

Articles Citing

Lewis' Analyze the Impact of Public Land Management on Wage Growth Rates in the Northern Forest Region

Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes

Kim Kwang-Koo, David Marcouiller and Steven C. Deller

Natural Amenities have a positive affect on economic growth and an equalizing effect on income distribution. 242 counties across Michigan, Minnesota and Wisconsin were picked for their access to recreation, especially from more urban centers. The authors use spatial data clustering along with a spatial error model to find a relationship between economic growth and these recreational areas. There was no significant relationship found between the natural amenity attributes and population, employment, or income growth. There was a slight positive correlation between lakes and retail/service sector employment.

"Moderate" Environmental Amenities and Economic Change: The Nonmetropolitan Northern Forest or Northeast US, 1970-2000

Kristopher D. White and Dean M. Hanink

The authors' analysis measured environmental amenities, the impact of access to these nonurban areas, and changes to income, population and employment due to their availability in the Northeast. The most significant, and new characteristic found in this study was the relationship between wilderness and access to such. To see positive economic growth areas rich with natural amenities are required to be easily accessible.

Population—Employment Models: Stationarity, Cointegration, and Dynamic Adjustment

Garly L. Hunt

Using two VEC models, one measuring the flow of net migration and employment, the second measuring the levels of net immigration and net natural increase, the author combines the two to create a cointegration equation. The author finds employment levels and population to be non-stationary and cointegrated.

The Determinates of County Growth

Gerald A. Carlino and Edwin S. Mills

Carlino and Mills look at several factors that influence population and employment movement and change. While their results are not applicable to this study, their paper is frequently cited and their model adaptable. The purpose of their paper is to analyze movements from three different areas: metropolitan areas to suburbs, metropolitan areas to non-metropolitan areas and the frostbelt to the sunbelt and whether this movement was a result of government action or inaction. Their

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theoretical model uses a general equilibrium equation. By using this model the relationship between population and employment can be demonstrated, in addition to the effects of highway density, taxes, crime rates, union membership, education, bonds, and regional dummy variables. Their study found that climate is important to people's decision to move. In addition they recommend local government officials spend more on education than employment opportunities as that often draws more people to an area.

The Role of Landscape Amenities in Regional Development

Fabian Waltert, Thomas Schulz and Felix Schlapfer

For the first time, Europeans look at land amenities as a potential draw for population and economics opportunities. Using the same approach as Carlino and Mills the authors look at how landscape affects development across Switzerland. There was a connection found between the proximity of lakes, and a greater portion of land being devoted to visual, landscape amenities. There was no connection found however between hiking trails and employment. There was a lag in growth in areas that were home to areas of large "nationally significant landscapes" (1).

Conservation and Development: Evidence from Thai Protected Areas

Katharine r. E. Sims

Using several thousand subdistricts, containing the majority of protected forest areas in Thailand, Sims' goal is to find a positive association between economic growth and protected lands. With an ordinary least squares model measuring the relationship between socioeconomic growth and protected lands, taking into account land characteristics, average temperature and rainfall, the distances to rivers, waterfalls, railroads, mineral deposits and dummy variables for watersheds and touristic waterfalls. In addition Sims also takes into account qualitative historical research by creating a dummy variable to account for the assertion that land protection decisions are usually made based on physical and geographical decisions. The OLS model found a positive correlation of \$1.70 per month of added income, with a one-third increase in protected land, and a decrease of .066 in the poverty rate. In addition an increase in the Gini coefficient was found demonstrating an increase in income for households close to protected areas.

Forest Management Policy, Amenity Migration, and Community Well-Being In the American West: Reflections from the Northwest Forest Plan

Susan Charnley, Rebecca J. McLain, Ellen M. Donoghue

The authors draw on the example of the Northwest Forest Plan due to the recent increase in population growth and policy shifts towards conservation as seen in Washington, Oregon and California. Using the change in population leveled against a socioeconomic indicator that included employment diversity, unemployment, percent of people living below poverty, household income inequality, education level and travel time to work. Then, the authors divided the communities into two

categories: forest communities, those within five miles of wilderness land, and those that were more than five miles. A statistically significant relationship was found between these factors in forest areas, presumably because areas within five miles of wilderness offer more amenities and easy access. The authors did not find that switching “federal forest management policy from timber production to ecosystem management, biodiversity conservation and protection of endangered species is not correlated with increases in population and socioeconomic well-being in many forest communities.” (16).

Environmental Protection and Impact on Adjacent Economies: Evidence from the Swedish Mountain Region

Tommy Lundgren

Using Swedish mountain municipalities, this paper looks into the effects of land protection on economic growth, net migration, and employment in the forest and tourism industries. The author uses simultaneous equations to model the relationship between these factors. Both positive and significant gains were found between forest sector, net migration, national GDP and a growth in the productive population (16-65 years). In addition tourism is positively affected by net migration. Overall the author found environmental protection to “be favorable for overall economic growth of incomes and net migration in the region studied and detrimental to employment in the forest sector, but the effects are weak,” (531).

