THE DRIVE TO MOVE SOUTH

THE GROWING ROLE OF THE AUTOMOBILE INDUSTRY IN THE SOUTHERN LEGISLATIVE CONFERENCE ECONOMIES

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The Automobile Industry in Arkansas

The Automobile Industry in Alabama

The Automobile Industry in the Southern Legislative Conference States

The Economic Contribution of the Automobile Industry to the United States

Production of Light Vehicles

Automobile Industry Output Levels

Automobile Industry Contributions to GDP

Employment Levels in the Automobile Industry

Motor Vehicles and Equipment Levels

The Road Ahead for the U.S. Automobile Industry: Challenges of a Sluggish Economy

The Drive to Move South: Automobile Manufacturers Locating Plants in the South

The Economic Contribution of the Automobile Industry to the United States

Employment Levels in the Automobile Industry Relative to Other Industries

SLC State-Specific Information

Globalization and the Automobile Industry

International Trade in Automobiles and Automobile Parts

Foreign Automobile Manufacturers Establishing Assembly Plants in the United States

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America’s complicated and multi-faceted love affair with the automobile has flourished for over a century now. The automobile’s impact on American society and cultural mores remains so pervasive that there are few other products that can stake the same claim. Few, if any, other products have been so enshrined in the nation’s movies, clothing, dance, music and in the general American psyche as has the car. Madison Avenue produced exhortations to “see the USA in your Chevrolet” or your “Merry Oldsmobile,” while top-40 radio has been rife with odes to Mustang Sally, Pink Cadillac, the Little Old Lady from Pasadena’s Dodge, the Beach Boys’ T-Bird, the Little GTO, the 409, Maybelline and the Ford V-8 truck along with artists pleading for a Mercedes Benz and feeling like a Porsche. Consequently, a connection to the automobile may be drawn from almost every level of an American’s life. Even when one pairs two seemingly unrelated topics, automobiles and international geopolitics, a connection springs forth with the recent movement to reduce American dependence on oil from the Middle East by encouraging the use of automobiles with greater fuel efficiencies and the pursuit of alternate fuel sources.

Similarly, automobiles have been reviled, celebrated, nearly worshiped, sometimes banned, used incessantly and relied on almost entirely for most of our surface transportation needs. To so many Americans, particularly those living in areas with limited public transportation, the lack of an automobile almost certainly diminishes their prospects for earning a livelihood. In sum, for almost a century since Henry Ford established the Ford Motor Company in 1903, created the Model T a few years later and invented the moving assembly line—arguably one of the greatest contributions to industrialization—the automobile has become deeply ingrained in the American way of life.

The economic importance of the automobile industry to the overall American economy remains monumental and the Alliance of Automobile Manufacturers refers to it as “the engine that drives the economy.” In fact, as a U.S. Department of Commerce report demonstrates, not only does the
nation’s vast automobile industry manufacture the passenger cars and light trucks that enable millions of Americans to travel to work, shop, vacation and enjoy myriad other activities, the industry’s influence extends to almost every aspect of the economy. Furthermore, when calculated in conjunction with the tens of thousands of parts suppliers and dealers across the country, the economic impact of the industry remains truly staggering. The following information on motor vehicle and equipment manufacturers helps illustrate this point even though it should be noted that these numbers refer to direct impacts only; if the indirect and induced economic impacts are totaled, as will be done later in the report, the industry’s cumulative impact remains significantly larger. For instance, according to the U.S. Department of Commerce in 2001, the most recent year for which data is available, motor vehicle and equipment manufacturers accomplished the following:

» contributed $111.4 billion to the nation’s gross domestic product (GDP) or 1.1 percent;
» created 1.3 percent of all private industry output;
» operated with 941,000 full and part-time employees;
» generated $65.3 billion in employee earnings; and
» facilitated $361.3 billion in personal consumption expenditures or 5.2 percent of total consumer purchases.

At a broader level, when the full impact of the automobile industry is factored in, it is quickly evident that very few other industries in the United States have the sort of impact that the automobile industry does. The data presented below, extracted from a 2001 University of Michigan study, provides a glimpse into the sheer scope and magnitude of the industry’s role in the American economy even though the figures are five years old.

» Employment: America’s automobile industry is one of the largest industries in the country. When jobs dependent on the industry are included, the auto industry is responsible for 6.6 million jobs nationwide, or about 5 percent of private-sector jobs.

» Compensation: The contribution of the automobile industry to compensation in the private sector is estimated at $243 billion, or 5.6 percent of U.S. private-sector compensation.

» Job Creation: For every worker directly employed by an automaker, nearly seven spin-off jobs are created. America’s automakers are among the largest purchasers of aluminum, copper, iron, lead, plastics, rubber, textiles, vinyl, steel and computer chips.

» Gross Domestic Product(GDP): More than 3.7 percent of America’s total GDP is generated by the sale and production of new light vehicles.

» Output: The U.S. automotive industry produces a higher level of output than any other single industry. When measured in constant 1996 dollars, automotive economic output increased by 47 percent during 1987-1999.

» Research and Development: The auto industry invested $18.4 billion in research and development in 1998, higher than any other manufacturing industry.

» Exports: Automotive exports rose from $33.4 billion in 1988 to a record $74 billion in 1997, an increase of 122 percent
While these national economic figures and their ripple effects remain gargantuan, the contribution of the automobile industry to the overall economic vitality of The Council of State Governments’ Southern region, the Southern Legislative Conference (SLC) states, remains enormously important. From the BMW plant in Spartanburg, South Carolina, to the Mercedes plant in Vance, Alabama, to the GM plants in Doraville, Georgia, and Bowling Green, Kentucky, to the South’s newest addition, the Toyota plant in San Antonio, Texas, a number of automobile manufacturers have decided to locate their operations in the South. Needless to say, the cumulative economic impact of these plants is a crucial factor for the region containing some of the fastest growing states in the country. A brief glimpse into the economic impact of some of these plants helps illustrate their importance to the specific state and the region as a whole.

» The Mercedes plant in Vance, Alabama, established in 1993, manufactured more than 100,000 M-Class sport-utility vehicles in 2002 and employed close to 2,000 employees. Since Mercedes has initiated a $600 million expansion in the state, by 2004, the number of employees will increase to about 4,000 and production will increase to 160,000 vehicles per year.

» The BMW plant in Spartanburg, South Carolina, announced in 1992, manufactures the Z3 and Z4 roadsters and the X5 Sports Activity Vehicle. This plant involves a total investment of $1.9 billion and employs 4,300 workers. The plant’s total economic output is more than $4.1 billion (based on 2001 operations), in addition to supporting 16,991 jobs and producing $691 million in wages. State officials were ecstatic in September 2002 when BMW, to commemorate the plant’s 10th anniversary in South Carolina, announced a $400 million expansion with an additional 400 jobs in the pipeline.

» The commonwealth of Kentucky is the fourth largest car producing state in the United States and one of the nation’s top selling cars, the Toyota Camry, is manufactured at a Toyota plant in Georgetown, Kentucky. Another indication of the importance of the industry to the state economy involves the fact that there were 87,073 Kentuckians employed at 431 motor-vehicle related facilities in February 2003.

» In Mississippi, Nissan’s announcement in November 2000 to build a manufacturing facility in Madison County near Canton was greeted with great enthusiasm. The state provided Nissan with $363 million in direct incentives to build a $1.4 billion assembly plant. According to the Mississippi Development Authority, production at the plant commenced in May 2003—slightly ahead of schedule—and will result in 400,000 vehicles being produced annually. In addition, in a little more than two years, 18 companies had established operations as suppliers to the Nissan plant. Some of the other positive flows from the Nissan plant include an estimated 31,683 total jobs (direct, indirect and induced) by 2010; $903 million in total personal income (once again, direct, indirect and induced) being generated, also by 2010; and $393.1 million in Madison County taxes and $287 million in state taxes being generated by 2010.

» The South’s latest automobile manufacturing plant was announced in February 2003 when Toyota, the world’s third largest automaker, decided to set up an assembly plant in San Antonio, Texas.
The plant, an $800 million operation employing 2,000 workers, will be used to build 150,000 Tundra full-size pickup trucks by 2006. While the combined state, county and city incentive package amounted to $133 million, the economic ripple effect is expected to reach $1.4 billion within the next decade. In addition to the $80 million annual payroll, thousands of spin-off jobs are anticipated given the need for parts and other supplies.\textsuperscript{11}

The objective of this \textbf{Special Series Report} is to present a breakdown of the economic impact of the automobile industry in the 16 states belonging to The Council of State Governments’ Southern region, the Southern Legislative Conference (SLC). In recent times, the economic importance of the automobile industry in these Southern states has increased substantially, generating a great deal of positive publicity for the region alongside a range of powerful economic benefits. In an effort to place this growing economic influence in context, the report presents the key findings of a comprehensive University of Michigan report released in late 2001 (and later updated in fall 2003) assessing the industry’s economic importance; reviews some emerging trends in the automotive industry including the impact of globalization on the automobile industry, the challenges facing the major American players (General Motors, Ford and Chrysler) \textit{vis-a-vis} the largely foreign producers as they battle for market supremacy in the United States, the decision of major automobile manufacturers to locate their assembly plants in the South; and, finally, provides a state-by-state breakdown of the automotive outlook in the SLC states drawing largely on information submitted by the different SLC state economic development agencies and a number of other sources. Where possible, the latter section includes reference to the often contentious battle among states to lure automakers to locate their operations within their jurisdictions.
THE ECONOMIC CONTRIBUTION OF THE AUTOMOTIVE INDUSTRY TO THE UNITED STATES

In Winter 2001, a comprehensive, 50-state study on the contribution of the automotive industry to the U.S. economy was prepared for the Alliance of Automobile Manufacturers and the Association of International Automobile Manufacturers. The exhaustive and far-reaching nature of this national report, involving a number of research institutions assessing the automotive industry, consultants working in the automobile industry, automotive industry trade associations and staff from 21 automobile manufacturers, reinforces the validity of the study’s results even though it presents data from 1998. Despite the passage of five years since the study’s extremely thorough results were published and the fact that the U.S. economic environment has changed radically during this time period, the study’s key findings remain relevant; hence, these results are presented—and updated, where possible—in this section.

