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ABSTRACT

Long before General Motors filed for bankruptcy protection, it closed all 10 of its facilities in Anderson, Indiana, which was devastating to the greater Anderson Community, yet today, more than ten thousand General Motors retirees reside around Anderson and the pension benefits continue to buffer the economic impact on the community. There are viable threats in the current economic climate to this stream of pension income, however.

This study is an attempt to assess the long-term economic impact that a loss or significant reduction of future pensions could potentially have on the Anderson, Indiana, area.

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

In the latter half of the 20th century, Anderson, Indiana, was a prosperous factory town. The prosperity was largely due to the success of General Motors (GM) Corporation, the major employer in Anderson and the surrounding area, and of the many related companies that supplied General Motors, such as Guide Lamps, which produced headlamps, and Delco-Remy, which supplied batteries and electronic components. Anderson is located in Central Indiana, northeast of Indianapolis, and has a long, rich history in the automotive industry. Over the years, 17 brands of autos have been manufactured in Anderson.

At its peak in the late 1970s, GM had 10 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). As one

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resident reflected, "General Motors once had so many plants here that it had to stagger their schedules so that the streets would not be clogged with traffic when the workday ended" (Peters and Maynard 2006). During this time, only Flint, Michigan, was ranked higher than Anderson in largest concentration of GM operations (Chapman 2009).

All of those GM plants are now closed, however, the last closing around 2006. The impact on the community was dramatic, and the population declined from a peak population of 70,787 in 1970 to the current population of 55,554 in 2012 (U.S. Census Bureau 2014). 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.

In 1974, the Employee Retirement Income Security Act (ERISA) was enacted to protect employee rights pertaining to pension plans. Under Title VII of ERISA, the Pension Benefit Guaranty Corporation (PBGC) was created as a federally chartered government corporation designed to protect retirement benefits of participants in qualified single-employer as well as multi-employer defined benefit (DB) plans (Lucas and Furdek 2008). In 2012, the PBGC guaranteed payments of pension plans for more than 44 million American workers and retirees in more than 26,000 private-sector DB plans [Employee Benefit Research Institute (EBRI) 2013].

According to the EBRI (2013), for single-employer plans, 32.5 million participants were insured under 24,200 plans, with total assets held of $83 billion for the fiscal year ending September 30, 2012. For multi-employer plans, 10.4 million participants were insured under 1,450 plans, with total assets held of $1.8 billion for the fiscal year ending September 30, 2012. It is interesting to note that the net fiscal position of single-employer plans was a deficit of $29 billion and for multi-employer plans, a deficit of $5,237 million for the fiscal year 2012.

The guarantee of "basic pension benefits" by the PBGC includes pension benefits at normal retirement age, most early retirement benefits, disability benefits, and annuity benefits for survivors of plan participants (PBGC N.d.). According to a recent EBRI report (Banerjee 2013), for all age groups above 65, Social Security remained the primary source of income while income from pensions and annuities was the second largest source of income. Additionally, households aged 65–74 received 17.1 percent and households above age 85 received 15.3 percent of their incomes from pensions and annuities.

The greater Anderson area is not dependent on GM as a producer but rather "is dependent on GM, the welfare state" (Furdek and Lucas 2013). In essence, the GM retirees are solely dependent on the pensions and medical plans that they were given when they retired from GM. An important question that remains is what will happen to the pensions and medical plans after GM emerges from chapter 11 bankruptcy.

With General Motors filing a chapter 11 bankruptcy, the company continued to manufacture automobiles, under court protection, while resolving its financial difficulties. Keep in mind that a chapter 11 bankruptcy may or may not affect retirees' pensions or health plans. As a general rule, the promised pension should not be at risk, as the pension

assets should be adequately funded as required by federal law and the retirement assets should therefore be protected from the company's creditors under a chapter 11 bankruptcy (U.S. Department of Labor N.d.).

If a company decides to terminate its pension plans, two methods can be used. One method is the standard termination. With this method, the employer ends the pension plan and has enough money to pay the plan participants either by purchasing an annuity from an insurance company or by issuing a lump-sum payment to cover the entire benefit (EBRI 2014). The other method is a distress termination, in which the company is in financial distress and the pension plan does not have enough money to cover all the pension benefits owed to plan participants (EBRI 2014). In other words, the company demonstrates to the bankruptcy court or to the PBGC that it cannot remain in business unless its pension plan is terminated. Under conditions of a distress termination, the PBGC has the authority to initiate the necessary action to terminate a pension plan in order to protect the interests of the plan participants.

