

# THE AUTOMOBILE INDUSTRY IN SOUTH CAROLINA

## Overview

The announcement in June 1992 by BMW (Bavarian Motor Works) and the state of South Carolina that BMW intended to build its only North American assembly plant in Spartanburg County was arguably the most important automobile expansion news in the South since Toyota's December 1985 announcement to locate in Kentucky. Not only was this announcement of critical importance to the economic vitality of the state, it could not have

come at a better time: the country—and South Carolina, by extension—was slowly emerging from the strictures of the 1991 recession, and at a time when the state's economic stronghold, the textile industry, was undergoing severe tumult and erosion. Hence, not only were thousands of South Carolinians unemployed due to the sluggish national economy, thousands more lost and continue to lose their jobs due to the dismantling of the textile industry. In sum, BMW's decision was greeted with a great deal of enthusiasm as the prospects for employment and enhanced economic activity became apparent.

South Carolina does have a lengthy association with the automobile industry going back to when Milliken & Company made fabric seats and roofs at its Pacolet, South Carolina, location for Henry Ford's early cars many decades ago. Yet, the BMW operation is the state's only major assembly plant, though there are a number of additional elements in the state's automotive sector that remain important.<sup>‡</sup> For instance, the state is the

corporate headquarters for fire and emergency vehicle manufacturer American LaFrance; a Honda assembly plant for all-terrain vehicles (ATVs) and personal watercraft; and over 200 automotive suppliers, including Bosch, Delphi, Lear, Magna International, Michelin and the aforementioned Milliken. These diverse companies in the automobile industry continue to make significant contributions to the state's economic potential.

The state continues to emphasize its prowess in the automobile industry touting productive and cost effective labor (some of the lowest unionization and payroll rates in the country alongside a world-class pre-employment and continuing training program that rank its workers among the most productive in the country) and market access leveraged by an extensive intermodal transportation system that includes three seaports (including the Port of Charleston, one of the busiest in the world), 42,000 miles of toll-free highways, 2,600 miles of rail and eight, albeit small, commercial airports.

According to the South Carolina Department of Commerce, in mid-2003, the state had 188 companies operating in the automotive industry, ranging from the BMW manufacturing facility in Spartanburg, to the Freightliner Corporation facility producing motor home chassis in Cherokee, to the

<sup>‡</sup> South Carolina had little previous experience with automobile assembly. For instance, the Anderson Motor Company built a total of 5,553 speciality cars from 1916 to 1925, in Rock Hill, but these automobiles were found to be too expensive and could not compete with the Ford Model A.

## State Facts

Percent of Total Workforce	5
Direct Employment	11,850
Auto-Related Employment	33,850
Auto-Dependent Employment	85,400
Wages	\$2.5 Billion
New Vehicle Dealerships	321
Dealership Annual Sales	\$7.6 Billion
Production Facilities	1
Vehicles Produced	119,324
New Registrations	206,414
Registered Vehicles	3,094,729
Publicly-Owned Vehicles	47,499
Licensed Drivers	1,378,000
Total Miles Driven	45.5 Billion

Source: 2002 Ward's Motor Vehicle Facts & Figures

Robert Bosch Corporation manufacturing oxygen sensors and fuel injectors in Anderson, to Federal-Mogul Friction Products generating disk brakes in Orangeburg, to Honda manufacturing all-terrain vehicles in Florence, to Transaxle Manufacturing of America producing transaxles for tractors in York. While the investments of these companies totaled approximately \$4.2 billion, they cumulatively employed about 18,300 persons. Of the aforementioned 188 companies, since 1986, a total of 47 were new operations in the state while the remaining 141 companies expanded their operations.

