Economic Impact of the Elderly In Allegheny County

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Introduction

It is widely known that the City of Pittsburgh and Allegheny County contain one of the highest concentrations of elderly individuals in the nation. Several recent reports have characterized this population in terms of their marital status and living arrangements, health status, educational attainment and employment, and their needs and potential (Schulz & Kerchis, 1996; Aging Environmental Scan, 1996). The purpose of this manuscript is to focus specifically on the economic impact of the elderly on Allegheny County. In doing so, we will address a commonly held view that because older persons are generally not part of the work force, they represent an economic drain on the local economy.

This paper is an attempt to quantify some of the direct and indirect impacts of the elderly on the regional economy as a whole. A regional input-output model, the REMI model, will be used to translate some of the direct economic spending of the elderly into an overall economic impact on the region in terms of output, earnings and employment. Although typically used for economic forecasting and impact analysis of specific changes in the regional economy such as plant openings or closing, it will be used here to simulate a hypothetical smaller elderly population in the region and to quantify some of those consequent changes in the local economy. The model takes into account the linkages between income, consumption and the employment generated across industries, yielding a more complete picture of economic activity generated by the elderly.

This report is divided into five parts. First, we review the demographic characteristics of Allegheny County and answer the question, why do we have such a high concentration of elderly in this area? Next, we examine the economic status of the elderly , the sources of their income, and their employment status. This is followed by two simulations. The first examines the impact on the local economy of a reduction in the elderly population to levels equivalent to those of the U.S. as a whole. The second simulation assesses the impact on the regional health care industry of a 10 % reduction in medicare payments. We conclude with a summary and some tentative forecasts for the future.

Allegheny County Demographics

A commonly known fact about Allegheny County is the relatively high percentage of the elderly in the total population. The percentage of the population over 65 has been increasing continuously over the last several decades. The fraction of the population over 65 in Allegheny County is now 18%, which is significantly higher than the national average of 12%. Allegheny County itself has a larger percentage of the elderly than any large county outside of the traditional retirement locations in Florida (see table 1.). The population of the Pittsburgh Region has a percentage of elderly almost as high at 17.4%.

This large elderly cohort is a consequence of the economic history of the Pittsburgh region over the last several decades. Large scale downsizing in the American heavy manufacturing industries, particularly steel, has had a significant impact on the regional economy, as well as the age structure of the population. As jobs were lost in the region, younger workers left the region in search of jobs. Older workers who had fewer opportunities to find jobs elsewhere, had stronger ties to the region, and were able to collect retirement benefits tended to stay here. Figure 1 illustrates some of the differences between young and old migration patterns over the last two decades. The demographics of the Pittsburgh region thus result from reasons opposite those of many Florida communities with similar age structures. In many retirement communities the large elderly cohort results from the in-migration of retirees; the Pittsburgh region has a large elderly population because of the out-migration of younger individuals in the population.

Table 1: Large Counties (>500,000 population) ranked by Percentage 65 and Older – 1997

	County	Population	Population 65 and older	Percentage 65 and older
1	Palm Beach County, FL	1,018,524	252,415	24.8
2	Pinellas County, FL	871,766	209,228	24.0
3	Allegheny County, PA	1,280,624	231,928	18.1
4	Broward County, FL	1,470,758	265,151	18.0
5	Montgomery County, PA	712,466	116,821	16.4
6	Providence County,	574,429	93,431	16.3
7	Delaware County, PA	543,010	87,294	16.1
8	Cuyahoga County, OH	1,386,803	221,279	16.0
9	Erie County, NY	944,472	150,313	15.9
10	Bergen County, NJ	851,344	135,238	15.9

*source: US Bureau of the Census, PE-62 Population Estimates*

If older workers had left the region at the same rate as younger workers through the 1970's and 1980's, the expected age distribution of the region would be closer to the national average (12% vs. 18%). For the region to have the same base population of those under 65 (approximately 2 million in 1997) a proportional size of the elderly population would number just over 300,000. This is over 150,000 people fewer than the current size of the elderly population. Allegheny County alone would have over 77,000 fewer elderly in this scenario. The regional economy would be noticeably different if this were the case. The net impact of such a large group of elderly in the population is substantial and should not be ignored in studying the regional economy.

