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The Impact of Retirees and Working-Age Families on a Small Rural Region: An Application of the Wisconsin Economic Impact Modeling System

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Abstract

The Wisconsin Economic Impact Modeling System, a conjoined input-output/econometric model of Wisconsin counties, is used to simulate the economic and fiscal impact of two alternative residential development patterns. Under the first scenario, the impact of migrating retirees on a small tri-county region in northern Wisconsin is examined. Under the second scenario, the impact of the migration of younger families with children is examined. A comparison-contrast between the two scenarios demonstrates that the characteristics of the migrating household can have a significant impact on the nature of the impacts.

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Introduction

Patterns of growth and change across rural America are diverse and complex. Historically, rural areas have lost ground to their urban counterparts with respect to economic growth and development. During the 1990s, much like the rural renaissance of the 1970s, however, some rural areas are experiencing significant growth and development. The rural areas are of two types: adjacent to urban areas, and amenity-rich areas.

Rural areas that are adjacent to metropolitan areas are experiencing renewed growth and development as urban labor markets expand geographically (Walzer and Deller 1996). Younger families often look for a rural environment in which to raise children, but also to remain within commuting distance of employment opportunities and urban amenities offered in metropolitan areas. Rural amenity levels or quality of life often drive the spread affect of urban areas (Henry, Barkley and Bao 1997).

Areas with high natural amenity attributes are also experiencing higher than expected levels of economic growth and development (Marcouiller 1997; English and Marcouiller 1998; Nord and Cromartie 1997; Bao, Henry and Barkley 1996). Much of the growth comes in the form of tourism/recreational developments and the migration of retirees. Oftentimes rural areas with a high endowment of natural amenities become vacation destination regions, areas of investment in recreational housing, and subsequently retirement migration (Marcouiller, et.al. 1996). These retirement destination regions, as defined by the USDA ERS, are consistently among the fastest growing rural areas (Walzer and Deller 1996; Deller 1995).

While many rural areas are faced with economic stagnation and decline, amenity-rich rural areas are faced with significant growth and development opportunities. These communities, in effect, are in the favorable position to direct or influence their path of growth and development. Through effective planning and policy implementation, these high amenity rural areas, can guide the growth process. If these rural communities are interested in attracting younger families with children, investments in public schools, youth

programs, and day care facilities will make the community more attractive to younger families. Conversely, if the community is more interested in attracting retirees, investments in health care services and certain types of recreational activities, such as golf courses, will make the community more attractive to retirees.

There are many studies that document the positive economic impact on rural communities of retirees who migrate into the community. Several recent studies estimate the fiscal impacts on receiving communities of such migration. At the community level the fiscal impacts appear positive (Siegal and Leuthold, Woods et al), but at the state level the net fiscal impacts may be zero (Deller). Based on such studies, several states, and many communities, have begun programs to attract retirees.

From an economic perspective, documentation of net positive economic and fiscal impacts is only half of the question. The other half is what alternatives are the communities giving up if they pursue a development strategy of attracting retirees? In other words, what are the opportunity costs to the community of attracting retirees versus persuing another option.

To our knowledge only one study addresses this issue. Sastry compared the economic impacts on the state of Florida of retirees and working-age families. Using an input/output model he introduced changes in final demand based on the differing expenditure patterns of the two groups. The total change in final demand was equal for both groups. Sastry found, in comparison to expenditures patterns of working-age households, elderly expenditures generated: 1)higher earnings per worker because the elderly use more high-skilled services, particularly healthcare; 2) less employment per dollar of output; and 3)higher total earnings and employment because elderly expenditures were concentrated in sectors with higher indirect and induced effects. These findings refuted the then "common knowledge" that retirees generated only low-skilled jobs in the local economy. Sastry did not compare the fiscal impacts of retiree and working-age income.

This study presents an economic and fiscal impact analysis that compares retirees and working-age families. The study differs from Sastry in several respects: 1)the study includes a fiscal impact analysis; 2)the study is at the community where leakages will be higher than at the state level and there are many costs incurred by the state that are not incurred by the community; 3) the study scenario uses 500 households of each type rather than equal changes in total final demand, because many public services are delivered to households and communities tend to plan by household.

The intent of this study is to compare and contrast the economic and fiscal impact of the relocation of two distinct types of households into a small, high amenity area in northern Wisconsin. Using the Wisconsin Economic Impact Modeling System as a laboratory, two sets of 500 households that differ in age, size, income and spending patterns are introduced into a representative region. The simulated impacts on labor, retail and housing markets along with fiscal impacts facing local units of government can be compared and contrasted across the two types. While we do not hypothesize specific differences in magnitudes, we do expect the differences to be significant.

The paper is composed of four parts beyond the introduction. In the next section we introduce the Wisconsin Economic Impact Modeling System. We then lay out the scenarios as introduced to the simulation model. The simulation results are reported and discussed, and the paper closes with a short discussion of the analysis' policy implications.