### **Economic Impact of BMW in South Carolina**

In 1992, when BMW began constructing what would eventually be a 2.5 million square foot assembly plant on 1,039 acres off I-85 and State Route 101 near Greer in Spartanburg County, the plant's current economic impact, tremendously positive, was probably not expected.<sup>162</sup> The establishment of automobile assembly plants, mostly foreign automakers, in the South was still a relatively rare occurrence and there was still a level of uncertainty about how these plants would fare in the region. In the ensuing decade, the experience has been entirely positive as more foreign automakers have established manufacturing operations in Southern states; undoubtedly, the Toyota plant in Kentucky, and the BMW plant in South Carolina, were the pioneers in this trend, at least in the last few decades.



A BMW ready for export in the Port of Charleston

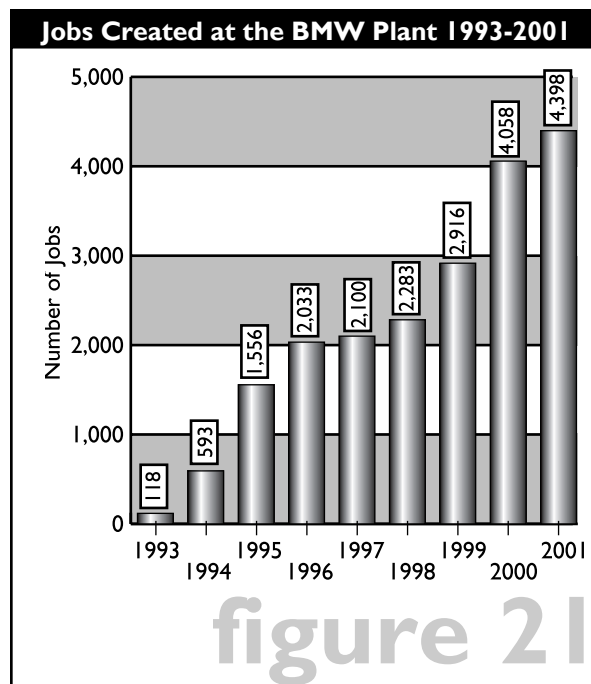
In the South Carolina example, the past 11 years have seen a powerful economic push rippling across the state (and region) as a result of the BMW plant. While the plant manufactures two of the automaker's latest product lines, the X5 Sports Activity Vehicle and the Z4 Roadster (replacing the Z3 Roadster, which also was manufactured at the South Carolina plant), the plant also produces automaker's famed M-Series Roadsters and Coupes. In addition to the generally calculable effects, such as employment, investment, wages and salaries, compensation, output, trade, net fiscal, etc., the prestige associated with BMW remains incalculable.

In order to develop a comprehensive analysis of the BMW plant's total economic impact in the state, the University of South Carolina released a study in May 2002 and the central findings of this report indicate the following:

- » BMW's Trade Effects: As documented in an earlier section, one of the factors that helped BMW locate its operations in South Carolina was the presence of the Port of Charleston, one of the nation's busiest deep-water ports. While there have been studies assessing the economic impact of the Port on the state's economy, in which BMW's involvement remains critical, the May 2002 report did note that the automaker remains a dominant player in the Port's activities. Cars manufactured at the Greer plant, from the 318i (the first model to be manufactured at this site) to the Z3, the X5 and the Z4 have been and/or continue to be shipped to some 120 countries. As expected, these exports generate a flow of funds from these countries to South Carolina. Importantly, this broad export base ensures that the plant's financial viability is not dependent solely on the U.S. economy, even though the U.S. market is the major destination for the vehicles manufactured in South Carolina. In terms of imports, the South Carolina facility also houses an imported car processing center, which serves as a final inspection point for BMWs brought in for delivery across the Southeastern United States. Some of the trade details of the BMW plant, particularly as it relates to the Port of Charleston, include the following statistics:

- » South Carolina Exports, 1993 through 2001 = 257,970 vehicles
- » South Carolina Imports, 1993 through 2001 = 213,064 vehicles
- » Taxes and Duties, 1992 through 2002 = \$252.4 million in U.S. import fees

- » Job Creation: Given that the establishment of the BMW plant in South Carolina was a new venture, the jobs created by the plant did not exist prior to the plant's construction. Hence, they were all a net gain in terms of job creation. Figure 21 demonstrates the gradual increase in the number of direct jobs as a result of the plant. As indicated, direct employment at the plant has increased from an initial level of 118 in 1993, to 4,398 in 2001, an impressive growth path indeed. Given the fact that when the company established its South Carolina presence back in 1992, the mandate was to hire 1,900 direct workers within 20 years,<sup>163</sup> the current achievement of 4,398 in just 10 years is a major accomplishment.