If the PBGC takes over as the trustee of the pension plan, it will review the plan records and determine the amount of benefit that each plan participant will receive. The amount paid to each participant is subject to limits set by federal law. For 2013, the maximum amount guaranteed was $4,789.77 per month, or $57,477.24 per year (EBRI 2014).

THE MODEL AND ITS ASSUMPTIONS

The model employed in this paper to estimate the impact over time of the stream of pension benefits was developed in an earlier study (Furdek and Lucas 2013). In this application, the loss of any of these benefits rather than the contribution from these benefits will be examined.

The City of Anderson estimates that 10,000 retirees continue to reside in Anderson, while the regional autoworkers' union estimates approximately 14,000 retirees. This estimate is likely for the Anderson statistical metropolitan area (SMA) or even of the union's service region, which includes the Indianapolis metropolitan area.

Estimating the Number at Each Age

By 2014, the GM retirees who remained in Anderson, Indiana, had been retired or eligible to retire for more than 10 years. Based on 2010 U.S. Census data for Anderson, the percentage of population in Anderson in the age groups 60 through 64, 65 through 69, 70 through 74, 75 through 79, 80 through 84, 85 through 89, and 90 years and older was determined (U.S. Census Bureau 2011). Those retirees who would have been eligible for retirement benefits when the plants closed and survived are likely in these age groups. The proportions of the population in each age group were applied to the estimated 10,000 to 14,000 retirees in Anderson in 2012.

The components of the model are worth reiterating. Mortality probabilities and, more importantly, survival probabilities for Anderson, Indiana, 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 indicate that 74% of autoworkers in Indiana are male and 26% are female. A weighted average of the survival factors for each age group was calculated to estimate the gender-combined survival factors.

The data was 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, 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 is 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, $S_{60}*S_{61}*X_1$ would be is age 62, $S_{60}*S_{61}*S_{62}*X_1$ would be age 63, and $S_{60}*S_{61}*S_{62}*S_{63}*X_1$ would be 64.

Estimating the Annual Pension Benefit

Based both on discussions with UAW officials and on general guidelines of benefits in the automobile industry, the annual pension benefit for each age group was 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 Juan 2012). 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.

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 years 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 from the 2009 database were adapted to the pension benefits as transfer payments entering the local economy. The IMPLAN model is a widely accepted and utilized input-output model for regional economic analysis. The model accounts for all dollar flows between the different sectors of the regional (Anderson, Indiana) economy. Using the information in the IMPLAN model, the way a dollar injected or removed from one sector (such as retiree pension incomes) is spent and then re-spent in other sectors of the regional economy and generates waves of economic activity, or the so-called multiplier effect, is estimated. 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 on 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 OF THE ANALYSIS

As retirees expire over time, the net result is that the total of the pension benefits that enter the Anderson economy diminishes. The results are summarized in Figure 1.

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

These revenues will have indirect effects resulting in labor incomes as well as outputs in real goods and services derived from these revenues. Tables 1 and 2 illustrate the impact on labor income and on the local economy derived from pension income.

Figure 1. Annual Pension Benefits Entering the Anderson Economy with 10,000–14,000 Current Pension Beneficiaries