The Wisconsin Economic Impact Modeling System

The Wisconsin Economic Impact Modeling System (WEIMS) is a county level conjoined input-output/econometric simulation model. For conjoined models the input-output component is used to determine industry outputs and primary factor demands. The econometric component estimates final demands, factor prices, and primary factor supplies. The aim is to retain the sectoral detail afforded by input-output techniques and close it with a system of endogenous econometric relationships. The advantage of this approach for assessing the socioeconomic impact of the two scenarios is that it moves toward the "holistic" approach that is often lacking in this type of analysis.

The theoretical and empirical approaches to thinking about and modeling economic and fiscal impact assessment ranges from the simplistic approaches of export-base modeling (e.g., Richardson 1985) to input-output modeling (e.g., Hewings and Jensen 1986; and Wagner, Deller and Alward 1994) to pure statistical or econometric modeling (e.g., Bolton 1985). The hybrid nature of conjoined models allows it to glean the best elements of the range of modeling approaches. First, it allows for the sectoral detail of an input-output model that is lost to econometric models. Second, the econometric specification allows for more detailed introduction and analysis of key policy variables that are of interest to local decision makers. Third, the "full employment" assumptions of input-output models can be relaxed, thus making the modeling effort more reasonable. Fourth,

the complex spatial dimensions of regional interactions can be implicitly and explicitly captured. Finally, the more flexible econometric format allows for a better representation of how economic agents interact.

While hybrid conjoined models, such as the WEIMS, represent an improvement over standard socioeconomic impact modeling approaches, they do have their limitations. First, these models tend to be demand driven and incorporation of supply responses can be cumbersome. Second, changes in relative prices must be explicitly built into the modeling framework. Given the relative smallness of the tri-county study area, this latter limitation is of minimal concern, because the region can be assumed to be effectively a price taker. Finally, while economic theory provides significant insight into how regional economies are structured and function, the degree of modeler discretion can be significant. Therefore, there is significant uncertainty in the level of modeling error. The theory of regional economic structure is far from complete and attempts to empirically represent that structure will have elements of error and uncertainty.

A graphical overview of the Wisconsin county model is presented in Figure 1. The major modules of the model are:

Production. This module is used to determine regional output in the export production sectors and in the local and mixed industries (IMPLAN-based input-output model).

Labor. This module determines employment by sector, wages, regional unemployment, commuting, labor force and population.

Demographics. In this module, local income and income distribution are examined.

Housing. In this module we examine new housing construction in the region, as determined by changes in local population and income.

Local government. This module provides understanding into local government expenditures and revenues, based on the political choice processes that determine local expenditures via implementation of the median voter model.

Local retail sales. This module examines spatial retail markets.

All but the production module consists of stochastic econometric equations. To capture interrelationships, the modules are linked by one or more endogenous variables (indicated by the circled figures). These modules are

used to obtain information on a number of variables of interest to local policy makers and development practitioners.

The interaction of the assorted modules is perhaps best understood by examining the model in the context of traditional simulation analysis. Specifically, the model used here is similar to other regional models in that simulations, or impacts, can be broken-down in detail so as to consider initial, direct, indirect and induced effects. These different effects are emulated in the individual modules of the model.

The initial impact can be thought of as an injection (or loss) of autonomous expenditures into the economy. The model recognizes two sources of county level economic demand, external (primarily export) and local. Referring to Figure 1, changes in the local economy are driven principally by (exogenous) changes in export production, and in this sense the model can be thought of as following a standard “export-base” approach. As shown here, shifts in the demand for locally produced goods enter the production module either via changes in local demand shocks (i.e., the injection of new local spending by in-migrants). Direct and indirect effects are changes in industry output as businesses try to meet the changing input needs of the sector immediately affected by the initial impact. The direct and indirect effects capture linkages between local producers and are the essence of the production module.

Not only do local industries buy and sell among themselves, but they also buy labor from households. Thus, changes in industry output have implications for local labor demand. For example, in instances where output increases, there may be an increase in the demand for local labor. As new economic opportunities arise, local population may increase. More people having higher incomes may then increase purchase of retail goods, housing, and public goods and services. These types of local demand change are referred to as induced effects. Tracing these impacts through the local economy allows to further emphasizes the notion that the economy is an integrated system, characterized by a number of important local linkages.

For policy makers contemplating a particular economic event, the relevant question is often: “What will our economy look like with this particular event and how does that compare to the status quo?” Accordingly, impact analysis can be thought of as “with and without” analysis. In this framework one can examine the potential impacts of a policy by comparing predictions of how the economy will evolve under various scenarios.

An important aspect of good impact analysis is a reasonable and accurate baseline against which to compare the scenario. This involves describing the baseline equilibrium conditions (without) if local actors do not

substantially alter their behavior. To determine the economic impact the model is "shocked," either via an exogenous change in final demand or the adjustment of some (exogenous) policy handle. The model is then re-estimated (i.e., simulated) using the new values of the relevant variables that are generated by the shock (with). The difference between the baseline and the simulation result is the local economic impact. By formulating the model this way, an important aspect of impact analysis is how the economic "event" is described to the model. A properly specified scenario should introduce only the direct effects of the economic event in question. The model then uses these direct effects to determine indirect and induced effects. Shields (1998) provides a complete description of the model.