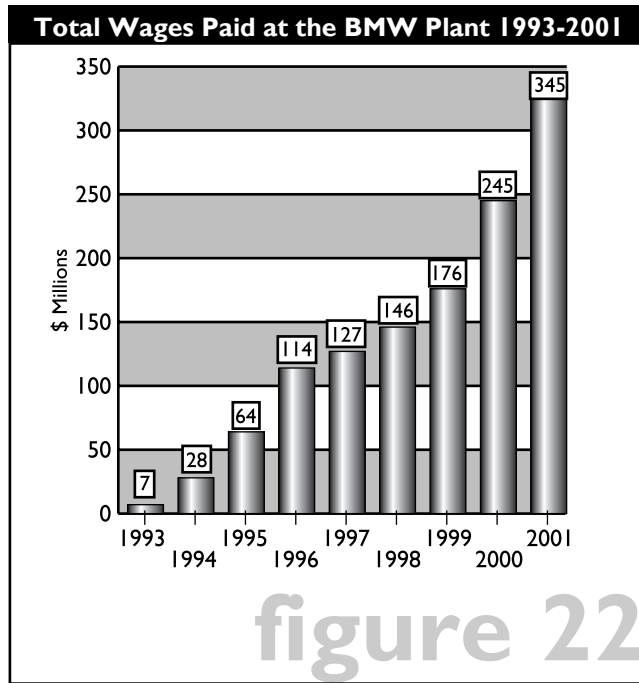


Source: University of South Carolina, May 2002

In addition to the almost 4,400 direct jobs at the plant, BMW's presence in the state also has resulted in numerous companies setting up operations in the state to supply parts and services to the plant. As indicated in the May 2002 study, there were 27 new automotive suppliers that located close to the Greer plant to produce parts, while six additional pre-existing local suppliers have secured supplier contracts. As a result, more than 6,700 supplier jobs were recorded in the May 2002 study, creating the first round of employment effects beyond the aforementioned direct plant jobs. (More recent data from June 2003, indicates that BMW's supplier network now extends to 40 suppliers that have invested about \$2.1 billion in the state while employing more than 12,000 South Carolinians.<sup>164</sup>) In turn, the employment earnings and expenditure patterns of these suppliers generate further economic activity as their purchases spread throughout the state. In total, this May 2002 study records that BMW's investments in South Carolina supports 16,691 jobs, which comprise the 4,398 direct jobs with the remainder being indirect and induced jobs.

- » Wages and Salaries: The payment of wages and salaries sets off a chain-reaction of economic effects too, mostly concentrated in the local economy. These payments produce induced effects when the thousands of BMW employees spend their income at various

establishments to procure goods and services. In turn, the financial transactions at these establishments generate further activity as the establishment employees engage in additional spending, creating the multiplier effect. While most of these payments are spent within the local economy, a certain portion of it is spent outside the region as well as set aside as savings or paid as taxes to various government entities.



Source: University of South Carolina, May 2002

As indicated in figure 22, there has been a gradual increase in total compensation levels at the BMW plant with the increasing number of employees being retained. From \$7 million in 1993, to \$127 million in 1997, to \$345 million in 2001, the total compensation level has been on the rise. The amounts paid out in wages and salaries to the BMW employees are reputed to create an additional \$346 million in indirect and induced wages and salaries for a total of \$691 million, annually, in economic impact in the state. By dividing this total income figure (\$691 million) by the total employment figure cited earlier (16,691), an average income per job of \$41,424 is yielded, certainly a significant level.

