Is Attracting Retirees a Sustainable Rural Economic Development Policy?

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Abstract

An economic impact analysis was conducted in two rural counties in Northwest Arkansas to observe effects of hypothetical retiree in-migration as a sustainable economic development policy. The analysis reveals economic benefits with varying impacts and additional socio-economic costs on both counties. The policy has the potential for sustaining in the long-term.
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Key Words: Rural Development, Economic Impact Analysis, Retiree In-migration

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Introduction

The coming 10 years will see an increase in the number of retirees of the baby-boomer[3] generation. In the US, the baby-boomers number seventy-six million and account for over 28 percent of the population (Census, 2006). As a group, baby-boomers have enjoyed higher income during their working years than any preceding generation, and they have been accumulating substantial savings, in part to provide for their retirement (CBO, 2004). To spend the rest of their lives, retirees relocate to locations of their choice based on several factors such as good weather, cost of living, natural amenities like lakes, rivers, mountains, less congestion and crime, as well as a community atmosphere. In 1990 and 2000, Florida was the most popular[4] destination for migrating retirees (Longino and Bradley, 2003). Studies have shown that from 1960 through 1980, nearly 60 percent of the inter-state migrating retirees settled in ten states[2]. However, this dropped to 56 percent in 1990 and about 54 percent in 2000 (Longino and Bradley, 2003), which meant the group was gradually spreading out to alternate locations. This has prompted states that were not traditional retiree destinations to experiment with policies directed at attracting retiree in-migrants to relocate to their communities (Haas and Serow, 2002).

Studies reveal that retirees have positive economic impacts on the communities where they choose to relocate (Miller, 2005; Miller and Rainey, 1997; Miller and Hy, 1998; Conway and Houtenville, 2003; Whitner and McGranahan, 2003). The benefits of in-migrating retirees into a community include stimulated growth in the health services, housing, banking, restaurants and entertainment sectors etc. (Skelley, 2004; Haas and Serow, 1993). Specifically, sectors that benefit from in-migration of retirees include real estate (residential & commercial), finance

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[3] People born between 1946 and 1964, who make up one of the largest and most prosperous generations in U.S. history.

[4] The ten most popular states for in-migrating retirees in 1990 and 2000 were Florida, California, Arizona, Texas, North Carolina, Pennsylvania, New Jersey, Washington, Virginia and Georgia in that order.

(banks, insurance, stocks, financial planners, and accountants), healthcare (professionals & facilities), recreation and entertainment, hospitality (lodging & restaurants), retail (durables & non-durables), utilities, and tourism (visiting & permanent tourists). Concurrently, this leads to an increase in property and sales taxes that enables local governments to spend on improving local services. Affluent retirees usually do not strain social services, healthcare services, school systems, criminal justice system, nor create environmental problems. Overall, communities that have a sizable elderly population are more likely to have a stable economy and are resistant to economic downswings. The policy however imposes several socio-economic costs that include rise in public spending for elderly healthcare and support services and the possibility of affecting the social fabric of the community.

Over the past two decades, the nation and most states have experienced changes to their economic structure with the agriculture and manufacturing sectors showing a gradual decline in employment. For example, manufacturing employment in Arkansas has declined from 11.7 percent of total employment during 1980-1990 to 8.2 percent during 1990-2000 (REIS, 2001). Due to increased globalization and rising domestic production costs, more manufacturing and service related jobs are being outsourced to less developed countries offering lower-cost skilled and unskilled labor. While some states including Massachusetts, California, Colorado, and Texas are switching to 'knowledge' based industries, many including Arkansas are yet to find economic growth engines for a sustainable economic future (Milken Institute, 2004). A state like Arkansas with about 20 percent of counties categorized as under poverty, needs to be innovative and devise alternate strategies/policies to fuel and sustain long-term economic growth and development. Given the changing structure of the local (county) economies, new growth engines are required for a sustainable future (Das and Rainey, 2006). This study proposes retiree in-

migration as an economic development policy and aims to investigate the likely socio-economic impact of implementing such a strategy.

Arkansas, especially the northwest region is endowed with abundant natural resources like mountains, lakes, rivers, plenty of greenery, arts and crafts centers, and a warm climate for most of the year. This has attracted tourists from all over the country. As illustrated in Figure 3, the state already boasts of some attractive and well established retirement communities in Bella Vista Village, Hot Springs, Mountain Home, Jonesboro, West Memphis and Texarkana. However, there is plenty of untapped potential in other areas of the state that needs to be exploited by local communities to jumpstart their economies for a better future.

Studies show that tourism attracts retirees (Chestnutt et. al. 1993). It is likely that if retirees like a tourist destination, it gets included in their list of destinations for possible relocation. While urban areas prosper due to the ongoing information technology revolution and growth of the 'new' economy, rural America is left languishing and searching for alternate development strategies. Some communities that have the infrastructure to support tourism are realizing that another industry is waiting –the 'retirement industry'.