Figure 1 Estimated Net-Migration Rates By Age Group
Allegheny County 1975-1995
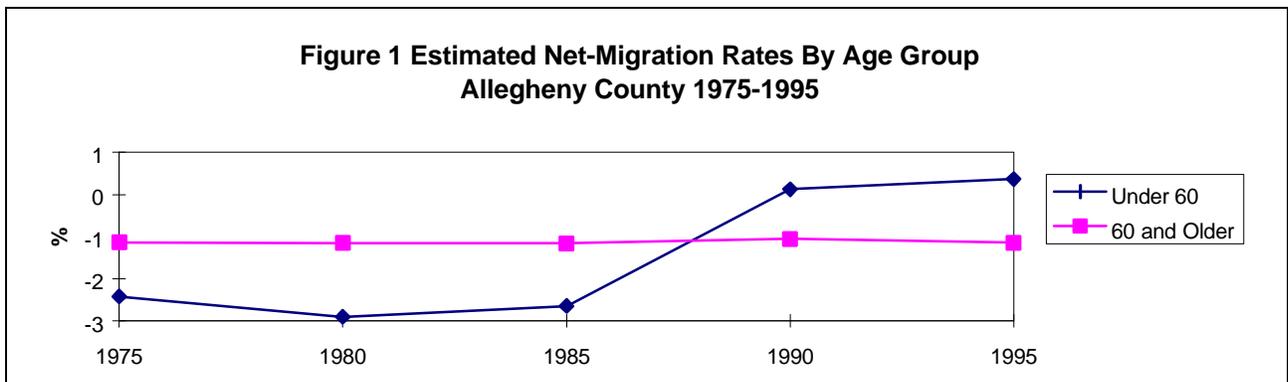
*Source: US Bureau of the Census, 1997 REMI Model*

It is important to note that the elderly are not evenly distributed across the county. Different communities have very different concentrations of the elderly. Based on data from the 1990 Census, municipalities ranged from as low as 4.9% elderly (Pennsbury Village Borough) to as high as 28.1% (Braddock Hills Borough). Figure 2 highlights the distribution of elderly across the county. Although beyond the scope of this paper, the economc costs and benefits of a high concentration of elderly at the level of municipalities is a topic that has received little attention in regional policy analysis.

Figure 2: Percentage of Population Age 65 and Older, Allegheny County Municipalities, 1990

Percentage of Population Age 65 and Older
Allegheny County Municipalities, 1990

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	less than 10%	(9)
	10 to 15%	(24)
	15 to 20%	(43)
	20 to 25%	(45)
	25% and over	(9)
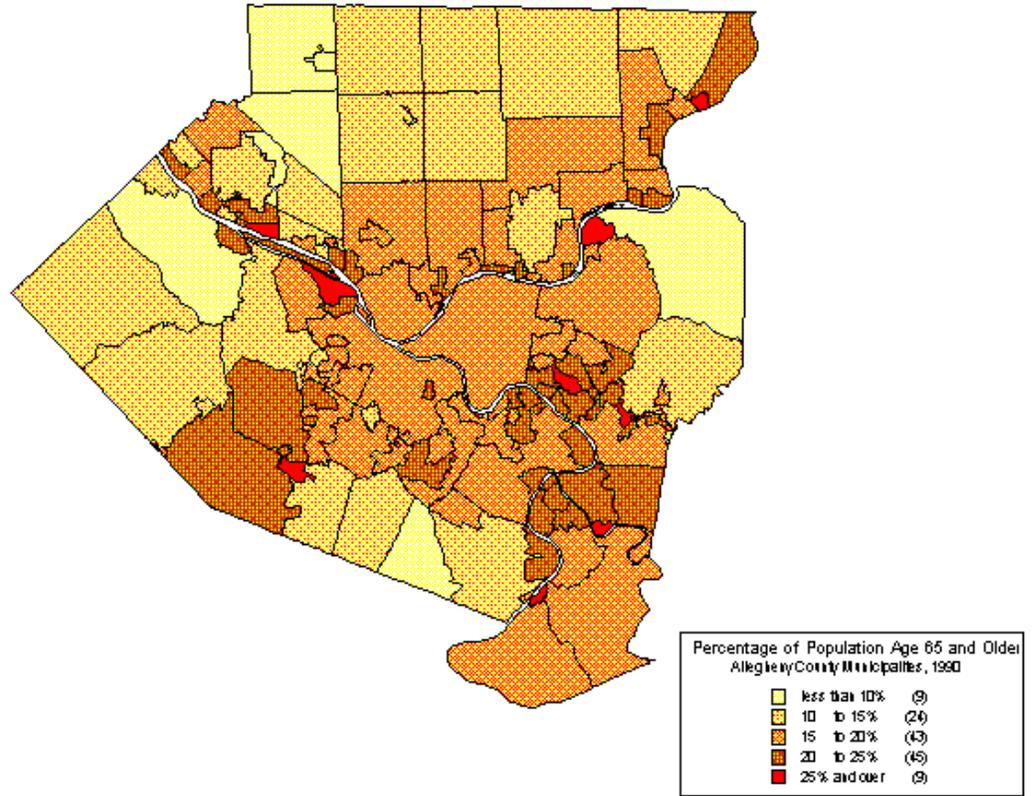
Elderly Income, Benefits, and Employment

