicate that the cost of living and quality of life both have highly significant impacts on net in-migration rates. As Renas and Kuman (1978, p. 101) observe, it "would thus appear that individuals do consider cost of living differentials as well as the quality of life in formulating migration decisions."

This study by Renas and Kumar has received criticism and attention from a number of authors, most notably Alperovich (1979) and Cebula (1981). Alperovich criticizes the Renas and Kumar (1978) study for using a separate living-cost variable rather than using living costs to deflate nominal-income terms into real-income values. In their response to Alperovich (1979), Renas and Kumar (1979) examine two types of regression models, one with a separate living-cost variable and one with living costs used to deflate money income into real terms. Both models yield significant empirical results, leading again to the conclusion that geographic living-cost differentials do appear to influence geographic mobility patterns. In both cases, moreover, the quality of life is shown to significantly affect geographic mobility. Cebula's criticism of Renas and Kumar involves their failure to disaggregate migration flows by age group to allow for the effects of variations in the labor-force participation rate among different age categories of the population. In response to this commentary, Renas and Kumar (1981) examine empirically the determinants of net in-migration for twelve different age groups in the population between 1960 and 1970. Once again, Renas and Kumar (1981) find that living costs and quality of life considerations significantly affect migration flows.

In a study by Cebula (1979), the migration impact of geographic living-cost differentials is investigated through a variety of regression modes. In the most developed of these models, Cebula (1979, pp. 82–87) hypothesizes the net in-migration rate to SMSAs to be a function of 1) median income, 2) the rate of change of median income, 3) the cost of living, 4) the unemployment rate, 5) the median education level of the population, and 6) two separate dummy variables that reflect the quality of life. This model is estimated by ordinary least squares. Of the seven coefficients generated, six are found to be statistically significant at the 0.01 level or beyond. As in the studies by Renas and Kumar (1978, 1979, and 1981), Cebula (1979) finds the cost of living and the quality of life to exercise a profound impact on interregional migration patterns in the United States.

Living-Cost Determinants and the North-South Framework

The economics literature has only embryonically examined the determinants of geographic living-cost differentials, although there are a few notable exceptions. A basic model to examine this topic is provided in equation (3):

(3) $Pi = Pi(Popi, Deni, Inci, RWi)$

where Pi = measure of the average cost of living for a four-person family living on an intermediate budget in state i, 1981
Popi = 1980 population in state i
Deni = 1980 population density in state i
Inci = 1979 per capita income in state i
RWi = a dummy variable indicating existence of right-to-work laws in state i

The OLS estimate of the linear version of (3) is given by:

(4) $Pi = .22691 - \underset{(-3.16)}{0.00066}\,Popi + \underset{(+4.57)}{1.6358}\,Deni + \underset{(+1.07)}{0.4256}\,Inci - \underset{(-2.84)}{2027.8}\,RWi,\ DF = 43,\ R^2 = .69$

where terms in parentheses are t− values.

The living-cost level is significantly determined here (for 1981) by population size, population density, and right-to-work laws. Moreover, in most earlier studies, e.g., Cebula (1983), the income variable and property taxes also influenced (directly) the living-cost level in

significant ways.

Given the geographic distribution of these various factors, in conjunction with climatic considerations, it is little wonder that the Sunbelt—with its other advantages as well as for industry—has propsered so much in recent years as a result of human and industrial migration. Moreover, as shown in Cebula (1983), this conclusion remains intact even after allowing for climate.

Observations

People (and firms) tend to gravitate to the Sunbelt, with its milder climate and lower cost of living. Moreover, given the fact that right-to-work laws are heavily concentrated in the Sunbelt states, living costs are likely to remain lower in the Sunbelt. Furthermore, even with the influx of northeastern and midwestern labor forces into the Sunbelt, to date there has been no significant rise in the role of labor unions in the Sunbelt, nor any major push to repeal the right-to-work laws existing in the states of the Sunbelt. In addition, lower tax levels in the Sunbelt as a whole act as a marginal incentive for firms and people alike to move. This process is all the more powerful by virtue of the fact that people relocate along with the firms by way of transfer and by way of the pursuit of growing employment opportunities.

As West, Hamilton, and Loomis (1976) have observed, the U.S. Commission on Population Growth and the American Future, in *Population and the American Future* (Washington, D.C., U.S. Government Printing Office, Vol. 5, 1972), has focused attention on population distribution within the United States as a major national policy issue and concern. In this country, both birthrates and death rates have become comparatively stable. As a result, internal migration has become the principal short-run determinant of changes in population distribution and one of the principal long-run determinants of changes in population distribution.