Scenario Development

To assess the economic and fiscal impacts of alternative elderly settlement patterns two separate patterns are constructed and simulated through the Wisconsin System. Each simulation assumes that 500 households relocate into a rural region in north-central Wisconsin[1]. As such, the scenarios take the form of exogenous in-migration of two different household types. The household types are; 1) households age 65 and over and 2) households under age 65. For a modeling perspective this comparison is akin to examining the difference between the impact of attracting retirees and younger (working-age) families.

Because the WEIMS has an input-output model at its core the two scenarios are best described in terms of the changes in final demand that different households types present to the local economy. To do this we turn to the 1995 Bureau of Labor Statistics Consumer Expenditure Survey (BLS-CES). Pervious work with these data shows that there are significant differences in spending habits between household types (Rubin and Nieswiadomy 1994) and these differences can be used to assess differences in economic and fiscal impacts (Sastry 1992). Because in the real world the two distinct types of households would contain some mix of income levels, this analysis can be thought of estimating the differential impacts of the average or representative of these two household types on the community.

The expenditure patterns of a representative household from each of the two household types are presented in Table 1a while the economic characteristics are summarized in table 1b. Of particular interest

[1] The region is the tree-county area of Oneida-Forest-Langlade in north central Wisconsin. Total population of the three county area is 63,000 with a per capita income of $16,551 (see tables 2a-2d for descriptive statistics). This is an amenity rich area that is experiencing significant in-migration of retirees to seasonal lake-front property.

for this comparison is the difference in expenditures between the two groups. The typical retired household in the BLS survey spends $19,354 annually while the more younger household of a husband and wife with children spend $38,632 (Table 1a). Note that the BLS-CES categories are aggregated to coincide with IMPLAN, the source of the WEIMS core input-output. Given the reported categories of expenditures and industries (commodities) some BLS-CES data are lost to IMPLAN, hence the total aggregate expenditure levels in Table 1a and 1b differ by the lost BLS-CES data. The category that accounts for the largest discrepancy is "entertainment." Because younger families spend slightly more on average than older households, the impact of the younger group will be slightly underestimated.

While the younger family will spend a greater overall amount in the local economy than a retired household due to income levels and household size, there can exist significant variation in patterns across BLS commodity groups. For example, although younger families are larger, retired household spend more on drugs and medical supplies ($627 vs $366) and health insurance ($1,541 vs $959), and older households are also slightly more likely to give cash contributions to charities ($1,099 vs $1,032). In some categories, however, the level of expenditures for the younger family vastly outpaces those of the older household. For example, younger households spend significantly more on vehicles ($5,638) than older households ($1,768) as well as more on food for consumption at home ($6,367 vs $2,367).

These households also differ by factors other than expenditure patterns. For example, a typical retired household has 1.7 persons while a younger household has 3.9 persons (Table 1b). In addition, older households have, on average, only 0.4 earners within the household, while younger households have 2.1 earners. Contrary to popular perceptions, not all elderly retire from the labor force: many elderly work part-time for either personal or financial reasons.

The fact that the typical household in our scenarios has a person in the labor force part-time is consistent with the literature on aging and work. Haas and Serow (1997) found that among in-migrant retirees in Western North Carolina, 30 percent of the households had someone in the labor force. While Cockerham (1997) observes that the percentage of persons over age 65 remaining in the workforce is steadily declining, the proportion of part-time workers increases at retirement age. Many of the elderly work part-time because they want to continue some work, or they work part-time to avoid having Social Security benefits reduced (Kahne). Cox (1993) further contends that low-income, unmarried retired women are

"very likely" to work at least part-time to supplement social security payments. While the motivation to return to, or remain in, the labor force may vary across the two groups studied here, the scenario with some level of employment in elderly households is consistent with the literature.

These are important differences when describing scenarios to WEIMS. For the simulations reported here differences in household sizes means initial population changes of 1,950 versus 850 which has significant implications on the simulated impacts. Differences in the number of earners also have implications because it requires the scenario/ construction to reflect where these persons will be employed. Given the descriptive information reported in Table 1b, 500 additional retired households suggest that will be 200 (=500 * .4) persons in the work force and 1,050 (=500 * 2.1) persons for younger households. For simulation purposes we assume that these "new" entrants to the local labor force are evenly distributed across the Trade and Service Sectors. The predominate source of part- and full-time employment in rural areas are increasingly in these sectors. In addition, the impacts of household consumption on local job creation are also predominately in these sectors. For simplicity, we assume that all of the older workers will work in the local community (i.e., no commuting), but for the younger families we assume that 20 percent out-commute, matching the region's current commuting pattern.

While information from the BLS Consumer Expenditure Survey provides us with a detailed description of the economic characteristics of the different households, we do not have data on specific taste and preference characteristics. For example, the older households may prefer to devote greater resources to hospitals or police protection than the younger households. The econometric specification allows only for differences in income and household size between the two groups. Their tastses and preferences are assumed to be the same. Hence, when interpreting the results it is important to keep in mind that the simulated results are based on IO computations and econometric estimations. Subtle, but important, differences in political philosophies that may exist between household groups are lost.