The elderly receive income from many sources, including public and private retirement programs. Government retirement benefits (social security, military and federal civilian retirement programs) make up a sizable part of all personal income in Allegheny county, over 17% in 1996 (see figure 3). As the size of the elderly population has increased so has the proportion of income in the region derived from retirement benefits. Figure 4 shows the growth in average per capita retirement benefits for Allegheny County over the last decade. The $4,824 per capita retirement benefit is greater than a comparable number for Pennsylvania or the United States and is much higher than many comparable urban counties. Table 2 lists some metropolitan counties comparable to Allegheny County. The contrast in retirement benefits per capita is striking. The figure for Allegheny County is almost 50% higher than that for Franklin County, Ohio, which is the location of the city of Columbus.

Figure 3: Derivation of Personal Income - Allegheny County 1996
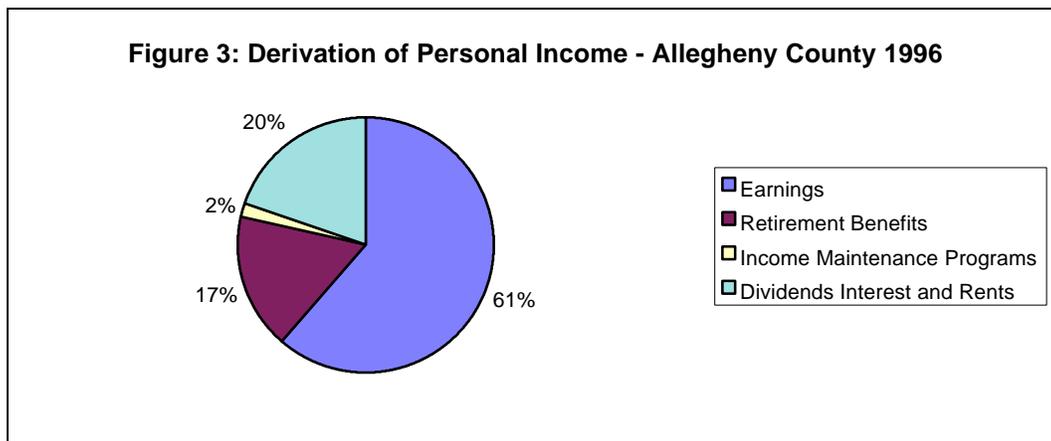
Source: Regional Economic Information System 1969-1996, Bureau of Economic Analysis

However, these numbers do not represent the total impact of the elderly on the region. It is important to note that some of the earnings and an even greater share of the income from dividends and interest are also generated by the elderly. Nor does this begin to quantify the impact of medical and other benefits that accrue to the elderly which will be discussed later in this paper.

Figure 4: Retirement Benefits Per Capita 1980-1996 *
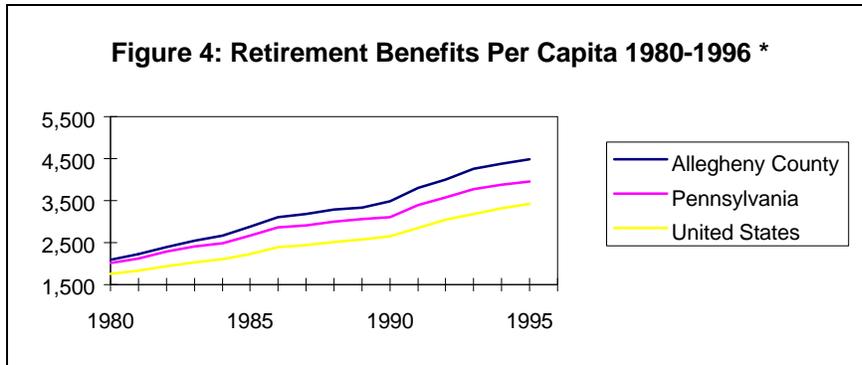
* 1995 dollars
Source: Regional Economic Information System 1969-1996, Bureau of Economic Analysis