Since geographic living-cost differentials and the quality of life exercise a significant influence on migration patterns, we may infer that living-cost differentials and quality-of-life differentials significantly affect the functioning of regional labor markets. By influencing regional labor markets, living-cost differentials and the quality of life affect the level and growth rate over time of money-wage rates; the level and trend over time of real-wage rates; and regional employment levels and trends. Living-cost differentials and the quality of life can profoundly influence regional economic growth rates by influencing the geographic distribution of labor (and the families thereof). In fact, because the most geographically mobile persons tend to be those possessing the greatest relative endowments of human capital, living-cost differentials and the quality of life could significantly contribute to a pattern of increasingly divergent regional growth rates in this country. Clearly, the states of the Sunbelt, which do in fact possess the living-cost advantages and the climatic advantages, have been and may continue to be the beneficiaries of an immense long-term economic growth surge.

The combination of low living costs and a high quality of life may also generate a myriad of public-policy implications. For instance, the Sunbelt may continue to attract an influx of migrants. This would create a rising demand for local public goods and services in the area. It would also likely generate the need for new revenue for increasing issues of tax-free bonds to finance capital improvements. The latter obviously would affect credit markets. Other areas, in contrast, are likely to lose population and potentially be faced with a declining tax base and an unwanted excess capacity in the utilization of public capital.

Prognosis

Despite the pattern of relatively rapid Sunbelt growth of the last quarter century or more, however, it is not entirely clear that the Sunbelt states will continue indefinitely to exhibit so much more extensive growth than the Frostbelt states. Consider the brief data summary in Table 1 below, where average annual rates of change (as a percentage) are represented.[1]

For over a decade, economic growth in the United States has been viewed as a Sunbelt-Frostbelt conflict— a "Second War Between the States." In this "war," in which the battle cry was "Growth," Southern governors and state industrial development authorities were depicted as aggressive seekers of a larger share of the nation's employment and wealth—even,

Table 1

Comparing Regional Growth Rates
(Average annual rate of change in percent)

	Population		Non-farm employment		Per-capita income	
	1970–80	1980–83	1972–80	1980–83	1970–80	1980–83
Frostbelt						
Northeast	0.02	0.26	1.17	−0.02	1.72	1.74
East North Central	0.35	−0.12	1.48	−2.24	2.09	−0.50
Sunbelt						
South Atlantic	1.88	1.64	3.16	0.89	2.26	1.29
East South Central	1.36	0.19	2.68	−1.06	2.63	0.22
West South Central	2.08	3.18	4.78	1.20	3.35	0.59

some said, at the expense of the North. Retaliating against this perceived threat, coalitions of state and congressional leaders in the North and Midwest banded together to stem the tide of industrial out-migration. In particular, they attemped to redirect the flow of federal money away from the Sunbelt, using the controversial argument that federal spending was ultimately responsible for the region's growth.

Is this "war" really a war, or is it a myth? Table 1 seems to suggest that the war, if it still exists, potentially has begun to enter into a new phase. For example, during the 1970s, there were major differentials in the North-South annual growth rates of population, nonfarm employment, and per capita income. On the other hand, during the period 1980–83, the Northeast has staged a mild comeback (in relative terms, via-a-vis the Sunbelt). This comeback is particularly evident in the case of the annual growth rate of per capita income.

Whether in fact the Northeast has made a strong enough comeback (relative to the Sunbelt) to put an end to divergent North-South regional growth rates on a long term basis depends upon a number of factors. For example, one long term and yet unresolved question is the South's image as a region with a poor educational infrastructure. Another problem is the pattern of asymmetric growth within the South: Florida plus Texas versus the remainder of the South. In addition, while the South is getting more like the rest of the nation in its industrial profile and urbanization, the North is undergoing an *economic resurgence*, especially in New England. The Frostbelt is beginning to display some measure of the competitive wage and cost advantages enjoyed heretofore almost exclusively in the South.

In sum, if the South can attend to such problems as upgrading the quality of education and achieving a more balanced pattern of economic expansion (within the region itself), then the major advantages summarized above would imply a continued long-term North-South growth differential. Nevertheless, there are forces at work that strongly imply at least a narrowing of that differential.

FOOTNOTES

[1]In interpreting the statistics in Table 1, we must be sure to allow for the impact of the 1981–82 recession.

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