Regional Science and Urban Economics 42 (2012) 375–388

Contents lists available at SciVerse ScienceDirect

Regional Science and Urban Economics

journal homepage: www.elsevier.com/locate/regec

Dwindling U.S. internal migration: Evidence of spatial equilibrium or structural shifts in local labor markets?☆

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ARTICLE INFO

Article history:
Received 14 May 2011
Received in revised form 19 October 2011
Accepted 24 October 2011
Available online 6 November 2011

Keywords:
Internal migration
Spatial equilibrium
Labor market flexibility

ABSTRACT

This paper examines whether the significant downward shift in U.S. gross migration rates after 2000 is indicative of the economy nearing a stationary spatial equilibrium characterized by relatively small population growth differentials. Nearing spatial equilibrium would imply that site-specific factors such as amenities and location within the urban hierarchy substantially subside in their influence on net-migration and relative population growth because their values have been capitalized into prices, causing interregional utility levels to become approximately equal. Yet, in an examination of U.S. counties, we find empirical evidence of only slight ebbing of natural amenity-based migration after 2000 and little slowing of population redistribution from peripheral towards core urban areas. Instead, the primary finding is a downward shift in the responsiveness of relative population growth to spatially asymmetric demand shocks post-2000, and associated increased responsiveness of local area labor supply, more consistent with European regional labor markets. Additional sensitivity analysis, including instrumental variable estimation, confirms the result. Quantile regression analysis suggests that our findings are not due to a difference in regional labor market tightness between the 1990s and post-2000.

1. Introduction

Amongst the highest in the world, U.S. interregional labor migration flows have long been viewed as a critical component of U.S. labor market flexibility (Obstfeld and Peri, 1998) and economic performance. Internal migration has been shown to smooth out spatially-asymmetric macroeconomic shocks (Blanchard and Katz, 1992; Partridge and Rickman, 2006b) and the effects of industry restructuring such as those arising from the decline of manufacturing and agriculture (Dennis and Iscan, 2007). Further, internal migration drives regional differences in regional employment and population growth and possibly underlies U.S. advantages in innovation and growth (Crescenzi et al., 2007). The recent decline in gross internal migration, however, raises the possibility that the U.S. economy is nearing a spatial equilibrium. A change in the traditional role of migration in local labor markets would be an alternative explanation.

Persistent migration during the latter half of the twentieth century suggests that the U.S. economy was far from a stationary spatial equilibrium. For example, amenity migration has been a primary driver in the redistribution of population from the Frostbelt to the Sunbelt as U.S. income and wealth increased (Graves, 1979, 1980; Blanchard and Katz, 1992; Plane, 1993). Interregional migration also has been fueled by urban-hierarchy-based shocks, such as those related to changes in communications and transportation technologies and the ascendancy of higher-ordered services (Plane et al., 2005; Partridge et al., 2008b). High-skilled workers seeking to earn greater returns on their human capital form a basis for regional innovation and growth (Becker, 1962; Faggian and McCann, 2006, 2009; Glaeser and Resseger, 2010). An economy approaching a stationary spatial equilibrium would be characterized by greatly diminished net-migration flows as the values of site specific characteristics become capitalized into housing prices and wages (Greenwood et al., 1991).

Perhaps consistent with approaching of a spatial equilibrium, the United States recently experienced a secular decline in the rate of interregional migration. As shown in Fig. 1, beginning with the 1970s, the percentage of the population moving across counties or across states generally started to decline, but the decline became more dramatic at the end of the 1990s. The dramatic decline has led to reports that the U.S. has entered an era of "new localism"

☆ Earlier versions of this paper were presented at the North American Regional Science Association Conference, European Congress of the Regional Science Association, Southern Regional Science Association Conference, London School of Economics, Madrid Institute for Advanced Studies (IMDEA) Social Sciences, and the University of Barcelona.

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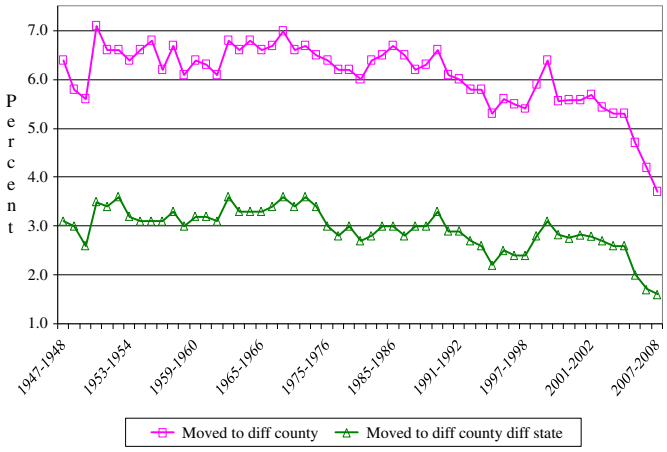
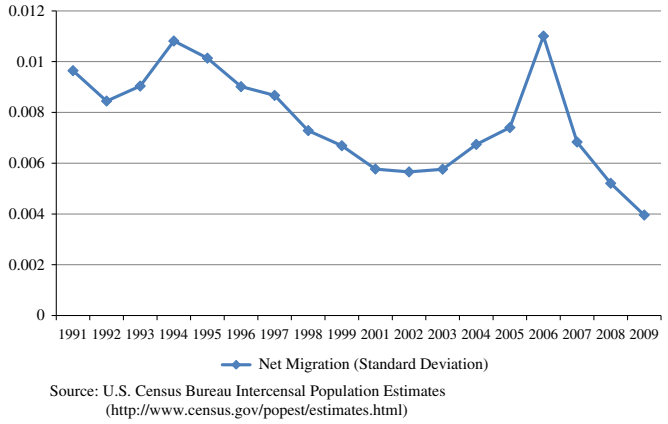
doi:10.1016/j.regsciurbeco.2011.10.006



Source: U.S. Census Bureau, Current Population Survey, Table A-1. Annual Geographical Mobility Rates, By Type of Movement: 1947–2009, available at: http://www.census.gov/population/socdemo/migration/tab-a-1.pdf (accessed Sept. 13, 2010).