Empirical Results

The simulated impacts of 500 new households of each of the two household types are reported in Table 2a through 2e. While the WEIMS estimates some 67 plus economic and fiscal indicators, three key variables—employment, population and income-drive a significant part of the housing, retail and fiscal modules and hence will be discussed before the results of the other modules are presented.

Overall Impacts

The simulated results for the employment and wage components of the model are provided in Table 2a. For the younger household scenario the BLS-CES data suggest that 500 new household will create 840 initial jobs (recall 20 percent out-commuting rate) and a total of 1,010 jobs for an implicit employment multiplier effect of 1.20 or .43 jobs for every person in the household. This compares with 200 initial jobs for the older household type, with a total employment impact of 287 jobs for an implicit multiplier effect of 1.43 or 0.34 jobs for every person in the older household. Clearly the larger employment impact for the younger households comes from a) more persons in the younger household in the work force and b) higher levels of expenditures in the local economy.

Impacts on income are measured two separate ways: earnings and per capita income. As reported in Table 2a, earnings per worker decrease slightly from the baseline under both the younger (-$95 or -0.48%) and older (-$24 or -0.12%) scenarios. While the reduction in per worker earnings resulting from the in-migration of the older is not unexpected, the larger reduction in per worker earnings from in-migration of the younger is unexpected. This result is in part due to scenario construction: we assume that all in-migrants that are working in the local labor force will earn prevailing wages in the trade and service sectors. Because the wages in these two sectors are lower than the regional average wage, and the majority of jobs created in both scenarios go to the elderly themselves, the result is consistent. Still, total earnings increases by 0.74%, or $4.8 million, under the older household scenario and 2.53% or $16.6 million, under the younger household scenario. Per capita income also declines (Table 2b). Under the older household scenario, per capita income declines by $45 or -0.27% and under the younger scenario by $83 or -0.50 percent. These latter declines are due to the lower than average earnings outlined above coupled with the increase in the number of persons relative to the number of earners.

A third important variable feeding into the fiscal, retail and housing modules is population. While the initial effect is determined by the scenario, the ripple or multiplier effect in employment, earnings, changes in relative housing prices, and unemployment will influence population changes through induced migration. The estimated population impacts are reported in Table 2b. For younger households, the initial effect is 1,950 (=500*3.9) additional persons and an indirect effect of 216 persons for a total population change of 2,166 persons (3.43% increase). For the older households, the initial effect is 850 (=500*1.7)

additional persons and an indirect effect of an additional 110 persons for a total population change of 960 persons (1.52% increase). Note that while the individual income measures (per worker earnings and per capita income) may fluctuate downward, the increase in population dictates that total earnings and income increase (Tables 2a and 2b). Not surprisingly, the impact on the number of new potential students in the region varies significantly across the two scenarios (Table 2b). For the retired household scenario, only one additional student can be expected, but for the younger household scenario, the student population is expected to increase by 397 (3.24% increase).

Labor Market Impacts

Given the model's construction, the employment created through the multiplier affect can be filled through several sources including the unemployed, additional in-migrants, and changes in commuting patterns. For the older household scenario, 40 persons fill the indirect and induced generated jobs from the ranks of the unemployed, for a decrease in the unemployment rate of 2.19 percent (Table 2b). For the younger household scenario, 142 of the 170 jobs created through the multiplier affect are filled by the unemployed. Under this latter scenario, the unemployment rate decreases by 7.72 percent, from a rate of 5.78 to 5.33. The number of in-commuters is estimated to actually decline slightly under both scenarios. This is due primarily to the expected small lowering of the average earnings per worker, which is the result of scenario construction. The number of out-commuters does not change as a result of the additional jobs created through the multiplier affect. The balance of the multiplier created jobs under both scenarios comes from additional in-migrants into the area. For the older household scenario, 45 jobs are taken by in-migrants, while 21 are taken by in-migrants under the younger household scenario. The changes in poverty rates were trivial, and are not reported.

Housing Impacts

The Wisconsin Model also provides insight into the impact of these two distinct types of households on local housing. Under both scenarios the demand placed on the local housing market results in similar increases in construction and higher prices for new construction (Table 2b). The measure aims at capturing the change in the equilibrium flow of new residents into the market through construction. It is important to note that this measure does not capture the one time shock of new construction from the initial in-migration of the 500 households. Under the retired household scenario the equilibrium number of new houses being

built increases by 195 with an average value of slightly less than $70,000, or a 3.22 percent increase in value. Under the younger household scenario, the increase in equilibrium is 209 new houses with a value of, again, slightly less than $70,000, or 3.21 percent increase.

The expected impact on the existing stock of housing, however, is very different. Given the small decline in per capita income, the median value of housing is expected to decline slightly under both scenarios. For the older household scenario, median house value is expected to decline by only about $3, while under the younger family scenario, the decline is about $5. Under both cases, the decline is less than 0.00 percent. While the two scenarios under examination are expected to positively impact the value of the new flow of housing onto the market, the impact is not sufficiently large to overcome the negative impact of a slightly lower level of per capita income on the value of the existing housing stock.