As alluded to earlier, the automobile industry is the largest manufacturing industry in the United States in terms of the number of light vehicles manufactured, sold and serviced (under warranty) across the country. Even globally, the U.S. market remains the most substantial and significantly outstrips every other market. For instance, in 2002, vehicle sales in the United States amounted to 16.8 million vehicles while over 12 million vehicles were produced here; in Japan, the next biggest market, also in 2002, a scant 5.8 million vehicles were sold though 10.2 million were produced.

In presenting the sheer size, depth and growth pattern of the U.S. automobile industry, several elements may be highlighted. The following sections illustrate these.

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1 In September 2003, the Alliance of Automobile Manufacturers (AAM) issued another report on the automobile industry’s impact. See McAlinden, Hill & Swiecki, ‘Economic Contribution of the Automotive Industry to the U.S. Economy: An Update,’ Fall 2003. This report partially updated portions of the previously referenced 2001 AAM study. For purposes of this SLC report, the updated information will be featured where appropriate.
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PRODUCTION OF LIGHT VEHICLES

During the 10-year economic expansion between March 1991 and March 2001, the longest economic expansion in the nation’s history, the U.S. automobile industry produced 12.6 million vehicles in 1999, the highest level reached since 1978. While this production number whittled down to 11.1 million vehicles in 2001, and 12 million vehicles in 2002, given the onset of the 2001 economic recession and subsequent slowdown, the significant increases from prior decades remain impressive. Figure 1 documents this trend graphically. As indicated in figure 1, U.S. motor vehicle production experienced some serious difficulties in the past few decades before redounding to unprecedented levels at the peak of the economy’s boom years in the late 1990s. From 12.8 million vehicles in 1978, production levels declined to a low of 6.9 million in 1982 (during the 1981/82 recession) before climbing to 11.3 million in 1986. Then, the number declined for several years before reaching 9.7 million in 1992 (during the 1991/92 recession). With the economy gathering momentum in the 1990s, as noted earlier, production levels peaked at the historic level of 12.6 million in 1999, and fell to 12.4 million in 2000. Given the negative implications of the 2001 recession, U.S. light vehicle production tapered off to 11.1 million in 2001 and finally, 12 million in 2002.

At a cursory level, analysts proffer several reasons for this impressive turnaround in U.S. motor vehicle production levels since 1978: the decision by a number of international automobile manufacturers to source many of their U.S. vehicle sales from recently established assembly plants in the United States, the reestablishment of the United States as the leading site for vehicle production due to location, resource availability, the efficiency of its economy and potential profit margins and the continued popularity and growth of the private automobile as the transportation mode of preference for a huge and rising number of Americans, particularly light trucks and sport-utility vehicles (SUVs).

Source: Alliance of Automobile Manufacturers 2001 study and U.S. Department of Commerce

**Figure 1**

![Total U.S. Motor Vehicle Production 1978-2002](image-url)
AUTOMOTIVE INDUSTRY OUTPUT LEVELS

According to federal statistics, the dollar value (constant) of automotive output has climbed steadily to impressive levels in the past decade and a half or so. Furthermore, according to the previously referenced 2001 University of Michigan report “the automobile industry produces a higher level of output in the United States than any other single industry.” The dollar figures included in automotive output represent the retail value of light motor vehicles sold to individuals, businesses and governments in a given year. In addition, they include the value contributed by new vehicle dealerships and they are adjusted to import values and inventory adjustments between years. As demonstrated in Figure 2, automotive output increased by 86 percent and 51 percent in both current and fixed (1996) dollar terms between 1987 and 2002. Figure 2 provides a graphical representation of the significant dollar value increases in U.S. automotive output between 1978 and 2002.

AUTOMOTIVE INDUSTRY CONTRIBUTIONS TO GDP

A review of the automobile industry’s contribution’s to the overall U.S. economy remains crucial, a trend amply demonstrated by the industry performance in the record economic growth levels achieved between March 1991 and March 2001. This review may be carried out in two ways: the actual dollar value advancements in the contributions of the industry to overall GDP and a comparison between the annual percentage change in output in the nation’s GDP and automotive industry output. These two sets of analyses, in fixed (1996) dollars as presented, enable us to conclude that the contribution of the automobile industry has been integral in the economic performance of the overall economy.

Source: Alliance of Automobile Manufacturers 2001 study and U.S. Department of Commerce
As indicated in table 1, between 1994 and 1998, GDP (in real terms) growth amounted to 14 percent while motor vehicle output increased by 10 percent. Then, between 1998 and 2002, when the U.S. economy grew at a very impressive pace, real GDP growth amounted to a resounding 25 percent, output in the motor vehicle industry leapt forward by an even larger 32 percent. As a proportion of real GDP during these three years, the contribution of the motor vehicle output amounted to 3.71 percent in 1994, 3.56 percent in 1998, and 3.77 percent in 2002.

PRODUCTION OF THE AUTO INDUSTRY RELATIVE TO OTHER INDUSTRIES

As previously noted, the automobile industry continues to play a vital role in the economic performance of the overall economy. The following table presents trends to solidify this assertion and also documents the performance of the industry in comparison to the economy’s other major durable manufacturing industries. (The nondurable manufacturing sector includes such categories as apparel, paper, printing and support, chemical, plastics and rubber products and food).

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<td>Motor Vehicles and Parts</td>
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<td>39.4</td>
<td>70.3</td>
<td>117.2</td>
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The performance of the motor vehicles and parts component remains impressive during the 30-year period reported in table 2. Except for the selected high technology sector, no other category in the nation’s durable industrial sector increased as significantly as the motor vehicles and parts sector. Specifically, the sector’s index more than doubled from 51.5 in 1972, to 117.2 in 2002.
As demonstrated in figure 3, the performance of the automobile industry in generating employment to almost a million Americans consistently in the past decade has been a noteworthy achievement. From the 841,000 employed in 1993, to the historic high of 1,032,000 employed in 2000, the industry has played an important role in preserving the vitality of the American economy. Even though overall employment numbers have declined in the past few years, from 1,032,000 in January 2000, to 967,000 in January 2001, and then January 902,000 in 2002, it appears that the number inched its way up to 911,000 by January 2003.

Figure 3 depicts all employees in the aforementioned motor vehicles and equipment category tabulated by the U.S. Department of Labor for each January between 1993 and 2003.

Source: U.S. Department of Labor, Bureau of Labor Statistics
As noted earlier, while the above employment levels account for only those employed in the manufacturing and assembling of motor vehicles, a number of additional industry categories contribute to the overall employment levels in the country. For instance, there are tens of thousands of establishments across the country that engage in manufacturing motor vehicle parts and accessories. Some examples from around the SLC states help illustrate the importance of the motor parts suppliers to the overall economies of the local region, the state and eventually the country.

After months of aggressive recruiting, officials in Greenville, Alabama, announced that South Korean auto parts maker Hwashin Co. Ltd. would build a $70 million manufacturing plant in the city, creating 400 new jobs. The company’s plant, which will be operational by March 2005, will be on a 62-acre site and will make chassis and auto body parts for the Sonata sedans and Santa Fe SUVs to be constructed at Hyundai’s Montgomery location. Also, in Alabama, Borgers USA announced that it would build a $5 million plant in Tuscaloosa County with 70 employees to supply Mercedes-Benz at its plant in nearby Vance.

In Tennessee, a new Bridgestone APM manufacturing plant slated to bring in 170 jobs to the state by 2006 was announced in April 2003 by state officials. This $11 million plant in Dickson, Tennessee, will make shock-absorbent pads and interior cushions for Honda, Toyota and Nissan vehicles.

North Carolina has devoted a great deal of attention and resources to promoting a motor vehicle parts cluster within its borders. Consequently, manufacturing outfits that make a variety of auto components such as the textile fabrics used in car interiors (Visotec Automotive Products in Burke County) and the ceramic filters used in automotive catalytic exhaust systems (NGK Ceramics USA in Iredell County), are scattered throughout North Carolina. Clusters are defined as geographic concentrations of interconnected companies and institutions in a particular field” with the high technology cluster in Silicon Valley, the film-making cluster in Hollywood, the leather fashion industry cluster in Italy and the photonics cluster in Arizona being the most prominent. According to the North Carolina Department of Commerce, in 2002, the state had 435 companies in its motor vehicle cluster with 60 percent manufacturing motor vehicles parts and accessories, 17 percent manufacturing car or truck bodies and 23 percent supplying textiles, chemicals, rubber, plastics, electronics, primary or fabricated metals or industrial and commercial machinery products. (In subsequent correspondence, in March 2003, the department noted that the overall number “was well over 450 companies in the automotive cluster.”)