- » **BMW's Impact on Economic Output:** The study also reports on the impact of the BMW plant on the state's total economic output, further indication of the facility's positive economic effects. According to the model used in the report, based on 2001 figures, the plant's annual economic output amounted to \$4.1 billion, comprising \$2.7 billion in direct impacts and \$1.36 billion in indirect and induced impacts. As noted in the study, economic output is a broader measure than income since it measures the overall value of BMW's economic activities in South Carolina. While the plant on its own accounted for \$749 million in annual economic output, the remainder, or \$3.4 billion, is attributed to the plant's linkages with the economy-at-large.
- » **BMW's Fiscal Effects:** States that offer economic incentive packages to companies to either entice them to locate to their states or retain their current operations often perform a cost-benefit analysis to

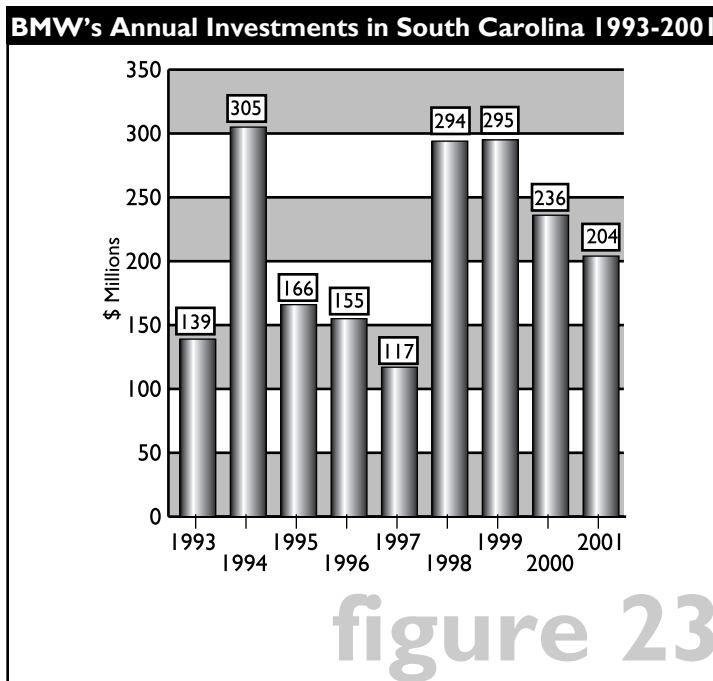
determine the financial viability of these operations. This is an attempt to determine whether the cost of the incentives provided, in addition to the demands placed on the locality (in the form of infrastructure, service and educational demands), outweigh the net fiscal benefits in the form of tax receipts and the economic impacts outlined above. The May 2002 report carries out this task for the BMW project in South Carolina and concludes that the plant provides a definite net fiscal benefit for the state and local communities.

<b>Annual Net Fiscal Impact: BMW Plant in South Carolina</b>			
South Carolina State Government	\$27,647,167		
South Carolina Local Governments	County	School Districts	Total
Greenville	\$214,559	\$100,593	\$315,152
Laurens	\$518,310	\$566,553	\$1,084,863
Spartanburg	\$270,613	\$200,731	\$471,344
Anderson	\$1,414,250	\$2,295,819	\$3,710,069
Four County Total	\$2,417,732	\$3,163,696	\$5,581,428
Grand Total (State + Local) =	\$33,228,595		

Source: University of South Carolina, May 2002

Table 31 illustrates the net fiscal effects (benefits less costs) at the state, county and school district levels as a result of the additional costs of public services and education created as a result of the BMW plant. This analysis reveals that the net fiscal impact is a gain of \$33.2 million, including both state and local considerations. While the state government gain amounts to about \$27.6 million, the local component totals \$5.6 million annually. It should be noted that the actual gains are probably higher since the analysis adopted the very conservative approach of assuming that all BMW employees are new residents who place new costs on the area that would otherwise have not occurred; in actuality, a vast majority of the plant's employees already were living in the area, so the infrastructure and educational costs already were being incurred. Hence, the local government costs are, in reality, overstated while the local benefits are understated.