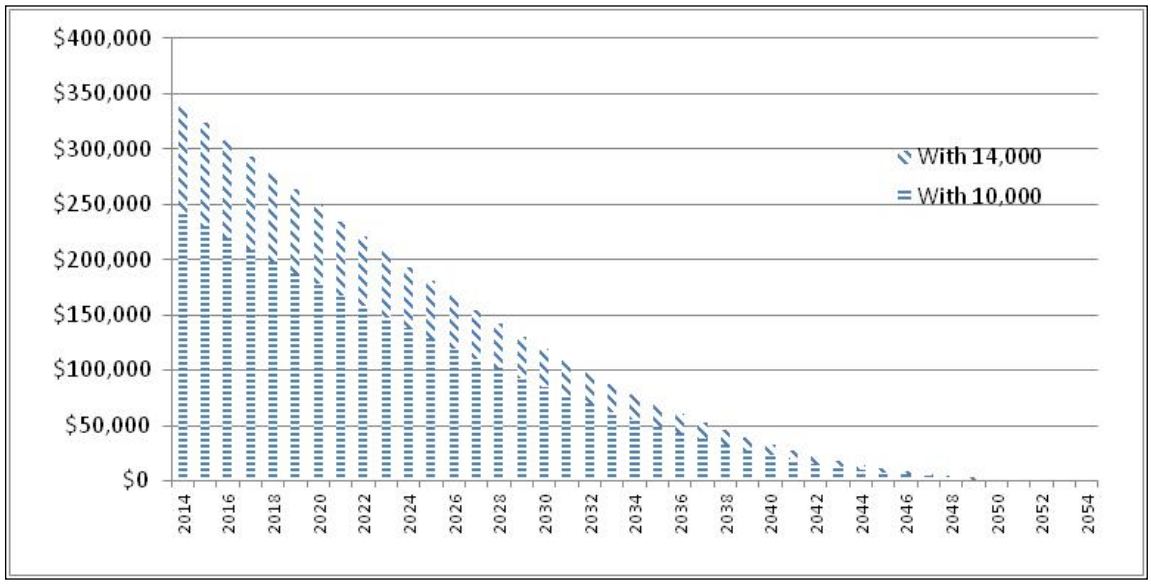

Table 1. Multiplier Effects of GM Pension Incomes on the Anderson Economy with 10,000 Retirees

Year	Indirect & Induced Effect on Employment	Indirect & Induced Effect on Labor Income ($000s)	Indirect & Induced Effect on GDP ($000s)	Total Effect on GDP ($000s)
2014	968	$28,342	$126,311	$396,720
2015	924	$27,135	$120,547	$378,614
2016	880	$25,852	$114,851	$360,724
2017	837	$24,590	$109,243	$343,111
2018	795	$23,345	$103,714	$325,744
2019	753	$22,117	$98,257	$308,606
2020	712	$20,905	$92,872	$291,692
2021	671	$19,723	$87,619	$275,194
2022	632	$18,554	$82,427	$258,886

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Table 1. Multiplier Effects of GM Pension Incomes on the Anderson Economy with 10,000 Retirees, concl.

Year	Indirect & Induced Effect on Employment	Indirect & Induced Effect on Labor Income ($000s)	Indirect & Induced Effect on GDP ($000s)	Total Effect on GDP ($000s)
2024	554	$16,271	$72,284	$227,031
2025	516	$15,163	$67,361	$211,569
2026	479	$14,075	$62,531	$196,397
2027	443	$13,018	$57,835	$181,649
2028	408	$11,993	$53,282	$167,347
2029	375	$11,002	$48,877	$153,513
2030	342	$10,046	$44,628	$140,167
2031	311	$9,126	$40,543	$127,337
2032	281	$8,245	$36,629	$115,044
2033	252	$7,404	$32,894	$103,341
2034	225	$6,606	$29,346	$92,171
2035	199	$5,851	$25,993	$81,638
2036	175	$5,142	$22,844	$71,747
2037	153	$4,480	$19,903	$62,510
2038	132	$3,866	$17,176	$53,947
2039	112	$3,302	$14,669	$46,071
2040	95	$2,787	$12,383	$38,893
2041	79	$2,323	$10,319	$32,409
2042	65	$1,908	$8,478	$26,626
2043	53	$1,543	$6,856	$21,535
2044	42	$1,227	$5,450	$17,117
2045	33	$956	$4,249	$13,345
2046	25	$731	$3,248	$10,201
2047	19	$546	$2,424	$7,614
2048	14	$397	$1,762	$5,534
2049	10	$281	$1,248	$3,919
2050	6	$190	$845	$2,655
2051	4	$123	$544	$1,710
2052	3	$74	$327	$1,027
2053	1	$39	$174	$548
2054	1	$16	$70	$220

Table 2. Multiplier Effects of GM Pension Incomes on the Anderson Economy with 14,000 Retirees

Year	Indirect & Induced Effect on Employment	Indirect & Induced Effect on Labor Income ($000s)	Indirect & Induced Effect on GDP ($000s)	Total Effect on GDP ($000s)
2014	1355	$39,679	$176,835	$555,408
2015	1294	$37,989	$168,766	$530,060
2016	1232	$36,193	$160,791	$505,014
2017	1172	$34,426	$152,940	$480,355
2018	1113	$32,683	$145,200	$456,042
2019	1054	$30,964	$137,560	$432,048
2020	997	$29,267	$130,021	$408,369
2021	939	$27,612	$122,667	$385,272
2022	885	$25,976	$115,398	$362,440
2023	829	$24,363	$108,234	$339,944
2024	776	$22,779	$101,198	$317,843
2025	722	$21,228	$94,305	$296,197
2026	671	$19,705	$87,543	$274,956
2027	620	$18,225	$80,969	$254,309
2028	571	$16,790	$74,595	$234,286
2029	525	$15,403	$68,428	$214,918
2030	479	$14,064	$62,479	$196,234
2031	435	$12,776	$56,760	$178,272
2032	393	$11,543	$51,281	$161,062
2033	353	$10,366	$46,052	$144,677
2034	315	$9,248	$41,084	$129,039
2035	279	$8,191	$36,390	$114,293
2036	245	$7,199	$31,982	$100,446
2037	214	$6,272	$27,864	$87,514
2038	185	$5,412	$24,046	$75,526
2039	157	$4,623	$20,537	$64,499
2040	133	$3,902	$17,336	$54,450
2041	111	$3,252	$14,447	$45,373
2042	91	$2,671	$11,869	$37,276
2043	74	$2,160	$9,598	$30,149
2044	59	$1,718	$7,630	$23,964
2045	46	$1,338	$5,949	$18,683
2046	35	$1,023	$4,547	$14,281