Table 2: Retirement Benefits Per Capita – 1996

Allegheny County, PA	$4,824
Baltimore County, MD	$3,892
Cuyahoga County, OH (Cleveland)	$4,555
Hamilton County, OH (Cincinnati)	$4,052
Milwaukee County, WI	$3,905
Jackson County, KS (Kansas City)	$3,301
San Diego County, CA	$3,489
Sacramento County, CA	$4,067
Franklin County, OH (Columbus)	$3,469
King County, WA (Seattle)	$3,378

Source: Regional Economic Information System 1969-1996, Bureau of Economic Analysis

Taken together the income sources of the elderly are substantial. Overall, the view that the elderly are poor and destitute is a myth. The percentage of the elderly at poverty level or below is less than that of the population as a whole. Table 3 shows the breakdown in poverty rates for Allegheny County by age group. The bulk of the elderly, those between 65-74 years of age have a poverty rate below the overall average. Older persons aged 75 and over have a poverty rate just above the overall average but below the rates for all age groups 24 and under.

Table 3: Percent Living in Poverty by Age
Allegheny County – 1990

Age Range	% in Poverty
0-5	23.4
6-11	17.1
12-17	14.8
18-24	19.1
25-34	10.5
35-44	7.9
45-54	7.3
55-59	7.3
60-64	7.8
65-74	8.2
75+	13.1
Average	11.5

Most but not all of the elderly have left the workforce. Ten percent of the elderly still work on a regular basis. This has an impact on the regional labor market. It is possible that the elderly are displacing jobs that might go to younger workers. Alternatively, the presence of elderly in the workforce expands the total job pool and may keep labor costs constrained. Table 4 compares the elderly workforce of Allegheny County to Pennsylvania, the United States and a set of other urban counties. Only in Cayahoga County (Cleveland) do the elderly make up a larger percentage of the workforce than in Allegheny County.

Table 4: Age 65 and Older Employment- 1990

	Total Employment	65+ Employment	65+ % Share of Total Employment
Allegheny County, PA	604,923	22,037	3.64
Pennsylvania	5,434,532	185,840	3.42
United States	115,681,202	3,595,418	3.11
Baltimore County, MD	366,276	11,956	3.26
Cuyahoga County, OH (Cleveland)	629,512	23,200	3.69
Hamilton County, OH (Cincinatti)	406,974	12,526	3.08
Milwaukee County, WI	446,630	11,920	2.67
San Diego County, CA	1,145,266	31,051	2.71
Sacramento County, CA	485,063	11,855	2.44
Franklin County, OH (Columbus)	496,524	11,365	2.29
King County, WA (Seattle)	818,326	20,107	2.46
Wayne County, MI (Detroit)	843,731	21,984	2.61

source: 1990 Census

Elderly Spending: The Impact of a simulated population reduction

Given the relatively large net income of the elderly, one might ask, how do they spend their money? Table 5 shows the breakdown in consumption patterns for a U. S. representative sample. The consumption pattern of the elderly is quite similar to the overall population with a few important differences. They spend fewer resources on mortgage payments or new car purchases, reflecting the fact that they are more likely to have paid off these assets. Their expenditure on medical insurance, medical supplies and drugs are all higher. This spending generates both income and employment in the regional economy.

In order to quantify the level of economic activity generated by the elderly a regional economic simulation model was used. This model, the 1997 Pittsburgh REMI Model, uses regional input-output analysis to determine the impact on spending and employment resulting from simulated changes in the demography of the region. The simulation used in this analysis compares the current regional economy to an alternate economy with a smaller elderly population. It is argued that the difference between these two scenarios will help us understand how the elderly contribute to the regional economy.