- » BMW's Annual Investments: When BMW initiated its South Carolina operations in 1992, the commitment was that the company would make a \$400 million investment over a period of 10 years (alongside the creation of 400 jobs).<sup>165</sup> Just like the number of jobs promised has been far exceeded, the company also has invested considerably more than what was initially conveyed, thereby enhancing the economic impact of the plant in a much shorter time period. For instance, based on figure 23, BMW's annual investments between 1993 and 2001, add up to \$1.9 billion. In late September 2002, BMW also announced that it intended to invest an additional \$400 million in its Greer factory, a move that would create another 400 jobs at the facility.<sup>166</sup> (In addition, BMW announced the establishment of a \$10 million endowment at Clemson University, South Carolina, to establish masters and doctoral degrees in automotive engineering.) In sum, BMW has more than surpassed its stated investment goals in the state, a development that has brought about significant benefits to the South Carolina economy.



Source: University of South Carolina, May 2002

Alongside BMW's direct investments, a number of BMW's suppliers also have made sizable investments in the state. While most of these supplier investments were from outside the state, a direct result of BMW setting up its plant in South Carolina, there were a few local suppliers that were able to expand their operations. According to the May 2002 report, these suppliers cumulatively brought in another \$2.1 billion in investments to the state in the past decade.

### **Economic Incentives Offered by South Carolina**

South Carolina continues to pro-actively pursue companies to expand its physical capital base, and this strategy includes courting both foreign and domestic business entities. In this effort, companies considering establishing their operations in South Carolina certainly regard the economic incentives offered as one of many factors in their overall decision calculus. A number of other considerations influence these location decisions, including access to market proximity, the presence of a vibrant manufacturing base, public-sector/private-sector partnerships, work force skills and labor union presence, land and energy costs, the ability to set up a brand new facility adopting the latest technological advancements, infrastructure capabilities like highways, rail and air transport and deep-water ports. The decision by BMW in 1992, while influenced by the \$130 million in development incentives provided by the state, was certainly based on significantly more criteria than this single factor.

The \$130 million provided to the company was a combination of several features including tax credits, tax abatements, job training allowances, and infrastructure improvements. While a bulk of the incentives were focused on enhancing the state's capacity to nurture an advanced manufacturing plant, i.e., by ensuring labor and infrastructure improvements, they also included property tax breaks. The major components of the development assistance provided to BMW comprised the following:

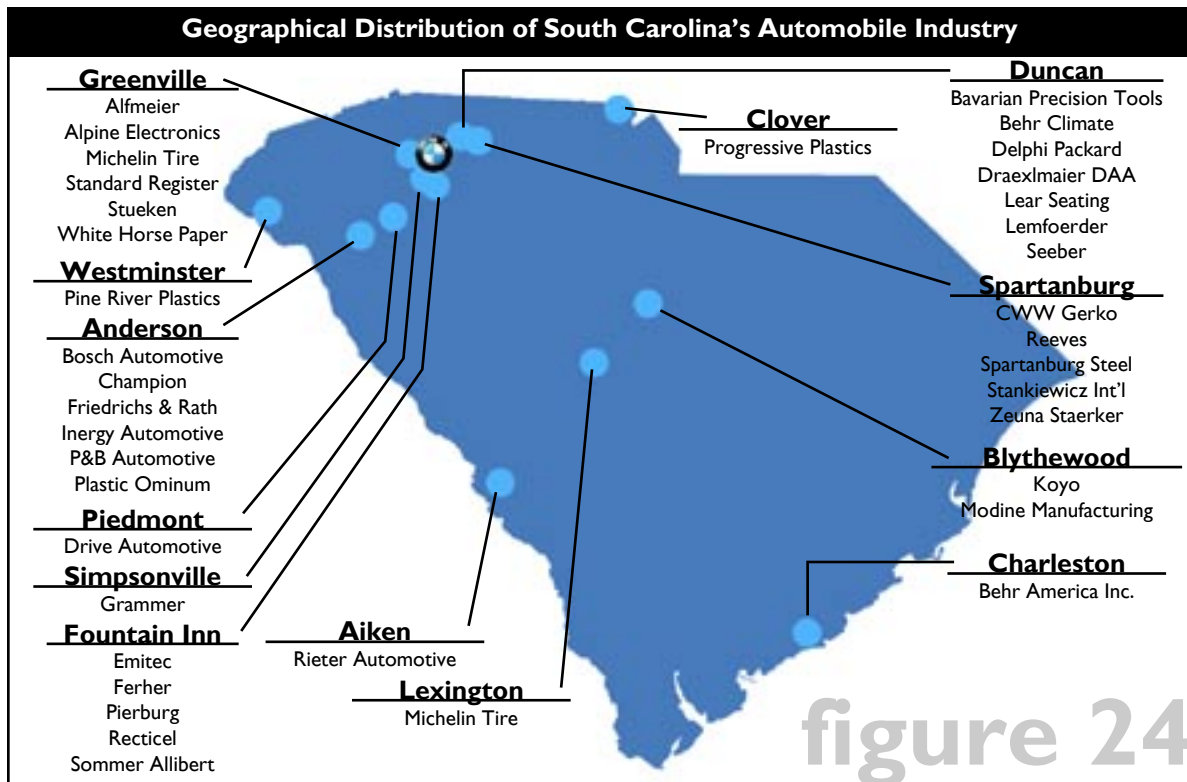
- » A property tax abatement, or set "fee-in-lieu" of taxes (FILOT), valued at about \$70 million over 20 years;
- » Labor training through the state's technical college system valued at \$5 million;

- » A standard job creation income tax credit (\$300 to \$1,500 per new job created) valued at \$2.85 million for up to 15 years;
- » Industrial revenue bonds issued by the state that carry lower interest rates than those offered directly in financial markets;
- » A plant site purchased and then leased to BMW for \$1 per year. (The land was purchased for an estimated cost of \$37 million, with the state paying \$32 million and the county paying \$5 million. In addition, various site improvements were carried out including sewers, utilities, road improvements and enhancing the capabilities of the nearby Greenville-Spartanburg airport.);
- » Revenue bonds amounting to \$6 million issued by Spartanburg County to acquire property and improve utilities; and
- » \$10 million allocated to improve roads around the plant site.

### South Carolina's Automotive Supply Base

BMW places a great deal of emphasis on developing a top-notch network of suppliers that can meet the exacting standards and demands of the automaker. The emphasis on high-quality products with modifications, often on short notice, requires these suppliers to operate at the highest level of competence and technology. Given that BMW produces 80 percent of its cars to order, the expectation that suppliers be extremely nimble in reacting to the automaker's demands remains critical. Consequently, the companies that rank as BMW suppliers are world-class entities with a number of the world's top original equipment manufacturers (OEM) operating in South Carolina. Anchored by the coterie of BMW suppliers, South Carolina has pursued a strategy of creating an automotive cluster in the state, a strategy that has generated a range of positive economic effects.

Figure 24 demonstrates the geographical distribution of South Carolina's automotive suppliers broken down by city and name of company.



