Journal of the Indiana Academy of the Social Sciences

Volume 16 | Issue 2 Article 6

2013

An Initial Study of the Economic Impact of General Motors Pension Benefits on the Greater Anderson, Indiana, Community

Jonathan Furdek
Purdue University Calumet

John Lucas
Purdue University Calumet

An Initial Study of the Economic Impact of General Motors Pension Benefits on the Greater Anderson, Indiana, Community[*]

JONATHAN FURDEK
Purdue University Calumet

JOHN LUCAS
Purdue University Calumet

ABSTRACT

Like in many communities, transfer payments are an important income source in Anderson, Indiana. Anderson was once the home of ten General Motors plants. These plants are now closed; approximately 14,000 retirees from these plants reside in the greater Anderson, Indiana, area.

This study is a first attempt to assess the long-term impact that these pensions will have on the Anderson, Indiana, area.

KEY WORDS Economic Impact; General Motors; Anderson, Indiana; Pension Benefits; Plant Closings

During the twentieth century, General Motors (GM) was regarded as one of the leading Fortune 500 companies in the United States. From 1931 to 2008, GM enjoyed recognition as the world's largest carmaker, which employed thousands of union workers at various locations throughout the United States. One city location that had several GM plants was Anderson, Indiana, located 50 miles northeast of Indianapolis. At GM's peak in the late 1970s, it had 10 GM factories employing more than 22,000 workers from Anderson (Peters and Maynard 2006). In fact, one out of every two people living in Anderson was employed as a GM worker (Peters and Maynard 2006). During this time, only Flint, Michigan, was ranked higher than Anderson as a city with the largest concentration of GM operations (Chapman 2009).

The automobile industry is volatile, and General Motors was huge beyond comparison. Facing stiff foreign competition, GM was continually striving for efficiency and performance and evaluated the performance of all facilities and subsidiaries as an ongoing process. Routinely, facilities that were underperforming were listed. Gradually, all ten plants in Anderson, Indiana, were listed by GM as underperforming. Facing a

[*] Jonathan Furdek, School of Management, Purdue University Calumet, Hammond, Indiana 46323; Tel: (219) 989-2426; Fax: (219) 989-3158; furdek@purduecal.edu

global recession and a depressed auto market, in 2005, GM reported its biggest loss since 1992—$10.6 billion—and its lowest market share in terms of sales since the Great Depression (Maynard 2006). Amid encouragement of future investment to expand and improve facilities in Anderson, financial concerns led to further closures of underperforming facilities.

Today, all GM plants and operations have permanently closed in Anderson. The population has declined to 58,000 people as compared to 70,000 people in the 1970s (Peters and Maynard 2006). It is estimated that approximately 10,000 GM retirees still live in the greater Anderson area, as well as an unspecified number of surviving spouses (Peters and Maynard 2006). These GM retirees are solely dependent on the pensions and medical plans that had been given to them for their many years of dedicated service. In the 1970s, the economy of the greater Anderson area thrived and was dependent on the successful operations of the GM plants. Today, the greater Anderson area is not dependent on GM as a producer, following plant closures, but rather "it is dependent on GM, the welfare state."

GM has an estimated $109 billion pension obligation to its retirees and surviving beneficiaries. In an attempt to reduce its pension liability, GM offered 42,000 of its 118,000 salaried retirees a lump-sum payment in lieu of its transfer payments of their defined benefit pension (Anand 2012). The GM salaried retirees who decline this offer will have their pensions converted to a group annuity with Prudential Financial Inc. (Monga 2012). It is anticipated that in the next contractual negotiations, with the United Autoworkers (UAW), a similar offer will be made to the hourly workers. Pensions are mandatory bargaining subjects, and both parties must bargain in good faith over any changes to the offered pension plan for current employees; however, changes to the pension for retirees are a voluntary subject, per the *Allied Chemical Workers v. Pittsburgh Plate Glass Company* decision (U.S. Supreme Court 1971).