Objective

The main objective of this study is to evaluate the socio-economic impacts of a hypothetical development strategy based on simulated retiree influx into two economically disadvantaged and amenity-rich rural counties in Northwest Arkansas. The specific objectives are to identify the different socio-economic benefits of the suggested strategy and evaluate the sustainability prospects. Further, the study also examines the likely differences in economic impacts due to the two counties' proximity to urban counties (areas).

Conceptual Framework

The study uses the input-output model as a framework to study the multiplier effects of expenditures made by retirees on each of the sectors (industries).

Input-Output Models

An input-output model (I-O model) is a mathematical model that describes the flow of money between sectors within a region's economy. Flows are calculated by knowing (by surveying each industry) what each industry must buy from every other industry to produce a dollar's worth of output. Using each industry's production function, an I-O model also determines the proportion of sales that go to wage and salary income, proprietor's income, and taxes. Multipliers can be estimated from input-output models based on the estimated re-circulation of spending within the region. Exports and imports are determined based upon estimates of the propensity of households and firms within the region to purchase goods and services from local sources (often called RPC's or regional purchase coefficients). The more a region is self-sufficient and purchases goods and services from within the region, the higher the multipliers for the region. Input-output models make a number of assumptions. The basic ones include: (1) all firms in a given industry employ the same production technology (usually assumed to be the national average for that industry), and produce identical products; (2) there are no economies or diseconomies of scale in production or factor substitution; (3) I-O models are essentially linear – double the level of activity/production and you double all of the inputs, the number of jobs, etc; (4) the model doesn't explicitly keep track of time, but analysts generally report the impact estimates as if they represent activity within a single year; (5) the various model parameters are accurate and represent the current year; (6) I-O models are firmly grounded in the national system of accounts that relies on the North American Industry

Classification System (NAICS codes) and various federal government economic censuses, in which individual firms report sales, wage and salary payments and employment; (8) the I-O models are generally a few years out-of-date, which usually is not a major problem unless the region's economy has changed significantly; (9) an I-O model represents the region's economy at a particular point in time (Stynes, 2006).

Sales leakages from a county

Net leakage from a county is defined as the net outflow or inflow of expenses made by county residents or visitors within a county. Depending upon the location of a county, the spending patterns of its residents tend to vary. For example, residents in a rural county that is adjacent to an urban county/area are expected to make some of their purchases in the urban area. This is in contrast to a rural county surrounded by other rural counties, where a higher proportion of the resident's expenditures are expected to stay within the county. Several techniques are used to assess the net leakages from a county's economy.

Trade Area Capture

Trade Area Capture (TAC) estimates number of customers a county's retail sector serves. TAC incorporates income and assumes that local tastes and preferences are similar to the tastes and preferences statewide. Trade Area Capture (TAC_{ij}) is estimated below:

$$TAC_{ij} = AS_{ij}/((AS_{sj} / P_s)(Y_c / Y_s))$$

Where TAC_{ij} represents trade area capture for retail sector j in county i measured by customer equivalents, AS_{ij} represents annual taxable retail sales in sector j in county i, AS_{sj} represents annual taxable retail sales in sector j for the state of Arkansas, P_s is the state population, Y_c is county per capita income, and Y_s is state per capita income. If county trade area capture exceeds the county population, either the county is capturing outside trade or local residents have higher

spending patterns than the state average. If trade area capture is less than county population, either the county is losing potential trade or local residents have lower spending patterns than the state average (Harris, 2003).

Pull Factor

The Pull Factor (PF) is the ratio of county trade area capture to county population and measures a county's drawing power. Pull factor makes explicit the proportion of consumers that a county draws from outside its boundaries. Over time, pull factor ratio removes the influence of changes in county population when determining changes in drawing power.

$$PF_{ij} = TAC_{ij} / POP_i$$

Where PF_{ij} is the pull factor value for commercial sector j in county i, TAC_{ij} is the trade area capture value for commercial sector j in county i, POP_i is population in county i. The pull-factor analysis can help identify selected retail sectors that may be targeted for retail sector development. Most often a pull-factor below 1.0 indicates a retail sector opportunity. However, this assumes that the low pull-factor is due to local residents shopping outside the county, which is not always true. Analogously, if a pull factor is above 1.0, it may suggest that the county is drawing in residents from neighboring counties to shop (Harris, 2003).