Fig. 1. Annual gross migration rates: 1947–2008.



Source: U.S. Census Bureau Intercensal Population Estimates (http://www.census.gov/popest/estimates.html)

Fig. 2. Standard deviation of annual state net migration as a share of initial population.

(Kotkin, 2009) and increased rootedness (Cooke, 2011), raising concerns that jobs would need to be created where people live (Fletcher, 2010). The recent Great Recession that began December 2007 appears to have magnified the post-2000 decline in the rate of migration (Saks and Wozniak, 2007; Frey, 2008).[4]

Regional scientists though focus more on differences in regional growth across U.S. regions than on gross migration flows, as much of gross migration can simply be churning between regions relating to personal considerations (e.g., divorce, marriage) or idiosyncratic matching effects. The more relevant issue then is how the decline in gross migration affected the net migration patterns (reflecting utility differentials) that drive regional growth differentials. Fig. 2 reports the standard deviation of annual county net migration rates (net migration divided by beginning year population) over the 1990–2009 period. The standard deviation of net migration rates experienced a secular decline over the period until 2002, then an upward spike until the peak of the housing bubble in 2006, followed by a sharp decline back to the pre-bubble trend.[5] While the peak of the housing bubble period was associated with an increase in net-migration differentials, possibly because the bubble was associated with an increased regional dispersion of housing prices (Sasser, 2010), the collapse of housing prices post-2006 and the ensuing recession that began in December 2007 rapidly reduced these differentials.

A question arises then whether net-migration and regional growth differentials will significantly rebound after the recession or whether the long-term trend of declining net migration will continue. U.S. population growth differentials may be more "permanently" at a lower level if the economy is nearing a spatial equilibrium in which location-specific attributes have largely been capitalized into local prices and interregional utility levels are nearly equal. Equalized utility levels would be manifested by an absence of net migration aside from the influences of "short-term" labor demand shocks (which would occur even in spatial equilibrium), or personal idiosyncratic migration. Alternatively, if there has been a change in the role of migration in smoothing out asymmetric demand shocks, migration would have a smaller role in regional economic growth differentials, representing a structural shift in U.S. labor markets.

Therefore, this study compares U.S. county population growth and interregional migration during the 1990s with that over the period 2000 to 2007. Because the latter period predates the recession, the comparison establishes whether there has been a longer term, rather than cyclical, shift in interregional migration dynamics. Factors examined include population growth and migration movements related to: natural amenities; proximity in the urban hierarchy; and asymmetric labor demand shocks.

The next section contains the theoretical framework, which demonstrates how the various factors can affect interregional migration and how their influence might change over time. Section 3 presents the empirical approach. General regression analysis, including instrumental variable estimation, and quantile regression analysis are described in Section 4. Among the primary results, there is some evidence of the diminishment of natural amenities as a force in the redistribution of population post-2000. We do not find any evidence that net population movements related to proximity in the urban hierarchy are ebbing—i.e., households continue to locate to areas more proximate to larger urban centers. Thus, consistent with the survey findings on well-being across U.S. states by Oswald and Wu (forthcoming) for 2005–2008, differences in utility arising from "innate state differences" (p. 15) do not appear to have been arbitraged away.

The most important shift appears to be that migration was the primary labor supply response to spatially-asymmetric labor demand shocks before 2000 while post-2000, the primary labor supply response is a change in the local employment rate. Possible explanations include a slack national labor market, which provide ample labor supply sources in most local labor markets, reducing the impetus for interregional migration. Likewise, increased variability of labor demand shocks may have caused risk-averse households to be less willing to migrate for jobs. Another possible explanation is increased labor mobility across industries, reducing the need for households to geographically migrate with job changes, possibly arising from reduced government regulation, reduced unionization and increased globalization (Kambourov and Manovskii, 2008). Further potential explanations include a decline in military transfers (Pingle, 2007) and the aging of the U.S. population. We explore the plausibility of these potential explanations in sensitivity analysis.

A structural shift *away* from the traditional large labor demand induced migration flows would suggest that U.S. regional labor markets have taken on a European flavor, in which asymmetric labor demand

[4] Kaplan and Schulhofer-Wohl (2010) argue that a change in the Census Bureau's imputation method in the March supplement to the Current Population Survey underlies the 2005–2006 dramatic drop in interstate gross migration flows shown in Fig. 1. However, their analysis of non-imputed data shows a significant sustained downward trend in migration after 2000. Moreover, our empirical analysis uses county-level data that are not based on the Current Population Survey and is unaffected by this imputation.

[5] Regression analysis confirms a statistically significant shift downwards in the standard deviation of net migration for the period of 2001–2007. The standard deviation of population growth rates parallels that for net migration over time. In their examination of Internal Revenue Service data, which is that used by the Census Bureau in constructing domestic migration estimates (http://www.census.gov/popest/topics/methodology/2009-stco-char-meth.pdf), Kaplan and Schulhofer-Wohl (2010) note a bump up in 2006 interstate migration, consistent with our Fig. 2 for the standard deviation of net migration rates.