When compared to the estimated market value of owner-occupied homes from the BLS-CES profile (Table 1b), the Wisconsin model seems to underestimate the impact that these types of households might have on the local housing market. In short, the model presumes that the in-migrants are leaving one housing market and entering another with perhaps very different equilibrium levels. Still, the model captures changes to the aggregate market, not the specialized markets that the new in-migrants may be entering.

Fiscal Impacts

The fiscal impacts of the scenarios presented in this study are reported in Tables 2c and 2d. Aggregate per capita non-education expenditures decrease by $1.75 (or 0.22%) for the older household scenario, but it decreases more, $5.19 (or 0.64%), for the younger household scenario. Econometric results suggest that public goods (as measured by expenditures) are normal goods and significant differences in income levels will have impacts on service levels. The decline in per capita expenditures/INCOME? for both scenarios partially explains the simulation result. But, simultaneously, population in both scenarios is growing faster than expenditure levels, thus driving the per capita estimate downward. Under the older household scenario, per capita expenditures do not decline as much because population is not growing as rapidly. It is important to keep in mind that total expenditures, as opposed to per capita, increase under both scenarios; 1.30 percent for the older households and 2.77 percent for the younger household.

Under both scenarios per capita public expenditures increase for waste and amenity services and for general government operations (i.e., administration). Per capita health expenditures decrease 0.56 percent in the older household scenario compared with a 1.89 percent decline in the younger household scenario. This latter result is due primarily to the greater decrease in the unemployment rate for the younger households. Per capita safety expenditures also decrease more in the older household scenario, 0.32 percent, compared with the younger household scenario, 0.46 percent. Per capita road expenditures decrease similarly for both scenarios. In addition to reflecting differences in tastes and preferences for public services, these results also hint to possible costs savings through economies of scale in the production process.

Again, however, total expenditures for all categories increase. For the older household scenario, total non-education expenditures within the three county region of analysis increase by $669,064 (1.30%); while for the younger household scenario the increase is significantly more, $1,422,828 (2.77%). In no category did aggregate expenditures decline. The driving factor behind the differences in absolute spending is primarily higher population impacts; the rate of increase in population is greater than the rate of decline in per capita expenditures.

There are differences in demand for and support of public education across the two age groups. For the older household scenario, per capita expenditures on public education decrease by $17.41 (1.46%), but increase in total by about $731,000 (.97%). For the younger household scenario, per capita expenditures increase by $31.11 (2.60%) and aggregate education expenditures increase significantly more, about $1.5 million (2.06%). Clearly, the difference in per capita expenditures hinges on rates of change in population and number of students across the two household types. Older households tend not to increase demand for public education services (i.e., no school-aged children), but they do expand the property tax base (e.g., housing) which supports public education. When converted to a per student basis, baseline expenditures are $6,457 per student. Under the younger household scenario, per student expenditures are $4,109. This may indicate economies of scale in the local school system. Educational revenues were not estimated because the state is revising the funding of education.

In-migration also affects the ability of local governments to generate revenues (Table 2d). Both scenarios show a small increase in property taxes per capita ($0.03 and $0.10, respectively). This

relatively small change in per capita property tax revenues is reflective of the mixed result on the impact of the in-migration on the value of housing flows and stocks. Regardless, the aggregate amount of property tax collected for municipal and county governments increases by just over $1 million for the older scenario and by more than $2.3 million for the younger scenario.

In Wisconsin, state aids are a significant portion of local revenues and simulated impacts of economic changes on aid flowing to local governments must reflect the unique aspects of the formulas. For the older household scenario, intergovernmental revenues per capita decline ($1.02 or 0.23%), but increase in aggregate by about $352,000 (1.28%). In the younger household scenario, intergovernmental revenues per capita decrease to a greater extent ($3.02 or 0.70%) and increases more in aggregate ($744,000 or 2.71%). The difference in per capita intergovernmental aid impacts rests on the uniqueness of the Wisconsin formulas: as local governments increase expenditures and corresponding property tax rates, the aid formula increases the flow of dollars to place downward pressure on property taxes. In other words, the aid formulas are set up to "reward" those local governments who place higher values on local public services (i.e., spend more) and are willing to tax themselves to pay for that higher level of service (i.e., higher per capita property taxes).

It is important to note that not all expenditure and revenue categories are included in the analysis. On the expenditure side, capital improvement and the small "miscellaneous" categories are excluded; and on the revenue side fees, charges and other "miscellaneous" sources are not considered. For most small rural communities, however, these categories tend to be small and should not play a significant role in the final analysis. Also recall that the financing of local schools in Wisconsin is undergoing significant revisions, hence is not explicitly modeled here.