Data/Methods

The 2003 data set from IMPLAN for Carroll and Baxter Counties was used to assess the multiplier effects due to inmigration of the retirees. Data on socio-economic variables for both counties was obtained from the Census Bureau and the county-wise data from state government internet sources. Data on the expenditure pattern of retiree families was obtained from the Bureau of Labor Statistics Consumer Expenditure Survey (BLS, 2006). Given the spending

habits of the retiree household, the expenditure data was used to assess the economic and fiscal impacts on the county economies. The scenario can best be described in terms of the changes in final demand that retirees present to the local economies. The input–output modeling software IMPLAN (2003) was used for the analysis. The changes in Carroll and Baxter counties employment and income due to the multiplier effects were then compared to the respective baseline scenarios that represent the status quo (pre-inmigration) for the base year. To address the sustainability issue, economic, demographic, and social variables were combined to draw broad conclusions on the possible effects of retiree in-migration to both counties.

Data used in the Input-Output model is given in Table 1. The annual expenditures are listed per household. The Local Purchase Coefficient (LPC) represents the percentage of expenditure made locally. Intuitively, it means that a higher LPC will have a bigger multiplier effect on the local community. Due to its proximity to urban counties like Benton and Washington, the LPC of apparel, health and vehicle insurance, and medical services is expectedly low in Carroll County. Similarly, the LPC for telephone services is very low in Carroll because the telephone carriers are located outside of the county. The property tax has a LPC of 1.00 in both the counties implying that all property taxes collected are spent locally. Given the location of Baxter County, household expenditures are expected to be confined to making local purchases. For example, due to the presence of Baxter County Regional Hospital and Baxter Healthcare Corporation in Mountain Home, the LPC for medical services was 95 percent for Baxter County.

Study Area

The two counties included in this study are Carroll and Baxter Counties in Northwest Arkansas. Carroll, a predominantly rural County is adjacent to Benton, and very close to neighboring Washington, which are both urban counties. Benton and Washington Counties together form the Northwest Arkansas Metropolitan corridor, which is home to the headquarters of Wal-Mart Inc., Tyson Foods Inc. and JB Hunt Transport Inc. In 2005, these two counties were among the nation's top areas in terms of job and income growth (Forbes, 2005). On the other hand Baxter, also a rural county is surrounded by other rural counties (Marion, Searcy, Stone, Izard, Fulton). In 2003, the median household incomes in Carroll and Baxter Counties were $27,711 and $30,463 compared to $45,264 and $36,825 in Benton and Washington Counties respectively. In 2000, manufacturing, services and retail trade accounted for approximately 68 and 69 percent of the total county employment in Carroll and Baxter counties respectively. During 1990-2000, services and retail industries accounted for more than fifty percent of the total jobs created in Carroll County, in contrast to 63 percent in the same two sectors in Baxter County. Whereas, during the same period, manufacturing employment accounted for 7 percent growth in Baxter County, in contrast to Carroll County, which was on a stronger wicket with a 30 percent increase.

Figures 1 and 2 illustrate the population trends in the two counties. The average rates of population growth for the period 1980-2005 were 2.09 and 1.56 percent in Carroll and Baxter Counties respectively. However, for the same period, the population growth of residents over age 65 was higher in Baxter (1.40 percent) compared to Carroll (1.35 percent). As illustrated in Figure 2, the ratio of seniors to the total population has been declining in both the counties, with Carroll County experiencing a more rapid decline compared to Baxter County. The local

authorities need to take note of this trend by adopting a retiree in-flux policy, which could be one of the initiatives to arrest this declining path.

Findings

The simulated long-run impacts of 100 new households are reported in Tables 2 through 7. The impact on the two rural counties are reported for output, employment and value-added (labor income, proprietary income, indirect business taxes etc) where the pre-migration scenario (baseline) is compared with the post-migration scenario (simulated scenario). The difference between the two scenarios is the net impact due to the in-migrating retirees. While the total effects are important, it is important to disaggregate the effects into direct, indirect and induced effects to understand the multiplier effects in each of the sectors. Direct effects result from the retirees spending dollars to purchase goods, services and real estate. Indirect effects arise when local businesses hire new employees to cater to the new demand and spend dollars on goods, services as well as real estate. The indirect effects are computed using the direct expenditures adjusted for employment and income multipliers generated by IMPLAN. Induced effects result from local purchases of goods and services made by new employees hired to meet the increased demand from retirees.

As expected, the in-migration of retirees had a bigger impact on the output of retail trade and services industry. In the results, retail trade is listed under manufacturing due to the aggregation[5] process adopted by IMPLAN. In Baxter County, the total impact on output was $2.53 million, which translated into a 0.16 percent increase over the baseline output. The retail and services industry had total impacts of $1.43 and 0.78 million respectively. Due to the indirect

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[5] The aggregation scheme used in IMPLAN is listed in Table 1.

and induced effects, output in the FIRE[6] industry increased by 0.04 percent, agriculture industry by 0.02 percent, TCPU[7] by 0.07 percent, and trade by 0.13 percent over the baseline. In Carroll County, the total impact on output was $2.65 million, a 0.19 percent increase over the baseline. The retail and service industry had increases in output to the tune of $1.48 and $0.78 million respectively. Relative to the baseline output levels, mining industry output increased by 0.41 percent, and based on the indirect and induced effects, agriculture output increased by 0.03 percent, TCPU by 0.17 percent, trade by 0.17 percent and FIRE by 0.24 percent.