In the Pittsburgh Metropolitan Region there are approximately 457,000 individuals aged 65 or older or about 17.5% of the total population. The simulation estimates the impact of a 1/3 decrease in the elderly population, a reduction of 152,000 in the elderly population. This was chosen because it would result in a ratio of elderly to total population equivalent to that for the US or 12%.

Table 5: Percentage Breakdown of Consumption by Age Group – United States 1995

	All Consumers	Over 65
Food	14.0	15.2
Alcoholic beverages	0.9	0.8
Mortgage interest and charges	6.5	2.3
Property taxes	2.9	4.4
Maintenance, repairs, insurance, household expenses	2.2	4.1
Rented dwellings	5.5	4.2
Other lodging	1.2	1.5
Utilities, fuels, and public services	6.8	8.9
Household operations	1.6	2.1
Housekeeping supplies	1.3	1.9
Household furnishings and equipment	4.3	4.7
Apparel and services	5.3	3.9
Other apparel products and services	0.8	0.5
Vehicle purchases (net outlay)	8.2	5.2
Gasoline and motor oil	3.1	2.7
Other vehicle expenses	6.2	5.8
Public transportation	1.1	1.5
Health insurance	2.7	6.9
Medical services	1.6	2.2
Drugs	0.9	2.4
Medical supplies	0.2	0.4
Entertainment	5.0	4.2
Personal care products and services	1.2	1.5
Reading	0.5	0.7
Education	1.5	0.7
Tobacco products and smoking supplies	0.8	0.6
Miscellaneous	2.4	2.7
Cash contributions	2.9	4.9
Life and other personal insurance	1.2	1.1
Pensions and Social Security	8.0	2.5

source: Bureau of Labor Statistics, Consumer Expenditure Survey, 1995

The first effect generated by the simulation is that the total population change exceeds the total loss of the elderly. Total population change is 203 thousand, yet only 152 thousand fewer elderly are assumed. The excess population reduction would be the result of job losses in areas that directly or indirectly support the elderly. The loss in jobs induces a set of younger workers to leave the region further decreasing population and the regional economy. The additional 51 thousand decrease in population is an illustration of the secondary, yet sizable, impacts that the elderly have on the region.

Table 6 illustrates the impact of these population changes on different sectors of the regional economy. It shows that the elderly are responsible for employment across a wide range of industries. The greatest impact is in the retail and wholesale trade and service industries. Forty two percent of the total loss of jobs comes from the service industries and another 30% in retail and wholesale trade. This is because people employed in these industries are generally serving customers in the local area.

Manufacturing industries actually show a small marginal increase in employment. This is mostly due to the increased labor supply that is available in the regional economy which no longer needs as large a service sector supporting the elderly.   Also shown in this table is the ratio of jobs lost as a ratio to the total decrease in the elderly population. This provides an estimate of how many jobs each elderly individual is responsible for through his or her economic activity. One example is in medical services industries where this ratio is 0.11. This translates to one job loss in the region for approximately every 9 elderly individuals in the simulation.   Finally, the table shows the loss in gross regional product for the region. This is a measure of the size in dollars of the regional economy. The total regional economy is approximately $50 billion dollars annually. The simulation shows a decrease of $3 billion or approximately 6%.

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Table 6: Simulation Results
Employment Change Resulting from a 1/3 decrease (152,000 total) in the Elderly Population of Pittsburgh Reg

Sector:	Change in Employment	% of total	Jobs/Elderly
Manufacturing	1,200	n/a	n/a
Mining	-65	0.1	0.00
Construction	-6,729	7.9	-0.04
Transportation/Public Utilities	-1,940	2.3	-0.01
Finance Insurance Real Estate	-4,767	5.6	-0.03
Retail	-24,230	28.4	-0.16
Wholesale	-2,270	2.7	-0.02
Services – total	-35,870	42.0	-0.24
Medical Services	-15,920	18.6	-0.11
Agriculture/Forestry/Fish	-435	0.5	0.00
Government	-9,151	10.7	-0.06
Total Jobs lost	**-85,457**		**-0.57**

Other Economic Impacts

Total Population Loss	-210,000
Gross Regional Product	-3 Billion $

Our simulation shows impacts across a wide range of industries and a large percentage of regional jobs. This would not have been the case 20 or more years ago, when the regional economy was dominated by heavy manufacturing. In the past, a far smaller percentage of local jobs were tied to the elderly. These sectors produced goods that were exported to other regions both in the US and around the world and would have been unaffected by a smaller or larger elderly population. Our regional economy has mirrored changes in the national economy in that service sectors have expanded while manufacturing sectors have decreased. Service sector jobs are tied directly to the size and characteristics of the local population. For this reason, a significant economic impact of any large subgroup of the population is to be expected.