Another dimension that WEIMS does not address is the capacity to accept growth. The decline in per capita levels of expenditures can be partially explained by the notion of economies of scale in service delivery. In other words, a given level of protective services can be spread out over a larger population. For example, a fire department might be able to service ten additional households with no meaningful increase in costs. A sewer treatment plant may be operating at 80 percent capacity and the addition of ten new households to the system is easily handled. The fixed costs of operating the plant can be spread over more households (i.e., a decline in per capita levels). But the addition of an eleventh house, however, may

exceed the capacity of the plant and expensive new investments in the plant's capacity must be undertaken. More directly, for the scenarios presented, the capacity of the local school systems to accept the growth induced my retirees moving into the region is sufficient: the number of new students is expected to be low. But, under the younger household scenario, the addition of an estimated 379 new students may result in the need for an expansion of local schools. WEIMS does not address this vitally important issue**.**

Retail Markets

Finally, WEIMS is used to estimate the (induced) affects of the different in-migration scenarios on local retail markets (Table 2e). Per capita total retail expenditures declines under both scenarios examined. For older households the decline is $18.54 (0.22%) and $40.67 (0.47) for the younger household scenario. The three primary driving forces for differences between the two scenarios are levels of out-commuting (a form of leakage), absolute changes in population levels and initial changes in expenditure patterns. Expenditure categories that experience the largest decrease in per capita expenditures include food stores, miscellaneous retail stores, and gasoline and service stations. Store types that experience increases in per capita expenditures across both scenarios include apparel, drug stores and general merchandise stores. Retailers, however, are probably more interested in the affects of the two migration patterns on total sales than they are in per capita sales. While there is a general decline in per capita expenditures in both scenarios, retail sales increase by $7 million in the older household scenario and by $16 million in the younger household scenario. Examination of individual store types, every category is expected to report higher overall sales, and total sales for the younger scenario are consistently more than double that of the older household scenario.

Conclusion

High amenity rural areas are experiencing a resurgence in population growth. Retirees are seeking out high amenity areas in which to relocate. Younger families, seeking a rural lifestyle, are increasingly willing to commute longer distances to sources of employment to experience that lifestyle. Communities that are endowed with high levels of natural amenities find themselves in the viable position of planning for and promoting different types of in-migration patterns. The question that is addressed in this analysis is what are the different levels of economic impacts of pursuing these two very different types of households.

Using the Wisconsin Economic Impact Modeling System, the hypothetical in-migration of 500 older households into a rural amenity rich region in northern Wisconsin is compared and contrasted to the in-migration of 500 younger households. Using data from the BLS Consumer Expenditure Survey, the two scenarios are outlined and simulated through the conjoined input-output/econometric WEIMS. Simulation results point to numerous commonalties across the two scenarios, such as decreases in per capita government expenditures and retail sales, as well as differences, such as the absolute levels of impacts.

While the results presented in this paper are suggestive and sensitive to the way in which the scenario is presented to the modeling system, several insights have been gained. For example, because most of the local purchases made by the new in-migrants are for retail and service goods-industries that have limited local inter-industry linkages-the in migration does not have a large employment multiplier affect. The consequence is that nearly all indirect and induced employment growth occurs in the service and retail sectors, industries that typically pay below average wages. The simulation result that few "good" jobs are created means that there is not much of an incentive for extra-regional workers to in-migrate or in-commute, so many of the jobs are captured by locals. While local job capture brings about a notable reduction in the unemployment rate, local officials should be cognizant of the "types" of jobs being created. Migrants without children (i.e., older households) do not appear to place substantial demands on local government expenditure categories, yet generate significant additional revenues-they may truly be "pure gold," at least from a local government perspective. Young migrants with families primarily affect local school expenditures, suggesting that communities need to carefully consider their capacity (and budget) to accept this type of migration.