Employment increase relative to the baseline was marginally different in the two counties. In Baxter County, 46 jobs will be created, while Carroll County will have 50 additional jobs. Given the average size of a retiree household at 1.7 (BLS, 2006), in-migration of 100 households translates into 170 individuals, which translate into 0.27 and 0.29 new jobs per person in Baxter and Carroll Counties respectively. This is slightly lower compared to an earlier study that reported 0.34 jobs per person in Wisconsin (Shields et al, 2001). The difference could be attributed to the time periods used in both studies as well the different income and multiplier values in the models. Breaking up by industry, retail industry is the major beneficiary in both the counties with 28.1 and 32.8 jobs additional jobs in Baxter and Carroll Counties respectively. Carroll County added more jobs due to the high LPC, primarily due to a large number of visitors to Eureka Springs who buy goods from local retailers. Baxter and Carroll Counties added 14.5 and 14.3 jobs in the service industry. The presence of two major hospitals in Mountain home resulted in Baxter creating marginally higher number of service jobs due to a bigger multiplier effect relative to Carroll where lot more residents travel to neighboring Benton and Washington counties for their service needs.

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[6] Finance, Insurance and Real Estate (FIRE)
[7] Transportation, Public Utilities (TCPU)

Table 6 and 7 give a comparison of the value added[8] in Baxter and Carroll counties respectively. Baxter County has a value addition of $1.67 million, a 0.20 percent increase over the baseline value. Retail and services industry had value addition of $1.03 and $0.50 million respectively. Besides, mining industry value added increased by 0.30 percent, and due to the indirect and induced effects, TCPU value added increased by 0.07 percent, agriculture by 0.01 percent, trade by 0.15 percent and FIRE by 0.15 percent. Similarly, in Carroll County, the retail and services industry had value addition of $1.01 and $0.47 million respectively, which was a 0.34 and 0.29 percent increase over their baseline values. Mining industry value addition increased by 0.46 percent, and due to the indirect and induced effects, agriculture value added increased by 0.004 percent, TCPU, trade, and FIRE increased by 0.17, 0.17, and 0.24 percent respectively.

Table 8 illustrates the tax impacts due to in-migration of 100 retirees. Baxter County had a total tax impact of $429,589 i.e. $2,527 tax impact per capita. State and local government would have a tax increase of $208,377 i.e. $1,226 per capita. This translates into a 2 percent increase of tax revenues over the baseline revenues for Baxter County. Sales tax, property tax and income tax were the major components of the new taxes obtained with values of $126,526, 37,041 and 17,509 respectively. Carroll county had a total tax impact of $435,037 i.e. 2,559 per capita. State and local governments had a tax increase of $214,148 i.e. $1,260 per capita. This translates into a 2.8 percent increase of tax revenues over the baseline revenues for Baxter County. The share of sales tax, property tax and income tax in the state/local government tax increases were $128,095, 37,500 and 17,872 respectively. This is consistent with the trends that exist in most parts of the state where sixty-nine of states' 75 counties have a county sales tax making them less reliant on the property tax to generate local revenue.

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[8] Valued added includes proprietary income, labor income, other property income and indirect business taxes.

To get an idea about the leakages from the two counties to neighboring areas, the TAC and PF were estimated. The results are presented in Table 9. In Baxter County, the estimated TAC was 25,269, which is less then the county population. The PF was estimated to be 0.65. Both the estimates indicate that the retail industry in Baxter County is losing potential trade or local residents have lower spending patterns than the state average. However, the service industry had contrasting results with a TAC of 34,823 and PF of 1.32, which meant that either the county is capturing outside trade or local residents have higher spending patterns than the state average. This is true primarily due to the presence of the 2 medical centers as well as some tourism activities in the county. Retail industry in Carroll County had a TAC of 40,578 and PF of 1.04, which meant that the retail industry captured more of outside trade, which is true due to the presence of Eureka Springs, which attracts a lot of tourists. However, the service industry is not as developed and lot of the trade gets leaked into neighboring urban counties owing to which the TAC was 26,114 which is less than the county population and the PF was 0.98 which is less than 1 indicating a net outflow of service from the county.