Source: University of South Carolina, May 2002

As mentioned earlier, several of the world's top OEMs operate in South Carolina; specifically, six of the world's top 10 OEMs maintain an operating presence in the state. These top six companies include Bosch, Dana, Delphi, Johnson Controls, Lear and Magna. In addition, the state is home to 27 of the world's top 75 OEMs, either supplying the BMW plant or providing supplies to assembly plants in neighboring states. Cumulatively, these companies have invested \$3.3 billion and created more than 10,000 jobs; in the past 10 years, they have expanded more than 140 times, a notable achievement. In a review of these suppliers, the role of automobile tire manufacturing in the state also is important. Three of the world's largest tire companies—Bridgestone/Firestone, Goodyear and Michelin—all have manufacturing facilities in the state. While the tire industry accounts for 14 percent of the state's automotive sector, it has invested more than \$2.4 billion in the state and created more than 4,200 jobs in the past 10 years. The state also has a solid base in the provision of raw material suppliers that are vital to the automotive industry in plastics (Datwyler Rubber & Plastics, for instance), electric components (Phillips Components), aluminum casting and forging (Ryobi Motor Products and Kaiser Aluminum), steel (Nucor Steel and Georgetown Steel) and fabricated metal products.

#### **Additional Automobile-Industry Related Operations**

Alongside the BMW assembly plant, several other automotive-related manufacturing operations in South Carolina deserve mention at this point. In Timmonsville, Honda of South Carolina announced plans in early 2000 to expand its facility that builds all-terrain vehicles (ATVs).<sup>167</sup> While this plant was originally constructed in July 1998, the expansion enabled an engine previously made in Japan to be manufactured at the South Carolina facility. The \$20 million expansion investment boosted Honda's total plant investment to \$70 million. The new 330,000 square foot production facility was expected to have an annual production capacity of 150,000 ATVs and engines, while employing more than 625 associates, up from 425 employees.

The other company, American LaFrance, a subsidiary of Freightliner Corporation, manufactures and distributes a comprehensive line of fire and emergency vehicles and attendant parts. (Freightliner Corporation is a leading manufacturer of heavy-duty trucks). In July 2002, American LaFrance announced the opening of its new headquarters and manufacturing facility in North Charleston, a 283,500 square foot facility. While the company's line of aluminum and stainless steel fire truck bodies and the MedicMaster brand ambulances will be produced at this plant, it is estimated that by 2004, the plant will have 800 employees.<sup>168</sup>

In addition to its American LaFrance operation in North Charleston, the Freightliner Corporation also has another manufacturing plant in Gaffney, South Carolina, which manufactures diesel chassis for the delivery walk-in van, motorhome, school bus and shuttle bus markets. Between 1995 and 2000, Freightliner has more than tripled the size of its workforce in Gaffney (from 213 to 750 employees), while annual production rates increased six-fold, rising from 3,800 units to 26,500 units over the five-year time period.

Finally, mention has to be made of the proposed \$2.6 billion automotive research park in Greenville, South Carolina.<sup>169</sup> In early 2003, Clemson University officials began negotiating with a Miami-based developer regarding the establishment of a research park that would house the University's

#### **Some of the Auto Suppliers:**

- » Lear Seating built its Duncan, South Carolina, plant in 1994 to supply seats for the BMW Z3 Roadster. Lear, based in Michigan, is one of the world's largest auto parts manufacturers and a Fortune 150 company. In 1998, Lear doubled the size of its South Carolina facility and added 100 workers to manufacture seats for the BMW X5 Sports Activity Vehicle.
- » Spartanburg Steel, founded in 1962 in Spartanburg, South Carolina, began supplying stampings for the BMW Z3 in 1994. The company's workload increased substantially with the introduction of the BMW X5. Consequently, the company has made substantial capital investments and efforts to train and re-train its workers on advanced engineering requirements. The company welds and presses some 280 metal parts for BMW, more than half of the company's production. The company now has a solid Southern customer base.

automotive engineering graduate program and a wind tunnel that could serve as a hub for automotive development and research. According to University officials, this proposed research park could generate 20,000 jobs, though taxpayer, state and developer interests will all have to be considered before the implementation of this project. While the park will focus on the automotive and motor sports industries, it will include a \$40 million to \$50 million wind tunnel—the first of its kind in the country—that would help the auto industry design sleeker, more efficient vehicles.