Figure 1. The Wisconsin Economic Impact Modeling System

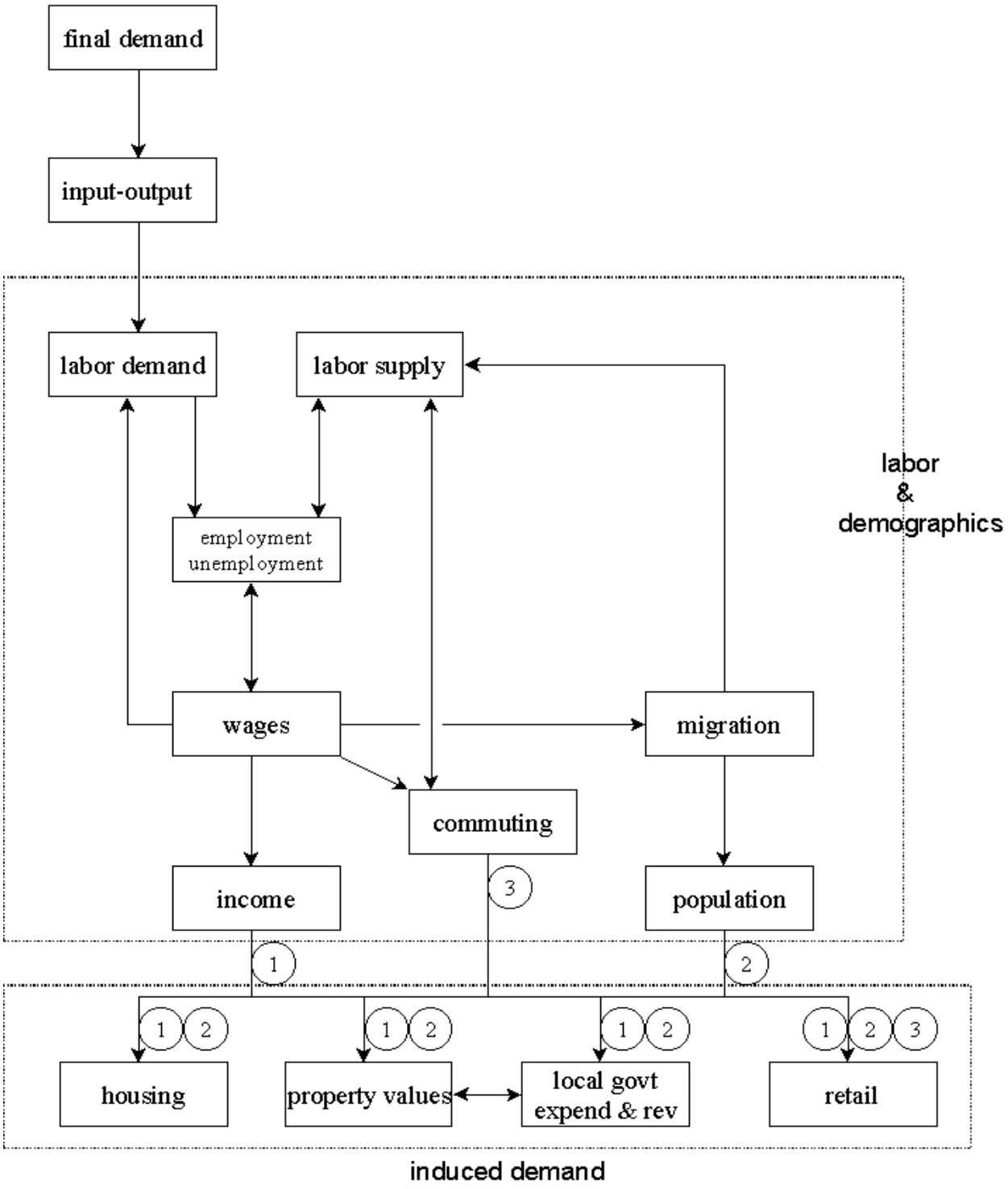

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Table 1a: Expenditure Patterns			
BLS Category	IMPLAN#	age 65+ all categories	Husband and wife with children
Shelter Maintenance	55	$916	$842
Telephone	441	$516	$845
Electricity	443	$801	$1,128
Natural Gas	444	$284	$328
Water and other pub serv	445	$251	$351
Food at home	450	$2,367	$6,367
Vehicle purchases – gasoline and oil	451	$1,768	$5,638
Apparel and Services	452	$875	$2,477
Household furnishings/equi	453	$1,051	$1,908
Food away from home	454	$1,021	$2,327
Drugs and medical supplies	455	$627	$366
Misc Retail	455	$2,003	$4,376
Shelter (owner dwelling/rent)	456	$509	$3,857
Health insurance	459	$1,541	$959
Vehicle insurance	459	$532	$1,001
Rented Dwellings	462	$933	$1,377
Other Lodging	463	$335	$524
Maintenance and repair	479	$473	$890
Medical services	490	$480	$777
Cash contributions	502	$1,099	$1,032
Property Taxes	522	$972	$1,262
Total		$19,354	$38,632

Table 1b: Household Characteristics

BLS Category	age 65+ all categories	Husband and wife with children
Income before taxes	$22,148	$53,694
Income after taxes	$21,068	$49,058
Average number of persons in CU	1.7	3.9
Average number of earners in CU	0.4	2.1
Average number of vehicles in CU	1.4	2.7
Average annual expenditure (total)	$22,249	$44,987
Percent homeowner	79	77
Percent homeowner with mortgage	14	61
Percent renters	21	23
Estimated market value of owner home	$81,160	$97,530
Estimated market rent of owner home	$530	$661

Table 2a: Employment and Wage Impacts

	age 65+ all categories			Husband and wife with children	
	baseline	Impact	percent	impact	percent
EMPLOYMENT					
Agriculture	1,604	0	0.01%	0	0.02%
Mining	121	0	0.01%	0	0.02%
Construction	1,806	3	0.18%	4	0.20%
Manufacturing	5,289	0	0.01%	1	0.01%
TCPU	1,581	3	0.17%	5	0.29%
Trade	8,343	145	1.74%	522	6.26%
FIRE	1,343	5	0.34%	14	1.03%
Services	8,966	114	1.28%	443	4.94%
Government	4,259	17	0.39%	22	0.52%
TOTAL	33,312	287	0.86%	1,010	3.03%
WAGES					

total earnings	$654,971,430	$4,824,526	0.74%	$16,601,716	2.53%
earnings per worker	$19,662	($24)	-0.12%	($95)	-0.48%