Conclusion/Discussion

The two counties in the study were deliberately chosen due to both fitting the profile: predominantly rural, amenity-rich, and already having some experience with retirement communities. Further, both the counties had per capita incomes below state average, declining manufacturing employment, marginalized farming activities, and with significant potential to attract retirees as an economic growth engine for long-term economic development. While the level of expenditure that was induced as a shock to the economy based on the in-migration of 100 retiree households was identical, the impacts vis-à-vis output, employment, value added and

taxes were marginally different in both the counties. This was primarily due to the multiplier effects that the input-output model assigned to various sectors within the two counties. For example, we expected Carroll County to lose part of its retail sales and services to more urban and neighboring Benton and Washington Counties. This was however partially true, because the service industry did lose part of its income, but the retail industry gained a lot of outside business mainly de to the influx of tourists. Similarly, we expected Baxter County to have most of its sales confined within the county. This also proved to be partially correct because the service industry gained from outside business. However, the retail industry did not perform as well, mainly due to the lower purchasing power of the county residents. Thus, the hypothesis that we set out with is not entirely justified. Although location does impact the spending patterns of residents, outflow in one sector could be offset by inflow of trade in another sector. This was true for Baxter County where the service industry attracted outside trade and in Carroll County, where the retail industry had a high regional purchase coefficient and therefore a high multiplier effect on the local economy.

The employment impacts in the two counties were different too. Baxter, which is a demographically larger county, had a marginally lower multiplier effect due to which the per capita gain in jobs was 0.27. Carroll County on the other hand gained 0.29 jobs per in-migrating person, which could be attributed to the high multiplier effect in the retail industry. From a fiscal point of view, Carroll County benefited more than Baxter County, mainly due to a higher percentage increase in tax revenues (Carroll County had a lower revenue baseline value due to it being a relatively smaller county).

The overall impact of the simulated scenario was positive for both the counties that resulted in marginal gains to their respective county economies. The main gains are in the retail

and services industry as well as in the construction sector. However, the jobs that are created are often low paying jobs due to which the county per capita income is not expected to increase significantly. The major question that remains unanswered and confronts most local communities is regarding the cost that the retirees impose on their local governments. It is often too abstract to estimate the actual social and economic costs that this group imposes on the community. While it is possible to quantify the healthcare, and other senior citizen services costs, it is impossible to put a value on the social cost that they impose. Depending upon the ratio of young[9] elderly to old[10] elderly, the economic and social impact will vary mainly because the old elderly strain the local health care system more and use more elderly assistance services (Aday and Miles, 1982)

The literature emphasizes that retirees tend to relocate to places they have previously visited (Haas and Serow, 1993). Therefore, counties those are willing to adopt a retiree development strategy need to begin by promoting tourism. The investments made towards attracting more tourists could have long-term benefits if the elderly decide to retire in those areas. Given the profile of counties chosen, it is highly unlikely that many manufacturing or other 'knowledge' based industries will set up shop in those areas. Even for areas where it is possible, studies reveal that it is far less expensive to create a job by in-migrating retirees than setting up manufacturing units (Fagan, 2005). For example the cost per job for BMW (Greenville, SC, 1992), Mercedes (Tuscaloosa, AL, 1994), Fed Ex (Greensboro, NC, 1999), Nucor Steel (Hertford, NC, 2000), and Hyundai (Montgomery, AL, 2005) were $81,000, $193,000, $182,000, $500,000, and $126,500 respectively (Fagan, 2005). Therefore, such a policy as recommended in this study is not just an option, it could be a practical solution for a

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[9] Young elderly are physically active and economically more affluent

[10] Old elderly are physically inactive and fiscally disabled who rely to a greater degree on local health services for their living.

number of counties in the state of Arkansas and outside to deal with the current economic realities that they are confronted with.

While this study has emphasized the economic benefits that accrue to a community due to the suggested policy, a realistic assessment of it requires addressing the social impacts as well. The retirees tend to be more affluent, thus there could be potential friction with the local communities based on their way of living i.e. urban versus rural way of life. Further, the demographic profile of a region could change with more elderly people, which could alter the social balance and make it more unfavorable for the younger population.

Is the policy sustainable for the rural counties? It remains a complex question that can only be answered by comprehensively evaluating the social, economic, human and governmental costs and benefits. The first step involves the local community coming together to decide if they have the necessary resources-human, physical as well as financial, and the will to accept newcomers into their community. Such a policy will not be effective if the local population is not receptive. This study has helped in assessing the economic impacts of the in-migration in the two selected counties. Knowing which sectors will face the increased demand in future could assist local businesses to plan ahead for the future in terms of making expansions or starting new businesses. Government, both state and local, need to act in unison to determine the additional infrastructure needed in each community. Governmental cooperation is also needed in making the region more attractive to tourists. There also needs to be interaction between local government, other institutions, and groups to effectively implement such a policy.