During the 1990s and the 2000s, many Midwestern communities were affected by the closing of industrial plants; numerous research studies have been conducted to assess the impact that the closings have had on some communities. Some studies focus on the socioeconomic consequences while others focus on the immediate economic impact caused by the loss of earnings, exposing economic as well as personal hardships that resulted from the closings. The long-term consequences have yet to be considered, however.

Anderson, Indiana, is one of those communities drastically affected by the closing of the ten GM plants in and around the city during that time.

In 1827, John and Sarah Berry donated 32 acres of their land to Madison County, Indiana, to establish a new county seat. In 1828, the county seat was officially moved to Andersontown, named after Chief William Anderson, whose mother was a Delaware Indian. The name of the city was later shortened to Anderson in 1844. In 1887, natural gas was discovered in Anderson, and although the natural gas was depleted, several industries located there, including Delco Remy, Guide Lamp, and 17 automobile manufacturers (Anderson, Indiana N.d.). Eventually, GM saw an opportunity in this small

Midwestern town not far from Indianapolis, and two dozen GM-related plants were operating in Anderson (Maynard 2009).

About one in three people in Anderson worked for GM in the 1970s. Work shifts were staggered and coordinated to ease the traffic burden. At that time, Anderson was a prosperous factory town (Peters and Maynard 2009). All those GM plants are now closed, however, the last closing around the year 2000. The impact on the community was dramatic, and the population declined from a peak population of 70,787 in 1970 to 56,129 in 2010. In addition to the loss of residents, the closures resulted in a rather immediate loss of income and benefits to employees, tax revenues from employees and companies, and incomes extracted from employee and company purchases.

THE MODEL AND ITS ASSUMPTIONS

This study focuses on the long-term economic impact of the continuing pension benefits received by GM retirees residing in the Anderson area.

It is estimated that approximately 10,000 retirees continue to reside in Anderson, while the regional Autoworkers' Union reports that their estimate is around 14,000. For purposes of this study, the more conservative estimate of 10,000 retirees is assumed. It is likely that the union's estimate of the number of auto worker retirees residing in the union's service region includes the Indianapolis metropolitan area.

It would seem that the economic impact would be significant and durable. As one journalist concludes, Anderson was once largely dependent on General Motors the employer but is now dependent on General Motors the welfare state (Peters and Maynard 2006). Certainly, the impact on the community during that period when the plants closed down was dramatic; however, the positive impact of transfer payments from GM, both in the form of pension benefits and in terms of insurance subsidies, continues and will continue for many years.

Estimating the Number at Each Age

By the year 2012, the GM retirees who remain in Anderson, Indiana, have been retired or eligible to retire for more than 10 years. Based on U.S. Census data for 2010 for Anderson, the percentage of population in the city in the age groups 60–64, 65–69, 70–74, 75–79, 80–84, 85–89, and 90 years and older was determined. Those retirees who would have been eligible for retirement benefits when the plants closed and who survive are likely in these age groups. The proportions of the population in each age group were applied to the estimated 10,000 retirees in Anderson.

Mortality probabilities and, more importantly, survival probabilities for Anderson were derived from the mortality probabilities estimated by the U.S. Social Security Administration (2012). These tables provide survival probabilities for males and females for each of these broad age categories. The data from the United Autoworkers' Labor Union indicates that 74 percent of autoworkers in Indiana are male, and 26 percent are

female. A weighted average of the survival factors for each age group was calculated to estimate the gender-combined survival factors.

The data were refined for each year rather than for five-year categories. With the proportion of retirees estimated for each age category, the number at each age was estimated by the following:

Let S_i be the survival factor for a person of age i and N_j be the number of retirees in a particular age group. Then

$$N_i = X + S_{60}*X + S_{60}*S_{61}*X + S_{60}*S_{61}*S_{62}*X + S_{60}*S_{61}*S_{62}*S_{63}*X$$

where X will be the number of retirees in the first year of that age group.

$$\text{So } X = N/(1 + S_1 + S_1*S_2 + S_1*S_2*S_3 + S_1*S_2*S_3*S_4).$$

For example, if N_1 are estimated to be in the age group of 60–64, then X_1 would be the estimated number of retirees aged 60, $S_{60}*X_1$ would be the estimated number at age 61, $S_{60}*S_{61}*X_1$ are age 62, $S_{60}*S_{61}*S_{62}*X_1$ are age 63, and $S_{60}*S_{61}*S_{62}*S_{63}*X_1$ are 64.