In North Carolina, between 1990 and 1999, 16,053 additional jobs were created in its automotive cluster. In 1999, there were 40,361 persons employed in the automotive cluster, a level that totaled almost 3 percent of the cluster’s national employment level. When one considers that the state is currently home to 160 Japanese companies, which generate about 16,000 jobs and have a cumulative investment of $3.3 billion, and that 75 percent of these
companies are in the auto industry, the true significance of the state’s
automotive cluster is apparent.\textsuperscript{24}

» In 2001, West Virginia announced Toyota’s expansion plans at its
Putnam County facility.\textsuperscript{25} The facility, which makes engines and
transmissions for the Lexus RX 300 SUV and the Toyota Matrix,
was the first in the United States to make engines or transmissions
for Toyota’s Lexus luxury line and will employ more than 1,000
people. This is an increase from the 725 employed prior to the $50
million expansion.

Alongside these state-by-state descriptions, the national employment
levels in the categories of motor vehicle parts and suppliers are presented in
figure 4.

![Motor Vehicle Parts and Supplies–U.S. Employment Levels
January 1993 to January 2003](image)

Source: U.S. Department of Labor, Bureau of Labor Statistics

The data represented in figure 4 indicate the importance, from an
employment perspective, of the motor parts and supplies industry in the states.
Under this category, the highest employment level reached in the past decade
was in January 2000, when 524,000 individuals were employed. From the
442,000 in January 1993, the number of employees in this category climbed
every year through 2001, when it declined in the next three consecutive years
due to the economic recession and slowdown sweeping the country.

There are additional employment categories that are related to the
primary category of motor vehicle manufacturing and assembly operations and
these include automotive dealers (for both new vehicles and used vehicles),
service stations and repair facilities. While these categories involve much
lower employment, they are, nevertheless, more than relevant in assessing the
cumulative impact of the automobile industry to the country’s employment
picture. Figure 5 presents information for employment levels in these two
categories: automotive dealers and service stations and auto repair services.
Once again, the data are presented for the past decade with the level as of
January of the specific year being reported.
As documented in figure 5, the national employment levels in these two categories of the automobile industry increased every year between 1993 and 2003, a notable achievement given the recession that plagued the country in 2001, and the subsequent sluggish economic growth rates and rising unemployment levels. Hence, in Group A (automotive dealers and service stations), employment levels increased from 1,982,000 in 1993, to 2,321,000 in 1998, to 2,416,000 in 2003; similarly in Group B (auto repair services), the employment numbers increased from 906,000 in 1993, to 1,133,000 in 1998, to 1,274,000 in 2003.

Finally, it is appropriate to review the total direct impact of the automobile industry on overall employment levels and this is reflected in table 3. For purposes of brevity, the data presented represent the employment scenario in January 1993, January 1998, and January 2003. Figure 6 provides a graphical representation of these total employment levels over the same time period.

Source: U.S. Department of Labor, Bureau of Labor Statistics
As evident in figure 6 and in table 3, total employment in the automobile industry amounted to a staggering 5.1 million individuals by January 2003, an increase of almost a million individuals when compared with a decade before in January 1993. In fact, the growth in total employment between these two review periods amounted to a growth rate of over 22 percent. Of the four major categories, employment levels in automotive dealers and service stations across the country represented the largest category over the review decade (1993 to 2003).
THE AUTOMOBILE INDUSTRY’S EXTENDED REACH

In exploring the expansive reach of the automobile industry, data contained in a fall 2003 report prepared for the Alliance of Automobile Manufacturers remains very useful. The preceding sections have presented the substantial direct and indirect impacts associated with the nation’s largest manufacturing industry, the automobile industry. Yet, this impact is even more significant when one considers that goods from a range of America’s most formidable industries—textiles from the South to computer chips from California to aluminum manufactured in Iowa to air bags produced in Arizona—are intricately involved. More specifically, the key findings of the report include the fact that the automobile industry is responsible for the following:

» More than 100,000 jobs in each of several industries, including dealerships, fabricated metals, auto parts, auto repair and maintenance, road construction, tire dealerships, fueling stations, and car washes;

» More than 50,000 jobs in each of several other related industries, including plastics and rubber, trucking, computers and electronics, petroleum and machinery and equipment;

» More than 25,000 jobs in each of several more related industries, including advertising, textiles, aluminum and recycling;

» Thousands more jobs each in the rail industry, steel industry, painting and coating industry, glass industry, copper and brass industry and iron industry;

» Providing for among the highest levels of wages and benefits in the private sector, averaging $69,500 in 2001; and

» Creating a value-added quotient of $292,000 per worker, 143 percent higher than the overall value-added ratio for U.S. manufacturing ($120,000).

SLC STATE-SPECIFIC INFORMATION

Alongside the national trends demonstrating the enormous positive impact of the industry on the nation’s economic livelihood, SLC state specific information also reveals similar trends. Table 4 documents these trends by highlighting the motor vehicle industry’s contributions to the GSP levels of the 16 SLC states over a decade, in 1991, 1996 and 2001. (2001 is the latest year for which GSP information is available.) Table 4 also indicates the proportional contribution of the motor vehicle industry during the decade.
<table>
<thead>
<tr>
<th>SLC State</th>
<th>GSP ($ Millions)</th>
<th>Contribution of Motor Vehicle Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1991</td>
<td>1996</td>
</tr>
<tr>
<td>Alabama</td>
<td>75,977</td>
<td>99,286</td>
</tr>
<tr>
<td>Arkansas</td>
<td>41,277</td>
<td>56,796</td>
</tr>
<tr>
<td>Florida</td>
<td>269,845</td>
<td>366,318</td>
</tr>
<tr>
<td>Georgia</td>
<td>148,722</td>
<td>219,520</td>
</tr>
<tr>
<td>Kentucky</td>
<td>70,834</td>
<td>95,536</td>
</tr>
<tr>
<td>Louisiana</td>
<td>95,918</td>
<td>116,867</td>
</tr>
<tr>
<td>Maryland</td>
<td>117,630</td>
<td>145,061</td>
</tr>
<tr>
<td>Mississippi</td>
<td>41,311</td>
<td>56,575</td>
</tr>
<tr>
<td>Missouri</td>
<td>110,396</td>
<td>146,537</td>
</tr>
<tr>
<td>North Carolina</td>
<td>147,743</td>
<td>204,329</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>59,698</td>
<td>74,855</td>
</tr>
<tr>
<td>South Carolina</td>
<td>68,776</td>
<td>89,854</td>
</tr>
<tr>
<td>Tennessee</td>
<td>102,049</td>
<td>142,051</td>
</tr>
<tr>
<td>Texas</td>
<td>403,286</td>
<td>553,180</td>
</tr>
<tr>
<td>Virginia</td>
<td>153,965</td>
<td>199,953</td>
</tr>
<tr>
<td>West Virginia</td>
<td>29,331</td>
<td>37,220</td>
</tr>
<tr>
<td>SLC Total</td>
<td>1,936,758</td>
<td>2,603,938</td>
</tr>
<tr>
<td>U.S.</td>
<td>5,895,430</td>
<td>7,715,901</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Commerce, Bureau of Economic Analysis

As noted in table 4, the three SLC states with the most significant contributions from the motor vehicle industry to their respective GSP in 2001 were Kentucky ($10.3 billion), Missouri ($5.5 billion) and Tennessee ($5.4 billion). (Georgia’s automotive industry contributed $2.5 billion while Alabama’s contributed $1.6 billion.) The top three SLC states in 2001 maintained this ranking in 1991 and 1996 too. It is noteworthy that a state like Kentucky secured the top ranking during this decade, mainly due to the tremendous contribution from the massive Toyota plant in Georgetown, and surpassed the capacities of states with substantially larger economies like Texas and Florida.

While a review of the actual GSP numbers remains interesting, a review of the percentage contribution of the motor vehicle industry to overall SLC state GSP is even more interesting. In this connection, in 2001, the motor vehicle industry in Kentucky remained the most significant in the region comprising 8.5 percent of the commonwealth’s total GSP. The 3 percent contributions of the industry in Missouri and Tennessee ranked these two states next under this category. Also important were the 1.9 percent and 1.3 percent contributions by the South Carolina and the Alabama motor vehicle industries to overall GSP, respectively, in 2001.
It should be noted that the 2001 leaders maintained their positions over the decade, securing similar rankings in 1991 and 1996. However, the important trend here is that in the case of Kentucky, the contribution of the industry experienced a steady growth pattern, increasing from 3.4 percent of GSP in 1991 to 6.1 percent in 1996 to the aforementioned 8.5 percent in 2001. The two other states (Missouri and Tennessee) saw some changes too. In Missouri’s case, the industry contributed toward 1.8 percent of GSP in 1991, a percentage level that increased to 3.2 percent in 1996 before declining to the aforementioned 3 percent in 2001. With regard to Tennessee, while the industry’s contribution amounted to 1.5 percent of GSP in 1991, it increased to 3 percent in 1996, and remained at that level in 2001.