The process involved in setting up a private business enterprise and adopting a 'retiree in-migration' policy is similar. While both require comprehensive planning for physical infrastructure and finance needs, 'retiree in-migration' needs to carefully consider the broader

social implications. The policy becomes sustainable only if it is pursued over a long period and with the county having a healthy demographic mix of old age and working age families. The two groups cross-subsidize each other in a sustainable economy. While the working age families subsidize the healthcare and other elderly assistance service needs, the older generation subsidizes the education and other public services that they often do not use.

Given the findings of the study, county level decision makers in Baxter and Carroll Counties need to realistically make an assessment of the social impacts such a policy could have. In conjunction with the results of this study, local decision makers need to evaluate the long-term viability and sustainability of adopting such a policy. They need to draw from the experiences of counties around the country that have experimented with this strategy, and take steps to avoid any loopholes that those regions might have faced. It is a very practical policy that needs consideration by local communities that have the resources and the will to move forward in this new global economy.

Figure 1. Population trends in Baxter and Carroll Counties during 1980-2005
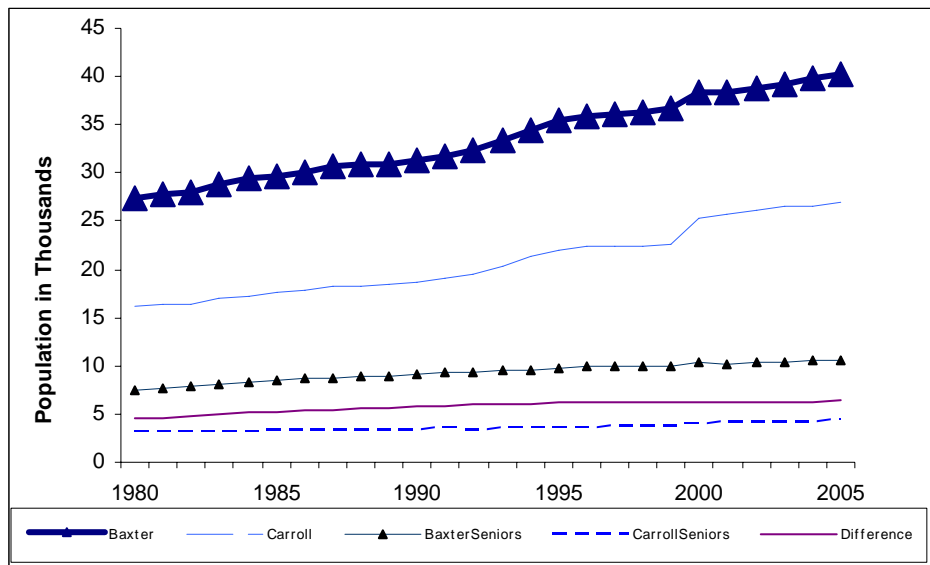

Figure 2. Proportion of Residents Age 65+ in Baxter and Carroll Counties during 1980-2005
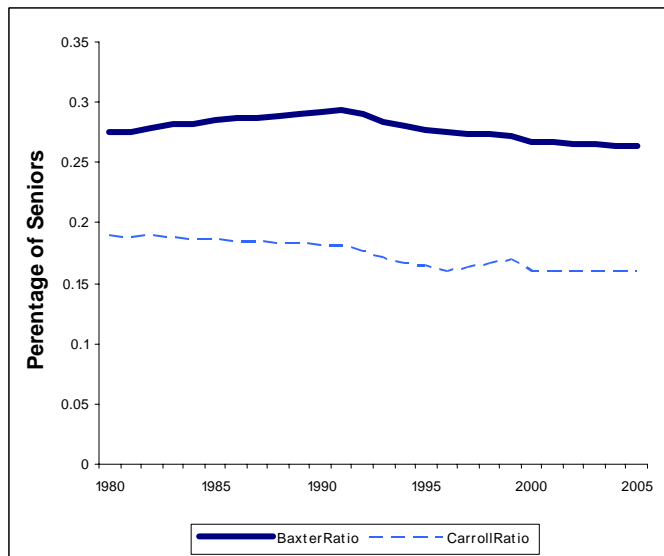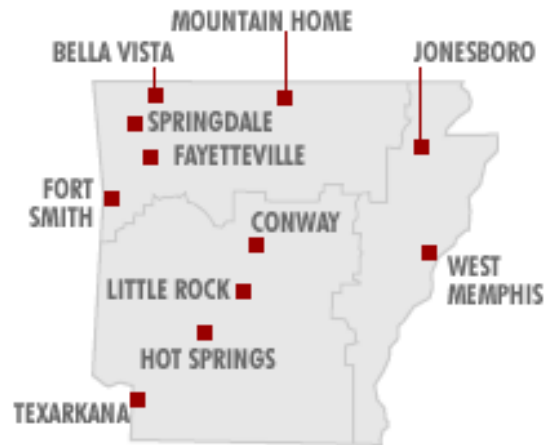
Figure 3. Major Retirement Communities in Arkansas