Estimating the Annual Pension Benefit

Based on discussions with UAW officials and on general guidelines of benefits in the automobile industry, the annual pension benefits for each age group were estimated as listed below.

Age 60–64	$22,000
Age 65–69	$24,000
Age 70–74	$29,000
Age 75–79	$27,000
Age 80–84	$25,000
Age 85–89	$23,000
Age 90–94	$21,000
Age 95–99	$19,500

Two primary factors were significant in determining these estimates. Generally, pension benefits track with annual earnings, and it is estimated, conservatively, that benefits in the auto industry were growing at an average annual rate of approximately 2.5 percent. Typically, the cost of the benefits package in the auto industry on an hourly basis tends to be a consistent proportion of the hourly wage. Under the current negotiations for a new contract, it was reported that a Ford employee in the United States earns $28 per hour in wages with a total cost, including benefits and taxes, of $64 per hour (McDonald and Juan2012). For those who were of an age approaching retirement, it is estimated that

annual benefits were growing. For those already retired, it is estimated that annual benefits were smaller in proportion to those entering the pool of retirees. The growth factor used for these estimates is 2.5 percent, consistent with average annual growth in earnings.

Estimating Direct Impact of Pension Benefits

For 2012, the annual amount of pension benefits entering the Anderson, Indiana, community was determined by multiplying the annual pension benefit estimate for each age by the estimated number of retirees at each age and then summing over all ages. For each subsequent year, the number of retirees at each age group was adjusted based on the weighted average of survival probabilities as provided by the U.S. Social Security Administration (2012). With this approach, the total amount of benefits entering the Anderson economy was estimated over the horizon 2012 through 2052.

Estimating the Total Impact of Pension Benefits

The economic impact includes a multiplier effect derived from spending resulting from pension benefits. For this part of the analysis, IMPLAN multipliers were adapted to the pension benefits as transfer payments entering the local economy. Input-output models have been used to analyze the economic impact that ripples through an economy when there is a change in the economic activity of a particular sector (Leontief 1986). Those impacts are indirect and induced. The indirect impacts are the linkages with other sectors in the economy, whereas the induced impacts are the results of spending from wages, dividends, and other sources of income. To develop such a model, the expenditure patterns of every enterprise would have to be determined and the expenditure pattern of every household would have to be estimated. For a study of any significant size, the collection of this information is prohibitively costly. A tool such as IMPLAN can provide this information and a model that can estimate the indirect ad-induced impacts with some level of detail.

There has been a considerable and lengthy discussion in the literature regarding the precision of the multipliers derived from this input-output model (Charney and Leones 1997; Rickman and Schwer 1995). The primary advantages are that IMPLAN provides multipliers that are county specific within a state and that the widespread application and acceptance of this particular model lends added credibility to the estimates. The primary disadvantage is that the model is designed to focus on industry sectors and not transfer payments as a source of income. Consequently, several sectors relevant to Anderson, Indiana, were examined and an average was used in this analysis.

RESULTS

As retirees expire over time, the net result is that the total of the pension benefits that would enter the Anderson economy diminishes. The results are summarized in the following illustrations.

As Figure 1 shows, presently, approximately $250 million enters the Anderson economy because of GM pension benefits. This will decline as retirees expire, such that by the year 2032, the annual revenues entering the Anderson community will approach $50 million. These annual revenues will continue to decline until approximately the year 2052.

These revenues will have indirect effects resulting in labor incomes as well as outputs in real goods and services derived from these revenues. Table 1 describes the impact on labor income and on the local economy derived from the pension income.