The Effects of Protected Forest Areas on Local Economic Development in Villages of Chiang Mai Province, Thailand: A Regression Discontinuity Approach

Kate Emans

Emans uses survey data from the Thai Community Development Department to understand the results of the Thai government’s decision to protect land despite preexisting villages. Many of these villages exist above 500 m in elevation. Using a regression discontinuity approach, the author finds that a decrease of 20-30 percent in wealth can be attributed to these policies. In addition, lower enrollment in secondary and compulsory education can also be attributed to these conservation efforts.

An Empirical Analysis of Employment, Migration, Local Public Services and Regional Income Growth in Appalachia

Gebremeskel H. Gebremariam, Tasfa G. Gebremedhun, Peter V. Schaeffer, Randall W. Jackson, and Tim T. Phipps

Here, the authors use the common simultaneous equilibrium equation model, as first used by Carlino and Mills (1987). To improve this model the authors have included to a model to explicitly demonstrate the role of local government and regional income in the economic growth process. Using a five-question standard simultaneous equation model the authors demonstrate the relationships between

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small business growth, migration behavior, household income, and local public services. The authors include an extensive list of independent variables including demographic, human capital, labor market, housing, industry sector, and amenity variables. Instead of creating a natural amenities index the authors use David A. McGranahan's (1999) index and find positive, but statistically insignificant relationship between employment and natural amenities.

The Effects of Federal Land on Rural Population, Employment and Income in the Rocky Mountain West

Stephen M. Cleverdon

Cleverdon employs a lagged adjusted model to estimate the effects of federal land ownership on population, employment and income in the Rocky Mountain West during the 1990s. While utilizing the same method as Duffy-Deno (1998) Cleverdon's goal is to see if a significant relationship exists, using more current data, and the inclusion income per capita. Land managed by the USFS had a positive impact on employment and income, according to the author; however, it isn't significant enough to make a large impact on employment. Additionally, "None of the federal land variables were statistically significant and negative, suggesting the theory of the negative effect of protected federal land on employment, population or income has no support." (63).

Natural Amenities and Rural Development: The Role of Land-Based Policies

David A Fleming, David A. McGranahan and Stephan J. Goetz

In this study the authors have assembled a very useful table presenting the findings of other key studies that also review the role of natural amenities in socio-economic policy. They present several issues that must be taken under consideration when evaluating amenities. Two such variables that would be useful to include are the diversity of the landscapes and its natural make up (rivers and lakes are preferable to swamps).

Analysis of County Employment and Income Growth in Appalachia: A Spatial Simultaneous-Equations Approach

Gebremeskel H. Gebremariam, Tesfa g. Gebremedhin, Peter V. Schaeffer

In this study the authors attempt to prove that median household income and employment growth are related and affected by regional variables, conditional upon initial conditions in that county, and affected by growth in neighboring counties. The authors draw on Carlino and Mills' use of a spatial simultaneous equations model. The effects of the independent variables: demographics, human capital, labor market, housing, industry structure, amenity and policy variables are then measured against these two. To measure amenities the author's use McGranahan's natural amenity index. In addition the authors use the Generalized Spatial Two-Stage Least Squares model (GS2SLS) and the GS3SLS to test for parameters, similar

to many other studies of the same design. The results are a clear, strong relationship between employment and median household income growth rates.

An Empirical Analysis of County-Level Determinates in Growth Poverty in Appalachia

Gebremeskal H. Gebremariam, Tasfa G. Gebremedhin, and Peter V. Schaeffer

Using a similar model as their other papers, the authors test the interdependence between small business growth and poverty. A strong relationship was found between these dependent variables and the authors made the recommendation that small counties should pull resources to attract small businesses.

The Role of Landscape Amenities in Regional Development: A Survey of Migration, Regional Economic and Hedonic Pricing Studies

Fabian Waltert and Felix Schlapfer

The authors perform an empirical literature study to answer two questions: “Do landscape amenities promote population growth and economic development ... [and] Which landscape amenity attributes are valued?” (5) Using key words the authors found 39 articles that used migration models, regional economic models or hedonic pricing. The authors found 36 amenities effects that positively impacted dependent variables. The variables receiving the most impact were those in the population and migration category. However, most of these came from one study, so no overall conclusion can be drawn from their literature review. When reviewing the studies that used hedonic pricing the authors found few similarities between how the term amenity was defined. The only conclusion that the authors could derive from the HP data was that studies were more effective if they reviewed diverse localities.

Natural Resource Amenity Service Values and the Impacts in the U.S.