Table 2b: Labor Market and Housing Impacts

	age 65+ all categories			Husband and wife with children	
	baseline	impact	percent	impact	percent
LABOR SUPPLY					
unemployment	5.78	-0.13	-2.19%	-0.45	-7.72%
prop incommute	1.61	-0.00	-0.10%	-0.00	-0.30%
prop outcommute	10.67	0.00	0.00%	0.00	0.00%
unemployed	1,837	-40	-2.19%	-142	-7.72%
total incommuters	2,441	-2	-0.10%	-7	-0.30%
total outcommuters	3,392	0	0.83%	0	0.00%
jobs to inmigrants		45		21	
population	63,210	960	1.52%	2,166	3.43%
new students	11,708	1	0.00%	379.00	3.24%
local labor force	31,780	264	0.83%	964.68	3.04%
per capita income	$16,551	($45)	-0.27%	($83)	-0.50%
HOUSING					
housing starts	564	195	34.49%	209	37.05%
permit value	$67,790	$2,183	3.22%	$2,130	3.14%
median house value	$43,167	($3)	(0.00)	($5)	0.00%

Table 2c: Fiscal Impacts-Expenditures

	age 65+ all categories			Husband and wife with children	
	baseline	impact	percent	impact	percent
Per Capita Govt Expenditures					
Health	$206	($1.16)	-0.56%	($3.88)	-1.89%
Government	$149	$0.50	0.34%	$1.94	1.30%
Safety	$190	($0.85)	-0.45%	($2.69)	-1.42%
Roads	$167	($0.54)	-0.32%	($0.78)	-0.46%
Waste	$40	$0.26	0.64%	$0.20	0.50%
Amenity	$62	$0.04	0.07%	$0.01	0.02%
Total per capita government	$814	($1.75)	-0.22%	($5.19)	-0.64%
Total Govt Expenditures					
Health	$12,991,000	$123,067	0.95%	$191,650	1.48%
Government	$9,409,000	$175,035	1.86%	$449,346	4.78%
Safety	$12,025,000	$127,947	1.06%	$235,969	1.96%
Roads	$10,564,000	$125,843	1.19%	$311,264	2.95%
Waste	$2,545,000	$55,130	2.17%	$100,279	3.94%
Amenity	$3,897,000	$62,044	1.59%	$134,320	3.45%
Total govt exp.	$51,431,000	$669,064	1.30%	$1,422,828	2.77%
Per Capita Expenditures (Education)	$1,196	($17.41)	-1.46%	$31.11	2.60%
Total Expenditures (Education)	$75,599,192	$731,090	0.97%	$1,557,179	2.06%

Table 2d: Fiscal Impact—Revenues

	age 65+ all categories			Husband and wife with children	
	baseline	impact	percent	impact	percent
Per Cap Government Revenues					
Intergovernmental	$435	($1.02)	-0.23%	($3.02)	-0.70%
Property tax	$1,092	$0.03	0.00%	$0.10	0.01%

Total per capita revenues	$1,527	($0.99)	-0.06%	($2.92)	-0.19%
Total Government Revenues					
Intergovernmental	$27,496,350	$352,320	1.28%	$744,433	2.71%
Property tax	$69,025,320	$1,050,857	1.52%	$2,371,806	3.44%
Total Govt Revenues	$96,521,670	$1,403,177	1.45%	$3,116,240	3.23%

Table 2e: Retail Impacts

		age 65+ all categories		Husband and wife with children	
Per Capita Retail Sales	Baseline	impact	percent	impact	percent
Furniture	$228.41	($0.39)	-0.17%	($1.26)	-0.55%
Autos	$1,950.33	($2.56)	-0.13%	$0.69	0.04%
Building	$499.73	($0.08)	-0.02%	$0.17	0.03%
Apparel	$296.90	$0.80	0.27%	$1.90	0.64%
drug stores	$213.32	$0.24	0.11%	$1.16	0.54%
food stores	$1,589.70	($6.36)	-0.40%	($18.26)	-1.15%
General	$1,053.83	$1.66	0.16%	$7.44	0.71%
Eats	$853.10	($1.82)	-0.21%	($4.88)	-0.57%
Misc	$1,164.20	($8.48)	-0.73%	($22.43)	-1.93%
Gas	$770.32	($1.55)	-0.20%	($5.20)	-0.68%
Total per capita retail sales	$8,619.83	($18.54)	-0.22%	($40.67)	-0.47%
Total Retail Sales					
Furniture	$14,437,945	$194,120	1.34%	$412,283	2.86%
Autos	$123,280,613	$1,708,683	1.39%	$4,269,337	3.46%
Building	$31,587,661	$474,943	1.50%	$1,093,425	3.46%
Apparel	$18,766,967	$336,622	1.79%	$766,955	4.09%
drug stores	$13,483,658	$220,568	1.64%	$537,708	3.99%
food stores	$100,484,868	$1,118,364	1.11%	$2,249,103	2.24%
General	$66,612,533	$1,118,390	1.68%	$2,768,850	4.16%
Eats	$53,924,431	$702,414	1.30%	$1,528,439	2.83%
Misc	$73,588,949	$574,237	0.78%	$1,055,274	1.43%
gas	$48,692,119	$640,426	1.32%	$1,328,389	2.73%
Total Retail Sales	$544,859,743	$7,088,765	1.30%	$16,009,763	2.94%