Figure 1. Projected Annual GM Pension Benefits Entering the Anderson Economy (thousands of dollars)

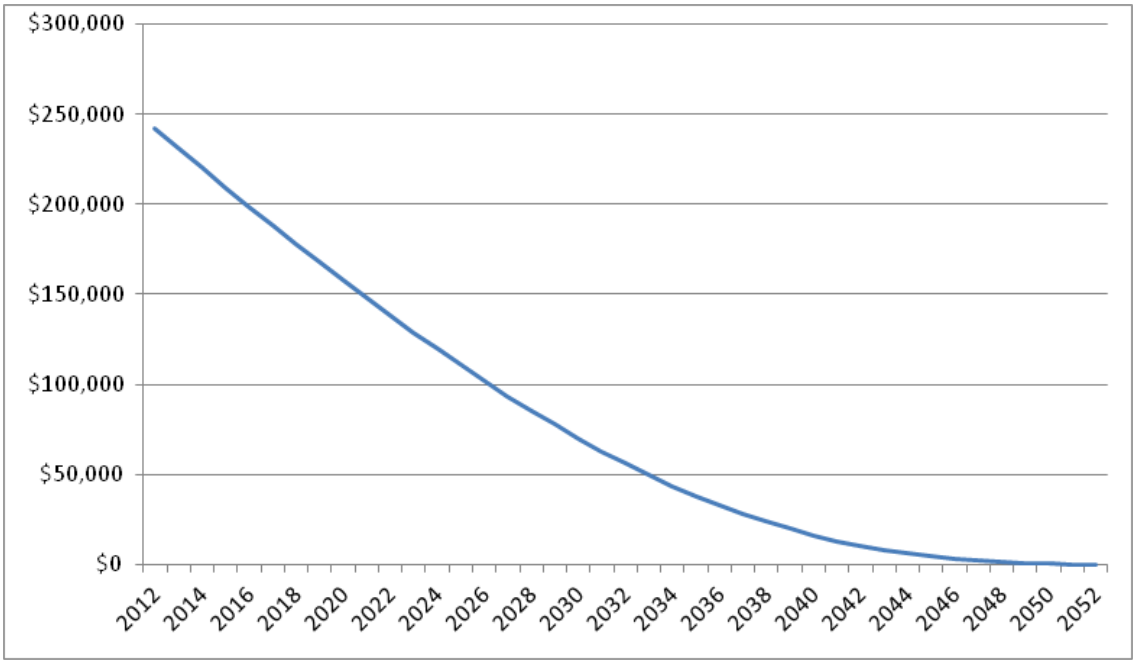


Table 1. Induced Effects of GM Pension Incomes on the Anderson Economy

Year	Indirect & Induced Effect on Employment	Indirect & Induced Effect on Labor Income ($000's)	Indirect & Induced Effect on GDP ($000's)	Total Effect on GDP ($000's)
2012	968	$28,432	$126,311	$396,720
2013	924	$27,135	$120,547	$378,614
2014	880	$25,852	$114,851	$360,724
2015	837	$24,590	$109,243	$343,111
2016	795	$23,345	$103,714	$325,744
2017	753	$22,117	$98,257	$308,606
2018	712	$20,905	$92,872	$291,692
2019	671	$19,723	$87,619	$275,194
2020	632	$18,554	$82,427	$258,886
2021	592	$17,402	$77,310	$242,817
2022	554	$16,271	$72,284	$227,031
2023	516	$15,163	$67,361	$211,569
2024	479	$14,075	$62,531	$196,397
2025	443	$13,018	$57,835	$181,649
2026	408	$11,993	$53,282	$167,347
2027	375	$11,002	$48,877	$153,513
2028	342	$10,046	$44,628	$140,167
2029	311	$9,126	$40,543	$127,337
2030	281	$8,245	$36,629	$115,044
2031	252	$7,404	$32,894	$103,314
2032	225	$6,606	$29,346	$92,171
2033	199	$5,851	$25,993	$81,638
2034	175	$5,142	$22,844	$71,747
2035	153	$4,480	$19,903	$62,510
2036	132	$3,866	$17,176	$53,947
2037	112	$3,302	$14,669	$46,071
2038	95	$2,787	$12,383	$38,893
2039	79	$2,323	$10,319	$32,409
2040	65	$1,908	$8,478	$26,626
2041	53	$1,543	$6,856	$21,535
2042	42	$1,227	$5,450	$17,117
2043	33	$956	$4,249	$13,345
2044	25	$731	$3,248	$10,201
2045	19	$546	$2,424	$7,614
2046	14	$397	$1,762	$5,534
2047	10	$281	$1,248	$3,919

(Continued on next page.)