Source: American Home Guide, 2006

Table 1. Annual Household Expenditure and Local Purchase Coefficient for Residents over Age 65+
    in Baxter and Carroll Counties

BLS Category	IMPLAN #	IMPLAN Sector	Expenditure	LPC Baxter	LPC Carroll
Electricity	30	Mining	946	0.4869	0.8955
Natural Gas	31	Mining	396	0.5516	0.7314
Water	32	Mining	332	1.0000	1.0000
Shelter Maintenance	42	Mining	1,266	0.8706	0.8775
Vehicle Purchases	401	Manufacturing	3,039	0.9443	0.8272
Food at home	405	Manufacturing	2,575	0.6792	0.6570
Apparel	408	Manufacturing	908	0.5083	0.4190
Miscellaneous Retail	411	Manufacturing	2,752	0.9500	0.9500
Drugs and Medical Supplies	411	Manufacturing	1,051	0.9500	0.9500
Telephone	422	Manufacturing	673	0.5628	0.2534
Health Insurance	427	Manufacturing	2,002	0.3268	0.1159
Vehicle Insurance	427	Manufacturing	640	0.3268	0.1159
Shelter (owner dwelling/rent)	430	Manufacturing	851	0.5662	0.5698
Rented Dwellings	431	Manufacturing	1,331	0.4268	0.5481
Medical Services	465	Services	688	0.9499	0.5559
Other lodging	479	Services	355	0.7922	0.8006
Food away from home	481	Services	1,321	0.8173	0.9000
Auto Maintenance Repair	483	Services	467	0.8999	0.8999
Cash Contributions	492	Services	1,969	0.4317	0.5041
Property Taxes	503	Services	1,399	1.0000	1.0000
Home Furnishings	402	Manufacturing	923	0.9500	0.9500
Total			25,884		

Table 2. Baseline Output versus Simulated Impact Results for Baxter County

	Baseline	Retiree In-Migration Scenario				
Industry	Industry Output	Direct	Indirect	Induced	Total	Percent
Agriculture	27.14	0	0.002575	0.002899	0.005474	0.0202%
Mining	98.825	0.1992	0.018241	0.015769	0.23321	0.2360%
Construction	0	0	0	0	0	0.0000%
Manufacturing	788.208	1.099151	0.148157	0.187348	1.434656	0.1820%
TCPU	33.557	0	0.016609	0.009197	0.025806	0.0769%
Trade	24.229	0	0.027037	0.006611	0.033648	0.1389%
FIRE	29.623	0	0.009826	0.004517	0.014342	0.0484%
Services	518.174	0.468675	0.022848	0.295108	0.786631	0.1518%
Total	1,519.76	1.767026	0.245294	0.521448	2.533768	0.1667%

Table 3. Baseline Output versus Simulated Impact Results for Carroll County

	Baseline	Retiree In-Migration Scenario				
Industry	Industry Output	Direct	Indirect	Induced	Total	Percent
Agriculture	185.8	0.000	0.002	0.004	0.007	0.0036%
Mining	78.6	0.276	0.027	0.025	0.328	0.4167%
Construction	0.0	0.000	0.000	0.000	0.000	0.0000%
Manufacturing	833.2	1.172	0.137	0.173	1.481	0.1778%
TCPU	10.4	0.000	0.011	0.007	0.018	0.1768%
Trade	8.5	0.000	0.011	0.003	0.015	0.1711%
FIRE	6.3	0.000	0.010	0.005	0.015	0.2396%
Services	255.8	0.502	0.026	0.261	0.789	0.3084%
Total	1,378.6	1.949	0.226	0.478	2.652	0.1924%

Table 4. Baseline Employment versus Simulated Impact Results for Baxter County

	Baseline	Retiree In-Migration Scenario				
Industry	Industry Employment	Direct	Indirect	Induced	Total	Percent
Agriculture	464.46	0	0.1	0.1	0.2	0.0431%
Mining	1,102.57	1.4	0.2	0.1	1.7	0.1542%
Construction	0	0	0	0	0	0.0000%
Manufacturing	7,207.92	23.7	1.7	2.7	28.1	0.3898%
TCPU	496.003	0	0.2	0.1	0.4	0.0806%
Trade	506.958	0	0.6	0.2	0.8	0.1578%
FIRE	431.975	0	0.2	0.1	0.2	0.0463%
Services	7,708.88	10.2	0.4	3.9	14.5	0.1881%
Total	17,918.77	35.3	3.4	7.3	46	0.2567%