The two SLC states where the motor vehicle industry impacted the least in 2001 were Florida and Maryland. During 2001, the industry contributed only 0.1 percent of GSP in these states. Interestingly, while Florida’s GSP contribution remained unchanged for the entire decade, Maryland’s motor vehicle industry contribution declined steadily from .3 percent in 1991, to .2 percent in 1996, to .1 percent in 2001.

A review of the SLC state average and the national average for this date during the decade under review reveals some interesting trends as well. In 1991, the cumulative value of the industry in the SLC states stood at $11.8 billion; this amount increased to $25.6 billion in 1996 and jumped to $36.3 billion in 2001. In contrast, the national total was $45.5 billion in 1991, $92.2 billion in 1996, and $111.4 billion 2001. Proportionately, the amounts depicted similar trends in the SLC states and national levels. In 1991, the industry’s contribution to the SLC-state cumulative GSP was .6 percent; the national number was .8 percent. In 1996, the SLC percentage was 1 percent while the national contribution was 1.2 percent. In 2001, the percentage levels remained at an even 1.1 percent.

Another interesting angle on assessing the impact of the motor vehicle industry in the SLC states is a review of their GSP growth between 1991 and 2001, along with the SLC and national averages. Figure 7 carries out this task.
As indicated, except for four SLC states, the remaining 12 all achieved triple-digit growth levels between 1991 and 2001 in the contribution of the motor vehicle industry to their GSP. South Carolina displayed the most impressive percentage growth level during the review period coming in at 693 percent. Tennessee’s expansion level was almost as impressive (675 percent), while Kentucky’s 332 percent occupied the third highest ranking among the SLC states. At the other end of the spectrum, Maryland experienced a percentage decline of 27 percent, while Oklahoma (38 percent), Texas (72 percent) and Louisiana (75 percent) reached growth levels at double-digit levels. The SLC average was considerably more than the national average (207 percent versus 145 percent), a clear indication of the growing importance of the motor vehicle industry in the Southern states.

Despite the passage of several years since the collection of data for the 2001 Michigan report, a series of additional statistical calculations regarding the SLC state-specific economic contributions of the industry remain hugely relevant. For instance, a review of both the direct employment and payroll, and the spin-off jobs and compensation that result from the industry’s direct activity remains appropriate. In assessing these impacts, the contributions of automotive manufacturing and those associated with new vehicle retail activities are presented here. It should be mentioned that a range of additional related activities, such as the direct, indirect and induced economic impacts of automobile parts and suppliers, used car dealers, service stations and auto repair services are not factored into the calculations presented in table 5.
Despite the dated nature of the results presented in table 5, 1998 figures, the sheer enormity of the automobile industry’s economic impact on the SLC state economies–reflected in terms of employment and compensation levels–is clearly apparent. For the review period, there were 2.1 million individuals–comprising direct, indirect and induced employees–employed in the SLC states in total. This SLC figure represented approximately 32 percent of the total national employee level of 6.6 million. In terms of the specific SLC states, Texas had the largest total number at 318,900 employees, with Tennessee (229,900 employees) and Missouri (221,200 employees) ranking second and third. Another interesting perspective on the industry’s impact is a comparison of employee levels as a percentage of total state employment. In this connection, Kentucky, with 9.4 percent of its total employment cohort relying on the automobile industry, ranked the highest, while Texas (8.1 percent) and Missouri (7.8 percent) came in second and third, respectively.

Another level of analysis gleaned from table 5 involves total compensation levels that result from the automobile industry in the SLC states. Cumulatively, in the SLC states, compensation based on the industry’s operations amounted to $69.7 billion, a number that included the direct, indirect and induced compensation activity levels. This SLC amount comprised 29 percent of the national amount of $242.8 billion, a noteworthy proportion since in terms of employment levels, the SLC state portion stood at 32 percent. Once again, Texas secured the top ranking in this category with a total compensation level of $11.49 billion originating in the industry, while
Tennessee with $7.93 billion and Missouri with $7.58 billion occupied the second and third positions.

The iteration of such criteria as the number of vehicles produced, the dollar value of the industry’s output level, the industry’s contribution to national gross domestic product (GDP), the industry’s production number relative to other industries and employment levels at the industry amply buttress the claim that “the automobile industry is the largest manufacturing industry in the United States.”27
GLOBALIZATION AND THE AUTOMOBILE INDUSTRY

Globalization, the increasing economic linkage between the nations of the world, is a concept that has grown prolifically in theory and practice in the past two decades. From the macro, nation-state level to the micro, private entity level, including both large multinational corporations and tiny, privately-owned companies, there is growing acceptance that engaging in production for export markets and facilitating the free flow of goods, capital and technology eventually will lead to higher standards of living. Consequently, the United States has seen the expanding influence of exports and international trade in overall economic calculations. As observed by Thomas Friedman, the foreign affairs columnist for *The New York Times*,

“...the globalization system, ... is not static, but a dynamic ongoing process: globalization involves the inexorable integration of markets, nation-states and technologies to a degree never witnessed before—that is enabling individuals, corporations and nation-states to reach around the world farther, faster, deeper and cheaper than ever before, and in a way that is also producing a powerful backlash from those brutalized or left behind...”

Hence, notwithstanding the increasing acceptance of international trade and export promotion as a catalyst for spurring economic growth in the states, certain segments of the economy have suffered serious dislocation as a result of this growing move toward globalization. Quite often, the harshest consequences of this growing trend toward globalism have been felt by low-skill and low-wage manufacturing jobs within the U.S. economy (the textile industry is a classic example), with a majority of these jobs fleeing to cheaper production sites overseas. Federal Reserve Board Chairman Alan Greenspan made this point in testimony before the U.S. Senate Committee on Finance when he noted the following:

“While major advances in standards of living are evident among virtually all nations that have opened their borders to increased competition, the adjustment trauma resulting from technological advances as well as globalization has also distressed those who once thrived in industries that
were once at the cutting edge of technology but that have become increasingly noncompetitive. . . . But, the adjustment process is wrenching to an existing workforce made redundant largely through no fault of their own.”

The ripple effects of globalization have impacted the automobile industry too, and the prior references to the ever-increasing roster of foreign auto manufacturers establishing assembly plants in the United States, particularly in the South, is just one aspect of this multi-faceted scenario. Similarly, there are a number of American automakers that have set up manufacturing operations overseas. Furthermore, this constantly expanding globalization trend has muddied the definitions of nationality for motor vehicle manufacturers operating in the United States. For instance, General Motors owns a 49 percent equity stake in Isuzu Motors Ltd., while Ford holds a 33.4 percent equity stake in Mazda Motor Corp. alongside total ownership of Jaguar and Aston Martin. General Motors owns 20 percent of Italy’s Fiat Auto. Then, Chrysler reports to Germany’s DaimlerChrysler, which now holds a 37 percent stake in Mitsubishi Motors Corp. Furthermore, Renault holds a 36.8 percent equity stake in Nissan Motor Co. Ltd. In fact, “[T]he globalization trend continues as multinational manufacturers agree to mergers, acquisitions, and joint ventures to improve their products for their customers and profits for their shareholders. The nationality of a name is no longer the defining attribute of a company. Nearly 20 percent of American auto nameplates are made overseas. More than 13 percent of American auto exports are Japanese nameplates, while Japanese automakers now supply 63 percent of their total U.S. sales from their North American plants, compared with less than 12 percent in 1986.”

In sum, the “internationalization” of both American and foreign car manufacturers is a clear example of the globalization effort sweeping the world. Yet, it should be mentioned that since its inception in the latter decades of the 19th century, the automotive industry has been an intensely international one. A few years after the development of vehicles powered by internal combustion in Germany, in 1888 to be exact, the Daimler Motor Company licensed William Steinway of New York City to sell the innovation in the United States. As a result, in 1905, Steinway produced the first American Mercedes under license at a plant in Long Island City, New York. Then, in 1905 the first Rolls Royce was imported into the United States and some 15 years later, in 1921, the first Rolls Royce was assembled in the country. In subsequent years, a number of European manufacturers began their American operations led by Jaguar (1949); Volkswagen (1949); Porsche (1950); Saab (1956); BMW (1960); and Audi (1969). The first Japanese manufacturer to either sell their vehicles or establish a presence in the United States was Toyota (1957), followed by Nissan (1960); Subaru (1968); Honda and Mazda (both 1970).

As in so many other spheres of the economy (shipping; banking; financial services; pharmaceuticals; telecommunications; energy), consolidation, mergers and acquisitions on a global scale have extended to the vehicle manufacturing arena. In fact, the world’s six largest automobile manufacturers (General Motors, DaimlerChrysler, Ford, Toyota, Volkswagen and Renault), referred to as original equipment manufacturers (OEMs) in the industry, together with all their affiliates and groups, effectively control more than 80 percent of global vehicle production. When one adds Honda, PSA Peugeot Citroen and BMW to this list, then the world’s nine largest OEMs control over 95 percent of global vehicle production.