Elizabeth Hill, John Bergstrom, H. Ken Cordell, and J.M. Bowker

In this paper the authors have compiled information from a wide range of studies in an attempt to explain the relationship between rural land and population growth. By using McGranahan’s natural amenity scale and comparing it to population growth in rural areas, the authors found that “counties who scored highly on the amenity scale more than tripled their population during a 32 year time period, while low-scoring counties lost population, and in some cases this loss was significant (great than 20 percent loss).” (21) In addition they found that, on average, rent in recreation counties is 23 percent higher than in non-recreation counties. This rent premium increases relative to the degree of recreation dependency a county faces (Reeder and Brown, 2005) (14).

The Economic Benefits of the Land and Water Conservation Fund

This publication, put out by the Land and Water Conservation Fund, claims that counties near protected lands had lower unemployment rates and fewer job losses

during the economic downturn of the 1990s. In addition gateway towns have seen a 1% higher annual increase in economic growth, when compared to statewide rates, every year since the 1970s.

Modeling Small Business Growth, Migration Behavior, Local Public Services and Household Income in Appalachia: A Spatial Simultaneous Equations Approach

Gebremeskel H. Gebremariam

In his dissertation, Gebremariam uses his familiar simultaneous-equation system under the assumptions of the equilibrium growth model to find the interdependencies between small business growth, migration behavior, local public services and median household income. In addition the author uses a spatial autoregressive lag and spatial cross-regressive lag simultaneities and a Generalized Spatial Three-Stage Least Squares Estimator. The results from this study point to a relationship, not only between the dependent variables, but also between the characteristics of neighboring counties. Using the USDA Natural Amenities Index the author finds a positive, but not statistically significant relationship, showing that employment growth rates are related to amenities as it draws in new businesses and workers.

The Value of Clean Water and Wild Forests: Economic and Community Benefits of Protecting New Mexico's Inventoried Roadless Areas

Robert Berrens, John Talberth, Jennifer Thacher, and Michael Hand

This paper has the goal of finding what benefits have been found by creating roadless areas in New Mexico. They build on the work of Loomis and Richardson (2000) "who considered recreation, passive use, scenic, waste treatment, and carbon sequestration values" as well as the value of clean water, recreation and then they quantify this data and compare it to losses incurred by federalization (5). Overall the authors found that from 1995-2004 roadless areas outperformed similar counties by 1.28% in total employment, wage and salary employment, population, total real income, real earning and real earnings per worker.

Forest Amenities and Location Choice in the Southwest

Michael S. Hand, Jennifer A. Thacher, Daniel W. McCollum, and Robert P. Berrens

Looking at the surge in population growth, the authors work to show a connection between this growth and forest amenities. In addition, the authors think that those moving to their areas will have a higher income, thus increasing their demand for natural amenities. There was a much stronger relationship found between female population growth and amenities presence, however there was a small relationship for both men and women. As for the second part of the hypothesis, a relationship was found between high-income individuals and their decision to move to areas with more forestland and water features. In this case the findings differed from the first set of results as men had a stronger relationship than women.

A Spatial Panel Simultaneous-Equations Model of Business Growth, Migration Behavior, Local Public Services and Household Income in Appalachia

Gebremskel H. Gebremariam, Tesfa G. Gebremedhin, Peter V. schaeffer, Tim t. Phipps, Randall W. Jackson

Using a spatial panel simultaneous-equations model and a Generalized Spatial Three-Stage Least Squares model the authors attempt to answer the question of whether “jobs follow people, or people follow jobs”. The authors find that employment growth ultimately brings in new immigrants and migration acts as an equalizing force. A strong correlation was also found between natural amenities and the Gross In-Migration Rate. Employment is also highly effected by the counties surrounding it and the number of adults between the ages of 22 and 44.

Modeling Small Business Growth, Migratin Behavior, and Household Income in Appalachia: A Spatial Simultaneous Equations Approach

Gebremeskel H. Gebremariam, Tesfa G. Gebremedhin, and Peter V. Schaeffer

The authors promote small business growth as the solution to low-income Appalachian counties. Using a four equation, spatial simultaneous framework the authors attempt to draw a connection between “small business growth (using employment growth rate as a proxy), gross in-migration rate, gross out-migration rate, and incidence of poverty (using median household income as a proxy)” (2). Evidence was found showing that high in-migration leads to small business growth, which in turns pulls more migrants, and creates a self –generating, income increasing system.

Urban/Regional Economics and Rural Development

Maureen Kelkenny

In this paper Kelkenny argues for policies that will stem the negative consequences from out-migration in rural communities. Kelkeny argues these are due to market failures, increasing transportation costs, the high cost of relocating housing and the increased rate of poverty found in rural areas. The author argues for a shift in rural development research and rural development funding.