Impact of the Elderly on the Regional Health Care Industry: Simulation of a reduction in Medicare payments

The previous section illustrated the impact of the elderly across a number of industries. One of the most significant impacts was on the health care industry. Medicare payments of more than 1.6 billion dollars came into Allegheny County in 1996. Table 7 shows that Allegheny County receives far more per capita in Medicare payments than a number of similar counties in the US.

Table 7: Medicare Payments Per Capita – 1996	
Allegheny County, PA	$1,167
Baltimore County, MD	$831
Cuyahoga County, OH (Cleveland)	$995
Hamilton County, OH (Cincinnati)	$797
Milwaukee County, WI	$770
Jackson County, KS (Kansas City)	$548
San Diego County, CA	$669
Sacramento County, CA	$700
Franklin County, OH (Columbus)	$564
King County, WA (Seattle)	$543

Source: Regional Economic Information System 1969-1996, Bureau of Economic Analysis

More medical dollars are coming into Allegheny County than the other counties in the region because of a growing concentration of medical services here. Figure 5 shows percentage of medical earnings in the region that come into Allegheny County compared to the entire Pittsburgh region over the last 30 years. Although the percent of the regional population located in Allegheny County has continuously decreased over this time period, the proportion of medical earnings has been steady and has even increased slightly. In 1996 Allegheny County accounted for only 54% of the Pittsburgh regional population but over 74% of all medical earnings in the region were in the county.

Figure 5: Allegheny County vs. Region
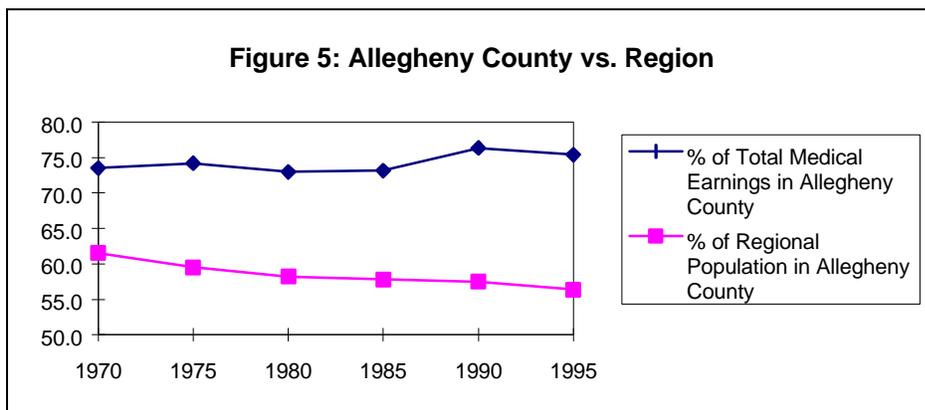
Because of a highly developed health care industry and the demographic structure of Allegheny County, the impact of federal medical programs for the elderly is larger than for other counties. This is important point because it means that the County is vulnerable to proposed changes in Medicare and Medicaid discussed in recent years. The aim of almost all proposed changes is to reduce the total costs of these programs. This potentially translates directly into fewer medical transfer payments coming into the region.

UCSUR has studied the economic impact of decreased medical transfer payments in the region using a REMI simulation (Rushen, 1996). This simulation assumed that the total level of spending of Federal medical programs decreases by 10%, an estimated $235 million for 1997. This is unlike the previous impact analysis because this simulation does not presume any decrease in the size of the elderly population. The lower total medical spending is assumed to derive from lower spending per person.

Table 8 summarizes the result of this simulation. Even this moderate change in Medicare payments would result in the loss of significant jobs in Allegheny County, between 9 and 12 thousand jobs. Half of these lost jobs are in the medical service industries. The indirect impact will also cause job losses across other non-manufacturing sectors of the economy. To put this in perspective this is almost 15 times the number of jobs lost because of the recent closing of the LTV Steel plant in 1998. Most of this job loss would happen immediately. As the regional economy adjusts, some of the total job loss is absorbed over the decade immediately following the decrease in transfer payments. All of lost jobs can not be absorbed by the local economy and will result in a complementary loss in population exceeding 15 thousand by 2010. Although not discussed here the results also show that a comparable loss of jobs, output and population would take place in the outlying 5 counties of the region.