As noted earlier, the motor vehicle industry in the United States is the largest manufacturing industry in the nation; not a single other industry is so
connected with the U.S. manufacturing sector or contributes more handily to retail commerce and employment rolls. Assessing the international implications of the automotive industry involves the following two aspects:

» International trade (export and import) in automobiles and automotive parts
» Foreign automobile manufacturers establishing assembly plants in the United States

INTERNATIONAL TRADE IN AUTOMOBILES AND AUTOMOTIVE PARTS

At the outset, it should be stressed that the sheer size of the American market and the tremendous profits to be earned here in the United States has diminished the importance of exporting automobiles to the rest of the world. In addition, the engine capacities and dimensions of American vehicles are designed specifically to accommodate a domestic market that features wide open spaces and low energy costs. These twin features, particularly given the recent surge in the international price of gasoline, remain unsuitable for most overseas markets, a phenomenon that is reflected in the relatively low level of U.S. automobile exports. In contrast, the size of the U.S. market, the relative affluence of American society, consumers that are highly receptive to the products of other nations and the demand for high-quality automobiles, makes the American market very lucrative for the full range of foreign manufacturers. Consequently, a review of U.S. international trade trends reveals a huge component of imported vehicles, which is reflected in a negative trade balance in the automobiles sector.

Tables 6 and 7 demonstrate the trade flows of all motor vehicles between the United States and its major trading partners in the 1997 to 2002 period, initially in terms of value and then in terms of units.

<table>
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</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>$25,593</td>
<td>$24,462</td>
<td>$23,824</td>
<td>$24,669</td>
<td>$24,255</td>
<td>$27,809</td>
<td>8.7%</td>
</tr>
<tr>
<td>- Imports</td>
<td>$87,656</td>
<td>$94,650</td>
<td>$115,609</td>
<td>$126,790</td>
<td>$124,657</td>
<td>$132,407</td>
<td>51.1%</td>
</tr>
<tr>
<td>- Balance</td>
<td>($62,063)</td>
<td>($70,188)</td>
<td>($81,785)</td>
<td>($102,122)</td>
<td>($100,402)</td>
<td>($104,598)</td>
<td>68.5%</td>
</tr>
<tr>
<td>Canada</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>$14,406</td>
<td>$13,867</td>
<td>$14,951</td>
<td>$14,863</td>
<td>$13,260</td>
<td>$15,895</td>
<td>10.3%</td>
</tr>
<tr>
<td>- Imports</td>
<td>$35,825</td>
<td>$37,518</td>
<td>$46,367</td>
<td>$45,371</td>
<td>$40,879</td>
<td>$41,392</td>
<td>15.5%</td>
</tr>
<tr>
<td>- Balance</td>
<td>($21,419)</td>
<td>($23,651)</td>
<td>($31,416)</td>
<td>($30,508)</td>
<td>($27,619)</td>
<td>($25,496)</td>
<td>19.0%</td>
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<tr>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>$1,184</td>
<td>$1,345</td>
<td>$1,194</td>
<td>$1,213</td>
<td>$1,797</td>
<td>$2,811</td>
<td>134.4%</td>
</tr>
<tr>
<td>- Imports</td>
<td>$9,040</td>
<td>$11,138</td>
<td>$13,505</td>
<td>$14,676</td>
<td>$15,048</td>
<td>$17,813</td>
<td>97.0%</td>
</tr>
<tr>
<td>- Balance</td>
<td>($7,856)</td>
<td>($9,793)</td>
<td>($12,312)</td>
<td>($13,463)</td>
<td>($13,250)</td>
<td>($15,002)</td>
<td>91.0%</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>$1,622</td>
<td>$1,165</td>
<td>$824</td>
<td>$804</td>
<td>$609</td>
<td>$468</td>
<td>-71.1%</td>
</tr>
<tr>
<td>- Imports</td>
<td>$23,631</td>
<td>$25,294</td>
<td>$29,848</td>
<td>$32,636</td>
<td>$31,513</td>
<td>$35,483</td>
<td>50.2%</td>
</tr>
<tr>
<td>- Balance</td>
<td>($22,009)</td>
<td>($24,129)</td>
<td>($21,023)</td>
<td>($21,800)</td>
<td>($18,990)</td>
<td>($15,015)</td>
<td>59.1%</td>
</tr>
<tr>
<td>Korea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>$92</td>
<td>$7</td>
<td>$16</td>
<td>$30</td>
<td>$35</td>
<td>$93</td>
<td>1.1%</td>
</tr>
<tr>
<td>- Imports</td>
<td>$1,904</td>
<td>$1,696</td>
<td>$2,900</td>
<td>$4,859</td>
<td>$6,344</td>
<td>$6,802</td>
<td>257.2%</td>
</tr>
<tr>
<td>- Balance</td>
<td>($1,812)</td>
<td>($1,689)</td>
<td>($2,884)</td>
<td>($4,829)</td>
<td>($6,309)</td>
<td>($6,709)</td>
<td>270.3%</td>
</tr>
<tr>
<td>Mexico</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>$1,978</td>
<td>$2,363</td>
<td>$2,547</td>
<td>$3,798</td>
<td>$3,922</td>
<td>$3,931</td>
<td>98.7%</td>
</tr>
<tr>
<td>- Imports</td>
<td>$12,110</td>
<td>$13,190</td>
<td>$15,788</td>
<td>$21,002</td>
<td>$21,302</td>
<td>$20,903</td>
<td>72.6%</td>
</tr>
<tr>
<td>- Balance</td>
<td>($10,132)</td>
<td>($10,827)</td>
<td>($13,241)</td>
<td>($17,204)</td>
<td>($17,379)</td>
<td>($16,972)</td>
<td>67.5%</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Commerce, Office of Automotive Affairs, February 2003
While the overwhelming dominance of the import sector is apparent in U.S. automotive trade flows in table 6, a graphical representation of this feature is apparent in figure 8. Figure 8 illustrates the U.S. trade balance in 1997 and 2002, for the world and the top five U.S. markets in motor vehicles.

A review of the information in table 6 and figure 8 indicates that between 1997 and 2002, the U.S. trade balance with the rest of the world in all motor vehicles worsened by almost 69 percent. Specifically, while exports grew by under 9 percent, imports expanded by more than 51 percent. In terms of the specific markets, imports from Korea expanded the most significantly, by more than 257 percent, indicating the growing importance of such automakers as Kia and Hyundai in the U.S. domestic market. As noted in table 6, exports to Japan suffered a decline between 1997 and 2002, by just over 71 percent, an indication of the difficulties associated with penetrating the domestic Japanese automobile market.

It should also be stressed that the overall U.S. trade balance continues to be in the negative and that the deficit in the motor vehicles sector is symptomatic of this larger trade issue. In fact, in 2002, the total U.S. deficit on goods and services trade (excluding earnings and payments on foreign investment) increased by approximately $65 billion from $358 billion in 2001 (3.6 percent of GDP), to $423 billion in 2002 (4.1 percent of GDP). The U.S. trade deficit in goods trade alone increased by $43 billion, while the service trade surplus declined by $22 billion between 2001 and 2002.35

Similarly, a review of U.S. trade flows of motor vehicles in terms of units displays the trends depicted with respect to their value. These trends, for the world and the same five countries of the world, are listed in table 7 and indicate that once again, imports seriously outnumber exports for the 1997 to 2002 period.
In terms of units, U.S. trade in motor vehicles experienced a negligible increase in exports (less than 1 percent) and a 42 percent increase in imports between 1997 and 2002. While exports to Canada and Mexico increased by more than 14 percent and 114 percent, respectively, mainly due to the North American Free Trade Agreement (NAFTA), with the exception of Germany (31 percent increase), exports to both Japan and Korea declined. On the import front, there were increases in every category with imports from Korea (182 percent) displaying the largest percentage increase.

While tables 6 and 7 and figure 8 presented data for all motor vehicles, information on total automotive trade (exporting and importing)—vehicles such as passenger vehicles, light trucks and automotive parts—remains important too. In particular, automotive parts represent a significant portion of trade flows both to and out of the United States. Table 8 indicates data for 1996 and 2002 for these categories.