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Table 2. Multiplier Effects of GM Pension Incomes on the Anderson Economy with 14,000 Retirees, concl.

Year	Indirect & Induced Effect on Employment	Indirect & Induced Effect on Labor Income ($000s)	Indirect & Induced Effect on GDP ($000s)	Total Effect on GDP ($000s)
2048	20	$556	$2,467	$7,748
2049	14	$393	$1,747	$5,487
2050	8	$266	$1,183	$3,717
2051	6	$172	$762	$2,394
2052	4	$104	$458	$1,438
2053	1	$55	$244	$767
2054	1	$22	$98	$308

CONCLUSIONS

The pension benefits of retired GM employees are an important economic resource, not only for those households receiving pension benefits but also for the general economy of Anderson, Indiana. It is estimated that the immediate impact of those pensions injects between $250 million and $340 million into the Anderson community. The impact is more substantial when the multiplier effect on the economy, which currently supports between 968 and 1,355 full-time-equivalent jobs that generate between $28 million and $40 million in labor income, is considered. The total effect currently on the Anderson economy is between $397 million and $555 million. The pension benefits will continue to inject resources into the Anderson economy over time, although at a declining rate as pensioners move or expire, for an additional 40 years.

As part of the chapter 11 bankruptcy agreement, General Motors has positioned the "old" pension benefits in a division that could easily be bankrupt. A bankruptcy of the "old GM" would place the pension benefits under the directive of PBGC. There are therefore three potential scenarios to consider if a bankruptcy were to occur.

The first scenario is that there would be no change in the stream of pension benefits. PBGC sets a maximum benefit each year under ERISA, and this amount is fixed as of the date the pension sponsor, in this case GM, would enter bankruptcy. For 2013, the maximum guarantee is $4,789.77 per month, or $57,477.24 per year. This amount is well above the range of pension benefits created prior to 2006 at the GM plants in Anderson. If PBGC is able to meet its obligations, the pensions would be protected under the provisions of ERISA of 1974.

The second scenario relies on the history of PBGC. In the past, PBGC has reduced pension benefits after a close analysis and evaluation of the specific provisions under ERISA. This could result in some pensions being adjusted. Historically, these

adjustments have been in the range of approximately a 20% reduction. Considering the financial situation at PBGC, this is a viable threat, and if pension benefits were reduced 20 percent, the economic impact would be proportional—that is, an immediate reduction in pension revenues between $50 million and $68 million, the loss of 194 to 271 full-time-equivalent jobs, resulting in a loss of $5.6 million to $8 million in labor income, and a total impact on the Anderson economy in the range of $79 million to $111 million.

The third scenario questions the solvency of PBGC. The Pension Protection Act of 2006 (PPA) was intended to resolve the funding deficit experienced by the PBGC due to past plan terminations. The PBGC continues to experience a funding deficit crisis and is deeply and dangerously in debt. In the PBGC (2014) actuarial report for single-employer pension programs like the GM pension plan, the PBGC liability as of September 30, 2014, was $102.6 billion for 4,640 that have terminated and $0.76 billion for two probable plan terminations. If the PBGC is unable to meet its obligations, the policies and directives under ERISA would likely change. The worst case scenario is that PBGC would be unable to meet its obligations at all. The projected loss is the impact reported in the analysis above.

The consequences of a pension plan failure can be devastating to the pensioners, particularly when the PBGC is unable to meet financial obligations and when severe cutbacks in benefits occur. The impact on the economy of the community—in this case Anderson, Indiana—is equally significant, as the analysis indicates. Similar risks of plan failures could occur for numerous pensioners and communities, and the financial difficulties of the PBGC could result in significant adjustments in pension benefits, affecting pensioners and also the communities.

It remains to be seen as corporate America continues to default on its pension obligations if communities like Anderson will be able to prosper as they did in the past.

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