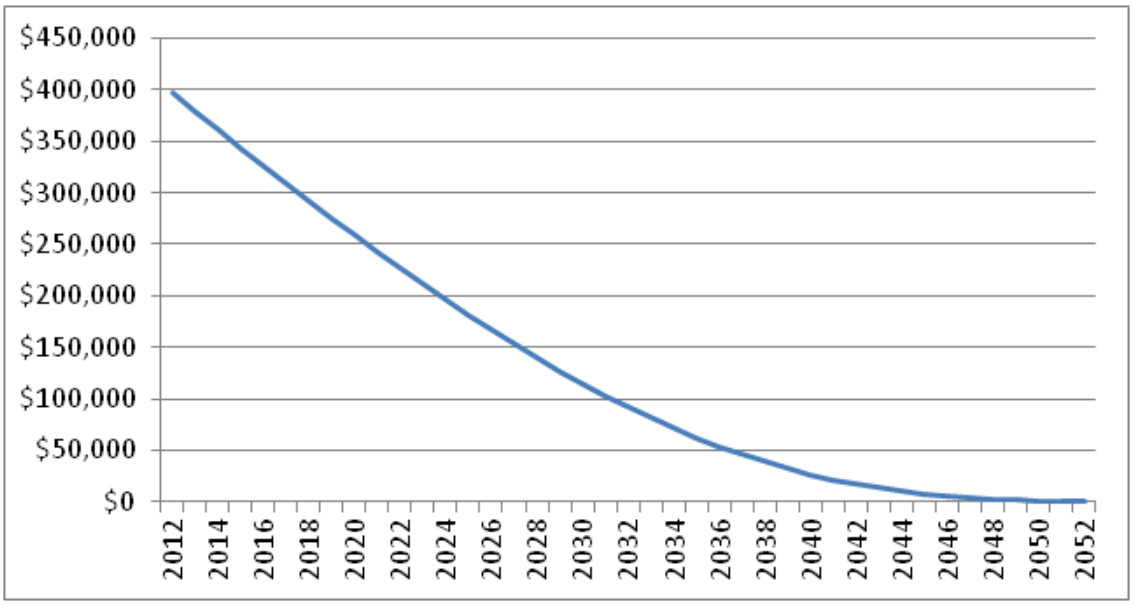
Table 1. Induced Effects of GM Pension Incomes on the Anderson Economy, cont.

Year	Indirect & Induced Effect on Employment	Indirect & Induced Effect on Labor Income ($000's)	Indirect & Induced Effect on GDP ($000's)	Total Effect on GDP ($000's)
2050	3	$74	$327	$1,027
2051	1	$39	$174	$548
2052	1	$16	$70	$220

CONCLUSIONS

The economic impact of the GM pension benefits received by retirees of General Motors in Anderson, Indiana, is very significant and enduring. Over the next 40 years, the impact of these benefits will affect the local economy, directly as pension income is received and indirectly by the economic activity generated, as illustrated in Figure 2.

Figure 2. Annual Economic Impact on the Anderson Economy (thousands of dollars)



Pension benefits received by GM retirees stimulated approximately 968 jobs in the local economy in 2012. This will decline, however, to approximately 516 jobs in 2023, and then to fewer than 100 jobs in 2038 as retirees expire. These laborers derived

incomes of approximately $28 million in 2012, which is anticipated to decline to $14 million in 2024 and then eventually below $5 million by the year 2035.

The total impact on the Anderson economy, direct and indirect, is projected to be $396 million in 2012 but will continue to decline to less than $200 million in 2024 and will decline below $100 million by the year 2032.