Table 8: Estimated Impact of a 10% decline in Medical Transfer Payments on Allegheny County

	1997	2000	2005	2010	2015	2020
Total Employment	-11,343	-9,809	-9,343	-10,097	-11,011	-11,785
Manufacturing	-83	75	117	67	16	-22
Non-Manufacturing	-11,150	-9,502	-8,873	-9,476	-10,283	-10,995
Medical Services	-5,109	-4,999	-5,067	-5,302	-5,555	-5,743
Gross Regional Product	-0.442	-0.392	-0.39	-0.437	-0.491	-0.54
Total Output	-0.776	-0.657	-0.632	-0.706	-0.798	-0.884
Population	-2,504	-8,645	-12,879	-15,185	-16,601	-17,461

source: Rushen, 1996: 1996 Pittsburgh REMI Model.
Gross Regional Product and Total Output are in billions of 1992 dollars.

Summary and Future Directions

Clearly, the elderly have a sizeable economic impact on the county. Through retirement benefits, interest and dividends, earned income and transfer payments they account for sizable portion of resources that flow into the region and thereby support a significant proportion of the existing labor force. Moreover, our assessment of their economic impact is likely to be an underestimate of their impact on the region because we have not included a number of additional funds which flow in the region because of their presence here. This includes state grant aide and multiple federal programs. These funds support programs as diverse as Meals on Wheels to elderly community centers. The total amounts can be significant with each dollar spent by Allegheny County's Department of Aging matched almost 8 to 1 by state and federal grants as shown in table 9. These expenditures provide additional economic stimulus programs throughout the region. This does not include additional funds that come to the region in support of medical and academic research on the elderly. One estimate of research funding for the elderly in Pittsburgh exceeds $30 million annually. All of these funds add to the net inflow of money into the region.

Table 9: Funding of County Aging Department

County Funds	$396,797
State Funds	$30,091,659
Federal Funds	$2,112,727
Total	$32,601,183

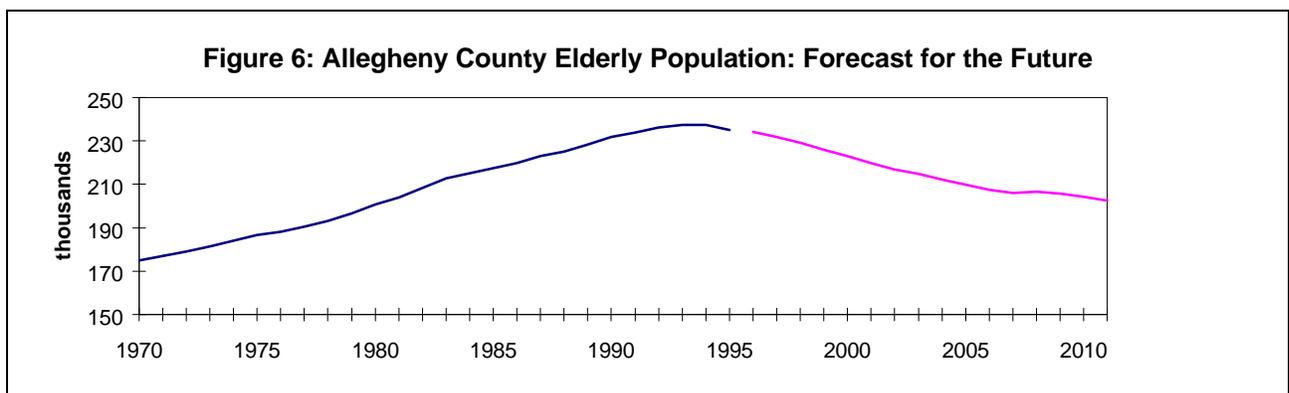*Source: County of Allegheny, Pennsylvania 1998 Operating Budget*

Finally, the elderly impact several sectors of the regional economy that are difficult to measure. Volunteer activity of the elderly has a real and positive impact on the region. In addition, many of the elderly may have left the work force but remain an integral part of home production activities. This could include many activities such as providing some form of childcare for grandchildren or care for other relatives.