Table 5. Baseline Employment versus Simulated Impact Results for Carroll County

	Baseline	Retiree In-Migration Scenario				
	Industry Employment	Direct	Indirect	Induced	Total	Percent
Industry						
Agriculture	757	0	0	0	0	0.0000%
Mining	724	1.9	0.2	0.1	2.3	0.3176%
Construction	0	0	0	0	0	0.0000%
Manufacturing	6,394	28.6	1.6	2.6	32.8	0.5130%
TCPU	166	0	0.2	0.1	0.3	0.1808%
Trade	100	0	0.2	0	0.2	0.1997%
FIRE	102	0	0.2	0.1	0.2	0.1967%
Services	4,746	10.4	0.5	3.4	14.3	0.3013%
Total	12,989	40.9	2.9	6.3	50.1	0.3857%

Table 6. Baseline Value Added versus Simulated Impact Results for Baxter County

	Baseline	Retiree In-Migration Scenario				
	Industry Employment	Direct	Indirect	Induced	Total	Percent
Industry						
Agriculture	13.821	0	0.001104	0.001025	0.002129	0.0154%
Mining	36.022	0.090668	0.009768	0.009008	0.109444	0.3038%
Construction	0	0	0	0	0	0.0000%
Manufacturing	396.194	0.811195	0.098473	0.12896	1.038628	0.2622%
TCPU	20.456	0	0.010236	0.006112	0.016348	0.0799%
Trade	13.142	0	0.016593	0.003999	0.020592	0.1567%
FIRE	12.018	0	0.004463	0.001904	0.006367	0.0530%
Services	320.495	0.310987	0.009994	0.183758	0.504739	0.1575%
Total	812.149	1.212851	0.150631	0.334765	1.698248	0.2091%

Table 7. Baseline Value Added versus Simulated Impact Results for Carroll County

	Baseline	Retiree In-Migration Scenario				
	Industry Employment	Direct	Indirect	Induced	Total	Percent
Industry						
Agriculture	69.7	0.0000	0.0011	0.0019	0.0030	0.0043%
Mining	35.8	0.1335	0.0160	0.0151	0.1647	0.4598%
Construction	0.0	0.0000	0.0000	0.0000	0.0000	0.0000%
Manufacturing	295.5	0.8232	0.0806	0.1124	1.0162	0.3439%
TCPU	6.1	0.0000	0.0061	0.0045	0.0106	0.1738%
Trade	4.0	0.0000	0.0053	0.0015	0.0069	0.1708%
FIRE	2.6	0.0000	0.0044	0.0021	0.0065	0.2486%
Services	160.7	0.3073	0.0103	0.1526	0.4701	0.2925%
Total	574.5	1.2640	0.1238	0.2902	1.6780	0.2921%

Table 8. Tax Impacts due to In-Migration of 100 Retiree Households

	Baxter	Carroll
Federal Government NonDefense		
Corporate Profits Tax	17,348	22,962
Indirect Bus Tax: Custom Duty	3,354	4,516
Indirect Bus Tax: Excise Taxes	10,706	14,413
Indirect Bus Tax: Fed NonTaxes	3,637	4,896
Personal Tax: Estate and Gift Tax	0	0
Personal Tax: Income Tax	61,936	65,810
Personal Tax: NonTaxes (Fines- Fees	0	0
Social Ins Tax- Employee Contribution	64,864	56,646
Social Ins Tax- Employer Contribution	59,367	51,645
Total	221,211	220,889
State/Local Government NonEducation		
Corporate Profits Tax	2,579	3,413
Dividends	7,314	9,680
Indirect Bus Tax: Motor Vehicle Lic	1,729	1,750
Indirect Bus Tax: Other Taxes	4,244	4,296
Indirect Bus Tax: Property Tax	37,041	37,500
Indirect Bus Tax: S/L NonTaxes	6,419	6,498
Indirect Bus Tax: Sales Tax	126,526	128,095
Indirect Bus Tax: Severance Tax	562	569
Personal Tax: Estate and Gift Tax	0	0
Personal Tax: Income Tax	17,509	17,872
Personal Tax: Motor Vehicle License	1,163	1,178
Personal Tax: NonTaxes (Fines- Fees	891	884
Personal Tax: Other Tax (Fish/Hunt)	741	798
Personal Tax: Property Taxes	306	291
Social Ins Tax- Employee Contribution	319	312
Social Ins Tax- Employer Contribution	1,035	1,011
Total	208,377	214,148
Total	429,589	435,037

Table 9. Trade Area Capture (TAC) and Pull Factor (PF)
Values in 2003 for Selected Sectors

County	Retail Trade		Services	
	TAC	PF	TAC	PF
Baxter	25269	0.645	34823	1.3165
Carroll	40578	1.037	26114	0.9872

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