Several factors can influence and affect these outcomes. Because pension benefits are fixed by contract, there is no adjustment for inflation. These impacts are in current dollars, based on current IMPLAN multipliers. Consequently, with inflation of any degree, the real impact of these pension incomes will be diminished.

The recent bankruptcy proceedings for General Motors, the bailout at the end of the Bush administration, and the buyout under the Obama administration may have a significant impact on these pension benefits in the future, but the relative degree of impact and timing are unknown at the present time.

It is important to recognize that the pension benefits reflect part of the transfers to GM retirees and into the Anderson community. Retirees receive medical insurance benefits as well as Social Security benefits. Social Security benefits are primarily a financial flow issue, whereas medical insurance benefits may be affected by changes anticipated in Medicare under the new federal law.

In an effort to counter the impact of the plant closings, Anderson has aggressively pursued new industry, but with limited success. The State of Indiana authorized the development of a land-based casino with an accompanying horse racetrack, which has had some impact on the local economy. When GM reorganized in 2006, the legacy liabilities were structured in Motors Liquidation Corporation, which included these ten Anderson plants, formed to dispose of unused assets. The facilities were donated to the city, enabling the city to offer them to new companies at attractive prices. The last three factory buildings were sold in 2010 (McLaughlin 2010).

Consider, however, the impact on the Anderson economy had General Motors filed for bankruptcy and the pension benefit programs been covered by the Pension Benefit Guaranty Corporation (PBGC), the government-instituted insurance carrier for industrial pension programs. Historically, PBGC has reduced benefits about 20 percent when taking over a pension program, which would mean a 20 percent reduction in pension incomes and a 20 percent reduction of the economic impacts. As this analysis indicates, however, the economic impacts of plant closures will persist for many years as the natural progression of aging and passing on continues in the community.

REFERENCES

Anand, S. 2012. “Retirees Face Tough Choice on Pension.” *Wall Street Journal,* August 6.

Anderson, Indiana. N.d. “History of Anderson Indiana.” (www.cityofanderson.com/resident-history.aspx).

Chapman, M. 2009. "Anderson Indiana Recovers from G.M. Hangover." *New York Times,* March 5.

Charney, A. H. and J. Leones. 1997. "IMPLAN's Induced Effects Identified Through Multiplier Decomposition." *Journal of Regional Science* 37(3):503–17.

Leontief, Wassily W. 1986. *Input-Output Economics*. 2nd ed. New York, NY: Oxford University Press.

Maynard, M. 2009. "Anderson, Indiana Recovers from 'GM Hangover.'" *New York Times,* March 5.

Maynard, M. 2006. "GM in the Worst Financial Crisis." *New York Times,* March 26.

McDonald, A. and E. Juan. 2012. "Canadian Auto Workers Focus on Ford as Deadline Nears." *Wall Street Journal*, September 17.

McLaughlin, K. 2010. "Anderson Makes Headway in Disposing of Former GM Sites." *Indianapolis Business Journal,* November 3.

Monga, V. 2012. "Taming Pension Headaches." *Wall Street Journal,* June 19, sec. B6.

Peters, J. and M. Maynard. 2006. "A Town in Danger of Dying out as GM Falters." *New York Times,* February 26.

Peters, J. and M. Maynard. 2006. "Company Town Relies on GM Long after Plants Have Closed." *New York Times,* February 20.

Peters, J. and M. Maynard. 2009. "A Town in Danger of Dying out as GM Falters." *New York Times,* March 5.

Rickman, D. and R. Schwer. 1995. "A Comparison of the Multipliers of IMPLAN, REMI, and RIMS II: Benchmarking Ready-Made Models for Comparison." *The Annals of Regional Science* 29(4):363–74.

Social Security Administration. 2012. "Actuarial Life Tables 2007." (www.ssa.gov/OACT/STATS/table4c6.html).

U.S. Census Bureau. 2011. "2010 Census, Summary File 1, Tables P12, P13 and PCT 12."

U.S. Supreme Court. 1971. "The Allied Chemical Workers v. Pittsburg Plate Glass". 92 Sup. Ct. 383 (1971).