### U.S. Trade Flows of Motor Vehicles in Total Units 1997 to 2002

<table>
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<tbody>
<tr>
<td><strong>World</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>1,735,579</td>
<td>1,610,943</td>
<td>1,526,924</td>
<td>1,616,164</td>
<td>1,594,707</td>
<td>1,739,595</td>
<td>0.2%</td>
</tr>
<tr>
<td>- Imports</td>
<td>5,124,004</td>
<td>5,347,765</td>
<td>6,500,387</td>
<td>7,145,146</td>
<td>6,888,948</td>
<td>7,291,955</td>
<td>42.3%</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>876,667</td>
<td>851,217</td>
<td>916,847</td>
<td>932,927</td>
<td>895,308</td>
<td>1,001,936</td>
<td>14.3%</td>
</tr>
<tr>
<td>- Imports</td>
<td>2,186,774</td>
<td>2,209,675</td>
<td>2,688,658</td>
<td>2,638,879</td>
<td>2,307,215</td>
<td>2,351,610</td>
<td>7.5%</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>74,201</td>
<td>70,008</td>
<td>59,880</td>
<td>61,831</td>
<td>79,445</td>
<td>97,296</td>
<td>31.1%</td>
</tr>
<tr>
<td>- Imports</td>
<td>300,694</td>
<td>376,705</td>
<td>460,101</td>
<td>493,058</td>
<td>498,703</td>
<td>575,710</td>
<td>91.5%</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>96,272</td>
<td>63,300</td>
<td>53,720</td>
<td>44,556</td>
<td>31,631</td>
<td>24,620</td>
<td>-74.4%</td>
</tr>
<tr>
<td>- Imports</td>
<td>1,428,496</td>
<td>1,498,671</td>
<td>1,744,763</td>
<td>1,865,022</td>
<td>1,813,743</td>
<td>2,067,190</td>
<td>44.7%</td>
</tr>
<tr>
<td><strong>Korea</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>5,357</td>
<td>928</td>
<td>1,379</td>
<td>1,757</td>
<td>2,107</td>
<td>5,035</td>
<td>-6.0%</td>
</tr>
<tr>
<td>- Imports</td>
<td>222,565</td>
<td>210,312</td>
<td>375,512</td>
<td>569,339</td>
<td>633,999</td>
<td>627,910</td>
<td>182.1%</td>
</tr>
<tr>
<td><strong>Mexico</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Exports</td>
<td>140,652</td>
<td>163,669</td>
<td>175,526</td>
<td>279,291</td>
<td>283,000</td>
<td>301,962</td>
<td>114.7%</td>
</tr>
<tr>
<td>- Imports</td>
<td>788,796</td>
<td>837,119</td>
<td>938,436</td>
<td>1,219,132</td>
<td>1,206,576</td>
<td>1,162,127</td>
<td>47.3%</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Commerce, Office of Automotive Affairs, February 2003

### U.S. Automotive Trade 1996 and 2002 Millions of Dollars

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vehicle Balance</td>
<td>Parts Balance</td>
<td>Total Balance</td>
</tr>
<tr>
<td><strong>World</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Canada</td>
<td>(21,481)</td>
<td>9,589</td>
<td>(11,892)</td>
</tr>
<tr>
<td>- Mexico</td>
<td>(10,052)</td>
<td>(4,567)</td>
<td>(14,619)</td>
</tr>
<tr>
<td>- Brazil</td>
<td>169</td>
<td>(452)</td>
<td>(283)</td>
</tr>
<tr>
<td>- Germany</td>
<td>(6,149)</td>
<td>(1,646)</td>
<td>(7,795)</td>
</tr>
<tr>
<td>- United Kingdom</td>
<td>(1,231)</td>
<td>56</td>
<td>(1,175)</td>
</tr>
<tr>
<td>- Japan</td>
<td>(18,232)</td>
<td>(11,368)</td>
<td>(29,600)</td>
</tr>
<tr>
<td>- Korea</td>
<td>(1,682)</td>
<td>336</td>
<td>(1,346)</td>
</tr>
<tr>
<td>- China</td>
<td>26</td>
<td>(581)</td>
<td>(555)</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Commerce, Office of Automotive Studies
As demonstrated in table 8, the significant increase in imports in both passenger vehicles, light trucks and automotive parts is apparent between 1996 and 2002. While there were a few instances where the United States enjoyed a positive trade relationship in these categories in 1996, this relationship quickly changed by 2002, when the U.S. trade deficit soared to unprecedented heights. Consequently, when reviewing the import-export situation for the entire world, it is evident that between 1996 and 2002, the U.S. trade balance in passenger vehicles, light trucks and automotive parts diminished from $63.1 billion to $123.6 billion, or by almost 96 percent.

Finally, another series of statistics from the Office of Automotive Affairs reinforces the growing importance of foreign automakers in overall United States sales. Table 9 provides sales figures for new cars and light trucks in the United States and affords a comparison between American, primarily the Big Three (General Motors, Ford and Chrysler), and foreign automakers. In addition, the data indicate the breakdown as a percentage of total sales by each country of origin.

| New Car and Light Truck Sales in Millions of Vehicles and Share of Total 1997 to 2002 |
|---------------------------------|---|---|---|---|---|---|
| **Country** | **1997** | **1998** | **1999** | **2000** | **2001** | **2002** |
| American | # vehicles | 10,761 | 10,863 | 11,528 | 11,341 | 10,806 | 10,345 |
| | share | 71.3% | 70.0% | 68.3% | 65.4% | 63.1% | 61.3% |
| German | # vehicles | 430 | 586 | 747 | 853 | 882 | 915 |
| | share | 2.69% | 3.8% | 4.4% | 4.9% | 5.2% | 5.4% |
| Japanese | # vehicles | 3,564 | 3,710 | 4,045 | 4,431 | 4,577 | 4,706 |
| | share | 23.6% | 23.9% | 24.0% | 25.6% | 26.7% | 27.9% |
| Korean | # vehicles | 169 | 175 | 330 | 473 | 618 | 650 |
| | share | 1.1% | 1.1% | 2.0% | 2.7% | 3.6% | 3.9% |
| Other | # vehicles | 163 | 176 | 221 | 234 | 235 | 251 |
| | share | 1.1% | 1.1% | 1.3% | 1.4% | 1.4% | 1.5% |
| Total | # vehicles | 15,087 | 15,511 | 16,870 | 17,333 | 17,118 | 16,867 |
| | share | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Source: U.S. Department of Commerce, Office of Automotive Affairs

Perhaps the most instructive statistic to be extrapolated from table 9 involves the continued decline of the sale of American vehicles as a proportion of total sales. From a high of 71.3 percent in 1997, this percentage declined every year to finally reach 61.3 percent in 2002. In contrast, the sale of foreign vehicles increased in each of these years at the expense of American vehicles from 28.7 percent in 1997, to 38.7 percent in 2002. To be more specific, between 1997 and 2002, the sale of Japanese vehicles increased from 23.6 percent to 27.9 percent; German vehicles increased from 2.9 percent to 5.4 percent; Korean vehicles increased 1.1 percent to 3.9 percent; and vehicles from other countries increased, albeit marginally, from 1.1 percent to 1.5 percent.

Finally, in exploring the relative importance of the different automakers in the United States, it is relevant to review the U.S. market share of some of the specific automakers between 2001 and 2002. (It should be noted that figure 9 only represents the eight major players in the U.S. market and that the total does not equal 100 percent.)
Figure 9 documents the breakdown for eight major automakers in the United States and their growth levels for the two most recent years, 2001 to 2002. As noted earlier, the Big Three (General Motors, Ford and DaimlerChrysler) still maintain a prominent position in overall sales. In 2002, General Motors enjoyed its first back-to-back market share gain since 1972. The other two U.S. automakers experienced declines in their market share while all the remaining foreign automakers—with the exception of Volkswagen, whose growth remained unchanged from the prior year—experienced market share increases in 2002. In 2002, the percentage market share breakdown for these eight major automakers remained as follows: General Motors 28.3 percent; Ford 21.1 percent; DaimlerChrysler 14.6 percent; Toyota 10.3 percent; Honda 7.3 percent; Nissan 4.3 percent; Volkswagen 2.5 percent; and the two Korean automakers, Hyundai and Kia, both holding at 3.8 percent.

FOREIGN AUTOMOBILE MANUFACTURERS
ESTABLISHING ASSEMBLY PLANTS IN THE
UNITED STATES

As noted earlier, the burgeoning success associated with foreign car sales in the United States, and the potential for increasing profit margins, prompted a host of foreign automakers to begin setting up manufacturing and assembly operations across the country. In fact, ever since 1978, when Volkswagen purchased a Chrysler plant in Westmoreland, Pennsylvania, for the purpose of assembling passenger cars, there has been a steady stream of European and East Asian automobile manufacturers establishing assembly and manufacturing operations in subsequent decades. As documented in the previously referenced University of Michigan study, until about 1982, the U.S. international auto sector (IAS) sales consisted almost entirely of imported...
vehicles. Yet, this aspect of the industry began changing soon after as the quantity of domestically-produced foreign vehicles began a steady ascent. Accordingly, in 1982, a review of international auto sector sales reveals that of the 2.7 million vehicles sold, only about 90,000 vehicles were produced domestically with the remainder being imported. By 1996, this production distribution had changed drastically to 2.37 million manufactured domestically and 1.72 million imported into the United States.³⁶

Hence, while the auto industry remains the largest manufacturing sector industry in the country, this achievement has been attained as a result of the contributions of the aforementioned foreign automakers’ U.S. operations. In fact, more than 30 international nameplate vehicles are now manufactured in the United States, and overseas automakers are making sizable investments in their U.S. manufacturing operations, expanding facilities and building new and innovative vehicles on American soil.³⁷ According to the University of Michigan study, following the 1978 Volkswagen plant in Pennsylvania, Honda established an automobile assembly plant in Marysville, Ohio, in November 1982. (Honda already had been manufacturing large motorcycles at this site since 1979.) Nissan started a plant a few years later in 1983 in Smyrna, Tennessee, followed by Toyota’s joint-venture assembly plant with GM in December 1984 in Fremont, California.