Demographic forecasts predict that the elderly population of Allegheny will decrease in both percentage and absolute number over the next decade. This is because the large elderly population here is not matched by an equally large pre-elderly population in the region. Over the next 15 years the number of people turning 65 will not match the natural decrease in the current elderly population. Figure 6 shows an estimated forecast of the elderly population over the next 15 years. This forecast predicts that the size of the elderly population will decrease almost 15%
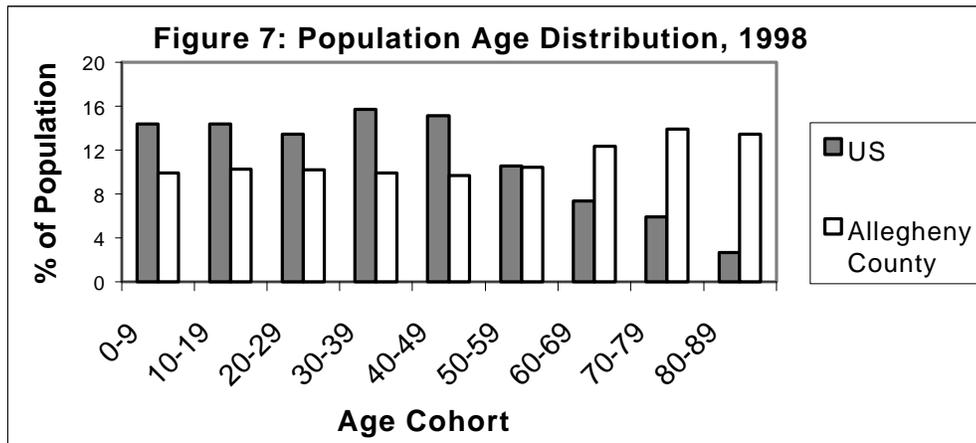
between 1995 and 2012. Elderly spending and medical transfer payments can be expected to decrease a similar amount, unless the local health care industry is able to further increase its share of the regional market.

The Pittsburgh region is unlike the nation when it comes to the age composition of the population. Figure 7 highlights the differences between the local and national age distribution of the population. The elderly in Allegheny County compose a far larger percentage of the population than in the US but the percentage composed of younger age groups is less than national levels. At the national level the large baby boom generation has not yet reached retirement age. As it does the size of the national elderly population will grow in both magnitude and percentage of the population over the next several decades. Here the baby boom generation is actually smaller than the elderly group it will replace in the future.

The elderly have a large impact on a wide range of industries in the region. Planning for the future will have to take into account the demographic projections for the elderly for both the near and long term. Unlike other aspects of economic development and planning, there are few policy actions that can affect the size of the future elderly population. Given low net migration trends among these groups, the future size of the elderly population depends on fundamental factors such as mortality rates, something that cannot be changed significantly by local public policy. Regional planning needs to take into account these anticipated structural changes. Our simulations were intentionally designed to capture two potential future scenarios, a reduction in the population of elderly and a decrease in medical reimbursement rates. They convincingly illustrate the economic impact of the elderly, but also point to a future of further regional economic decline unless we are able to develop and implement policies that anticipate these changes.

Figure 6: Allegheny County Elderly Population: Forecast for the Future

source: 1997 Pittsburgh REMI Model

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Figure 7: Population Age Distribution, 1998

Source: US Bureau of the Census, Pittsburgh REMI Model

Table 9: Facts About the Elderly Population of Allegheny County

Estimated Elderly Population – 1997	231,928
Percentage of Total Population	18%
Percentage Female	61.7
Total Interest, Dividend or Rental Income –1990	819 Million
Total Earnings - 1990	604 Million
Total Social Security Income – 1990	1.27 Billion
Percent of Population in Poverty aged 17 and under – 1989	17.1
Percent of Population in Poverty aged 18-64 – 1989	10.0
Percent of Population in Poverty aged 65-74 – 1989	12.3
Percent of Population in Poverty aged 75 and over - 1989	17.4
Percent of Elderly in Labor Force	10.0
Percent of Elderly Living in Owner Occupied Housing	72.6
Percent of Elderly Receiving Social Security	87.8
Percent of Elderly Receiving Public Assistance Income	5.0
Percent of Elderly with Mobility or Self-Care Limitation	21.6

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