The following list indicates a sampling of the vehicles and models manufactured within the United States by foreign automakers:

<table>
<thead>
<tr>
<th>Vehicle, Model and Location of Foreign Assembly Plants</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acura CL, Acura TL</td>
<td>Marysville, Ohio</td>
</tr>
<tr>
<td>BMW X5, BMW Z3</td>
<td>Spartanburg, South Carolina</td>
</tr>
<tr>
<td>Honda Accord</td>
<td>Marysville, Ohio</td>
</tr>
<tr>
<td>Honda Civic</td>
<td>East Liberty, Ohio</td>
</tr>
<tr>
<td>Honda Odyssey</td>
<td>Lincoln, Alabama</td>
</tr>
<tr>
<td>Hyundai Sonata, Hyundai Santa Fe</td>
<td>Montgomery, Alabama (Forthcoming)</td>
</tr>
<tr>
<td>Isuzu Ascender</td>
<td>Moraine, Ohio</td>
</tr>
<tr>
<td>Isuzu Axiom, Isuzu Rodeo, Isuzu Rodeo Sport</td>
<td>Lafayette, Indiana</td>
</tr>
<tr>
<td>Mazda 626</td>
<td>Flat Rock, Michigan</td>
</tr>
<tr>
<td>Mazda Truck</td>
<td>Edison, New Jersey</td>
</tr>
<tr>
<td>Mazda Tribute</td>
<td>Kansas City, Missouri</td>
</tr>
<tr>
<td>Mercedes-Benz M-Class</td>
<td>Vance, Alabama</td>
</tr>
<tr>
<td>Mitsubishi Eclipse, Mitsubishi Eclipse Spyder,</td>
<td>Normal, Alabama</td>
</tr>
<tr>
<td>Mitsubishi Galant</td>
<td></td>
</tr>
<tr>
<td>Nissan Altima, Nissan Frontier, Nissan Xterra,</td>
<td>Smyrna, Tennessee</td>
</tr>
<tr>
<td>Nissan Quest</td>
<td>Avon Lake, Ohio</td>
</tr>
<tr>
<td>Nissan Titan, Nissan Pathfinder Armada, Nissan Quest</td>
<td>Canton, Mississippi</td>
</tr>
<tr>
<td>Subaru Baja, Subaru Legacy, Subaru Outback</td>
<td>Lafayette, Indiana</td>
</tr>
<tr>
<td>Toyota Avalon, Toyota Camry, Toyota Sienna, Toyota</td>
<td>Georgetown, Kentucky</td>
</tr>
<tr>
<td>Corolla</td>
<td>Fremont, California</td>
</tr>
<tr>
<td>Toyota Sequoia, Toyota Tundra</td>
<td>Princeton, Indiana</td>
</tr>
<tr>
<td>Toyota Tacoma</td>
<td>Fremont, California</td>
</tr>
<tr>
<td>Toyota Tundra</td>
<td>San Antonio, Texas (Forthcoming)</td>
</tr>
</tbody>
</table>

Source: American International Automobile Dealers Association and Nissan and Hyundai Web sites
According to the American International Automobile Dealers Association (AIADA), international automakers are gaining ground with U.S. buyers, capturing more than 50 percent of the passenger car market for the first time in 2001. Toyota led the way with 10.2 percent of the overall market (up from 9.3 percent in 2000), landing the brand in third place ahead of Dodge and after Ford and Chevrolet. In addition, Honda took a 7 percent share, a 30 percent increase from 2000, with its Acura division up almost 20 percent. Given that until a few years ago, Detroit’s Big Three dominated the market, easily securing more than a 50 percent share, the growing performance of these international players remains significant.

In terms of economic impact, a topic that will be dealt with in much greater detail in the state-specific sections that follows, the results have been quite impressive. Just among the Japanese automakers, since 1987, $17.5 billion has been invested in their U.S. auto plants and auto parts manufacturing facilities; furthermore, these Japanese automakers (Toyota, Mazda, Subaru, Isuzu, Honda, Mitsubishi and Nissan) employ nearly 50,000 Americans. Also, every international nameplate manufacturer has offices and investments across the United States, and the 10,000 dealerships that sell and service their brands provide in excess of 432,000 American jobs. In fact, as detailed by the AIADA, in 2002, the commercial activities of these international nameplate automobile dealers provide the following breakdown of direct jobs in the SLC states.

<table>
<thead>
<tr>
<th>SLC State</th>
<th>Locations</th>
<th>Employment Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% of SLC Total</td>
</tr>
<tr>
<td>Alabama</td>
<td>124</td>
<td>4.3%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>69</td>
<td>2.4%</td>
</tr>
<tr>
<td>Florida</td>
<td>467</td>
<td>16.1%</td>
</tr>
<tr>
<td>Georgia</td>
<td>239</td>
<td>8.2%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>99</td>
<td>3.4%</td>
</tr>
<tr>
<td>Louisiana</td>
<td>119</td>
<td>4.1%</td>
</tr>
<tr>
<td>Maryland</td>
<td>188</td>
<td>6.5%</td>
</tr>
<tr>
<td>Mississippi</td>
<td>86</td>
<td>3.0%</td>
</tr>
<tr>
<td>Missouri</td>
<td>119</td>
<td>4.1%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>263</td>
<td>9.0%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>77</td>
<td>2.6%</td>
</tr>
<tr>
<td>South Carolina</td>
<td>126</td>
<td>4.3%</td>
</tr>
<tr>
<td>Tennessee</td>
<td>171</td>
<td>5.9%</td>
</tr>
<tr>
<td>Texas</td>
<td>458</td>
<td>15.8%</td>
</tr>
<tr>
<td>Virginia</td>
<td>249</td>
<td>8.6%</td>
</tr>
<tr>
<td>West Virginia</td>
<td>54</td>
<td>1.9%</td>
</tr>
<tr>
<td>SLC Total</td>
<td>2,908</td>
<td></td>
</tr>
<tr>
<td>U.S. Total</td>
<td>7,866</td>
<td></td>
</tr>
</tbody>
</table>

Source: American International Automobile Dealers Association

As documented, the international nameplate dealers operate more than 2,900 dealer locations (36 percent of the total locations across the country) and employ more than 165,000 employees (38 percent of total employees) in the SLC states. In terms of the specific SLC states, Florida and Texas are the states with the highest percentage of both dealer locations and number of employees.
THE DRIVE TO MOVE SOUTH: AUTOMOTIVE MANUFACTURERS LOCATING PLANTS IN THE SOUTH

Until the last few decades of the 100-year history of automobile manufacturing in the United States, the industry revolved around a number of states surrounding the Great Lakes from Michigan to Ohio to Wisconsin to Indiana (and across the border to Ontario, Canada). Yet, even though these Great Lakes states (and Canadian province) continue to play a central role in setting the tone for the automotive industry in the country, the industry has seen in recent decades a flurry of automobile manufacturers, both domestic and foreign, moving their assembly plant operations to a number of states in the South. The movement of automotive plants to Southern climes has served to not only enhance the economic potential of these states, but also reconfigure the automotive corridor of the United States away from sites focused largely around the Great Lakes.

At a minimum, as indicated in table 12, the SLC states have close to 30 automobile assembly plants within their jurisdictions, certainly an impressive number. While some of the General Motors and Ford plants were established some 80 to 90 years ago, a number of the plants were established in the last 10 to 15 years. For instance, Georgia’s role in the nation’s automotive history goes back to 1909, when the Ford Motor Company established an operation in the state. Similarly, the Blue Bird Corporation, the world’s largest producer of school buses, began manufacturing in the state back in 1927, while General Motors has been in Georgia since 1947. Then, General Motors began manufacturing vehicles at its Tarrant County, Texas, location in 1951, while Ford’s Norfolk, Virginia, plant was established as far back as 1925. However, it is the spate of announcements made in the last decade or so that has garnered a great deal of attention with BMW locating in South Carolina in 1992, Mercedes settling in Alabama in 1993, Nissan deciding to locate in Mississippi in 2000, and the latest addition, Toyota, deciding to establish a plant in Texas in 2003.

According to a report released by the Federal Reserve Bank of Chicago several years ago, the decision of automakers to increasingly locate assembly plants in the South actually began some 30 years ago. General Motors started this trend in the 1970s when they re-located a number of component
plants outside the traditional automobile manufacturing Great Lakes states in the South. In response, a number of Japanese-owned assembly and supplier plants followed General Motors, also setting up plants in the South. In fact, between 1970 and 1997, Kentucky and Tennessee expanded their national share of light vehicle production from 4 percent to 13 percent, a tripling of their production levels. As indicated in this report, between 1980 and 1997, seven new assembly plants opened in the South, including three in Kentucky, two in Tennessee, and one each in South Carolina and Louisiana. In addition to those listed in this report, more recently, additional plants either have opened or are about to open in Alabama (three), Georgia (one), Mississippi (one) and Texas (one).
Analysts proffer a variety of reasons for this move by automobile manufacturers to set up assembly operations in the South. According to a Federal Reserve Bank of Atlanta report, one of the major factors leading to the auto corridor’s Southward movement is the fact that “innovative methods of production are more readily introduced and implemented here [in the South] than in older Midwestern assembly plants geared to more traditional approaches to manufacturing.” The driving motive here is that the U.S. auto industry is constantly experimenting and striving to stay ahead of consumer expectations, demand and purchasing habits. Since the margin for error—reflected in corporate finances—has almost immediate and significant impacts on the share prices of automakers, the industry has been forced to look to technology to meet these fluctuating consumer demands. Consequently, automakers have been pressured to develop technologically-superior production systems that are able to respond rapidly to these consumer trends.

As noted earlier, given the overarching prominence of technology in the automobile manufacturing process, the ability to establish modern assembly plants, incorporating the latest innovations and technologies in the field, remains critical. For instance, the older systems of auto design entailed a lead time of about five years for a car to progress from the conceptual stage to the manufacturing stage; under the latest system, using such features as computer modeling that allow engineers to create “virtual cars,” this lead time is almost halved as automakers move swiftly from conception to fabrication. It is in this technologically-demanding environment that the South has had a huge advantage because automakers can basically create ground-up manufacturing plants applying new technologies and even customizing the construction to their specifications. In contrast, reconfiguring the much older assembly plants in the Midwestern states would be significantly cost prohibitive resulting in the nation’s auto corridor drifting Southward. Interestingly, a number of the nation’s auto plants, even with the recent surge of plants to the South, continue to be located within 200 miles or so on either side of two major interstates: I-75 and I-65.

An additional factor leading to automakers locating in the South involves efficiency and productivity levels, and these trends are substantiated in a June 2003 report. The 2003 version of the much-awaited Harbour Report, a report that measures assembly, stamping and powertrain productivity performances—plant-by-plant, and company-by-company—for North American automotive manufacturers, contained some positive results for the Big Three, but further reinforced how wide the competitive gap with the Japanese automakers remains. For instance, Nissan’s Smyrna, Tennessee plant, which produces the Altima, led all assembly plants with a measure of 15.74 labor hours per vehicle (HPV), the best performance in this report’s history. While this facility has been named the most efficient automotive plant in the United States for nine consecutive years, between 2001 and 2002, this Nissan facility shaved 66 minutes off the time it takes to build cars and trucks. On average, workers take an average of 16.8 hours to build each vehicle at the Smyrna facility; in contrast to the Altima (15.74 hours), the Frontier small pickup and the Xterra sport-utility vehicle each take more than 18 hours to produce. The best U.S.-based producer was General Motors in 2002, taking an average of 26.14 average hours per vehicle and Toyota with 21.83 hours. A glimpse into the efficiency gains Nissan incorporated into the company’s Tennessee plant exemplifies the attractiveness of locating new assembly plants in the South. For example, when Nissan began production of its Xterra sport-utility vehicle in 1999, it took 22 people to produce about 17 vehicles per hour in Smyrna. When Xterra sales spiked, Nissan increased
efficiency by adding robots and automating several functions. By 2001, the line produced 25 vehicles per hour while using only 16 workers.

Another critical factor propelling automakers to locate in the South deals with the favorable labor climate prevalent in these states. In addition to the lack of unions in the South, the right-to-work laws diminish union bargaining power considerably. Several additional elements are important here, including the readily available labor pool, the attractive incentives offered by states to train and instruct these workers, and certain automakers preferring workers who have not been trained in older methods of automobile manufacturing. Conversely, the onus is on the workers to remain flexible and technically competent to stay abreast of the latest industry developments. In this connection, several examples from the SLC states help illustrate the importance of worker training in attracting these automotive plants.

For instance, a portion of the incentive package offered by the state of Mississippi to Nissan to establish its plant in Canton, $23.5 million to be precise, will be directly applied toward worker training. While the starting hourly wages for these positions will hover between $13.25 and $18.50, the intense competition for the positions is one indication of the attractiveness of the salaries. Even at the lowest starting pay, a position at the Canton Nissan plant will yield an annual wage of $27,560, while the average private sector salary in the state was $26,066 in 2001. The Mississippi Employment Security Commission (ESC) remains an integral player in the recruitment of workers for the Nissan plant and over a period of 28 months, Nissan and the ESC held 45 job fairs and screened more than 87,000 applications and resumes for the available positions. In May 2004, when the plant reaches full production capacity, 5,300 maintenance technicians, assembly workers and salaried employees will have been hired. As of late April 2003, almost 1,500 individuals were hired to work at the 3.5 million-square foot, $1.43 billion assembly plant.

Similarly, Maryland supports the preparation and improvement of the state’s workforce through programs such as flexible training grants and an apprenticeship program that allows workers to build competence in their skill area. A network of community colleges provides specialized training in a variety of automotive industry disciplines. In addition, these community colleges revise their training programs and courses based on market changes in cooperation with state and local economic development offices. For instance, in fiscal year 2003, the division of Mack Trucks that manufactures diesel engines and transmissions in Hagerstown, Maryland, received a $400,000 grant to provide training for workers. Similarly, during fiscal year 2000, Allison Transmission, a manufacturer of transmissions in White Marsh, Maryland, was authorized to receive a grant of up to $1.5 million in state funds to facilitate worker training.

Alongside these factors propelling automotive companies to relocate in the South, there are several general features which analysts contend have resulted in scores of high technology companies either setting up operations or moving to Southern locations. Historically, high technology companies have tended to develop and/or locate in close proximity to technology clusters and this is more than apparent in a number of Southern states. As noted previously, given the strong emphasis on technology-driven growth in the automotive industry, these attributes are very important in this discussion. Some of these additional factors are:

“proximity to other technology companies, proximity to research universities that were spinning out new technology and new businesses, and proximity to venture capital. The cost of labor, the cost of initial investment, and the cost of operations were important—but secondary.”
Following this logic, it is apparent that the location decisions of a number of automotive manufacturers were influenced by the presence of such high-technology incubator cities as Austin and Dallas, Texas; Atlanta, Georgia; Research Triangle Park, North Carolina; Orlando, Florida; and Huntsville, Alabama. While these locations continue to be hotbeds for development and growth, a number of additional Southern cities have emerged as very qualified high-tech cities, including Oklahoma City, Oklahoma; Jackson, Mississippi; Hampton Roads, Virginia; Birmingham, Alabama; Tampa and Jacksonville, Florida; Charleston, South Carolina; Charlotte, North Carolina; and Knoxville, Tennessee. Hence, a review of the location of the latest crop of automotive manufacturers in the South reveals that they are in close proximity to these emerging incubator cities. Specifically, the Mercedes plant in Vance, Alabama, is close to Birmingham; similarly, the BMW plant in Spartanburg, South Carolina is near Charleston.

In this section on Southern advantages in luring automobile manufacturers, it is relevant to emphasize the significance of the highly efficient intermodal transportation systems within the South, particularly ports. Not only does a large majority of the nation’s exports and imports transit through a Southern port, several Southern ports rank very high in handling vehicles. Automobile manufacturers often stress the importance of efficient intermodal transportation strategies (such as rails and ports) to move not only automobiles ready for both the United States and overseas markets, but also parts and components critical for the production process. The presence of a number of the nation’s busiest and most efficient airports, such as in Atlanta, Dallas, Charlotte, Miami, Baltimore, Washington Dulles and Houston, including the hubs of several airlines at some of these locations, remains another pivotal factor in the location decisions of automakers. These airports are critical links in the supply and transportation chains of the automobile industry whether transporting personnel or parts and components.

Some details on the Southern comparative advantage in the area of ports are listed below. This information helps bolster the case that ports in the South maintain a dominant position in transporting the nation’s automobile cargo, in addition to highlighting that this feature is a crucial consideration in the location decision of automakers.
JACKSONVILLE PORT AUTHORITY–JAXPORT

In fiscal year 2003, JAXPORT’s three marine terminals handled a record number of vehicles, more than 615,000, making it the busiest vehicle handling port in the country. The following graph, figure 10, presents this information for the past five fiscal years. As indicated, there has been a steady rise in the number of automobiles moving in and out of the Port of Jacksonville. As documented in the figure, between fiscal years 1998 and 2002, there was a 28 percent increase in the number of vehicles handled by the Port, the highest number in the country.

MARYLAND PORTS ADMINISTRATION–PORT OF BALTIMORE

According to the Port of Baltimore, in the past 10 years, more than 3.5 million vehicles have rolled through the Port with a steady increase every year. The Port also notes that rail leaders Norfolk Southern (NS) and CSX Transportation play an important role in elevating the Port of Baltimore to be one of the country’s leading automobile ports. Once again, this partnership emphasizes the crucial role played by intermodal transportation strategies in contemporary commerce. In fact, the presence of these two rail leaders makes the Port of Baltimore very attractive to automobile manufacturers looking to export their vehicles. The railroads’ ability to transport automobiles across the country also makes the Port of Baltimore popular with overseas car makers who use the Port as their primary distribution center east of the Mississippi River. Norfolk Southern recently expanded its commitment to the Port by improving clearances along its Northeast Corridor. The high clearances allow NS to utilize rail cars capable of transporting automobiles stacked on three levels. This tri-level direct service to and from the Port’s Dundalk Marine Terminal improves the Port’s efficiency and cost effectiveness. The use of unit trains enhances the Port of Baltimore’s reputation as one of the nation’s top Ro/Ro (Roll-on/Roll-off) ports.

Roll-on/Roll-off cargo is driven onto the Blount Island wharf at the Port of Jacksonville.
Source: Port of Jacksonville, www.jaxport.com

Maryland Ports Administration–Port of Baltimore

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In January 2002, the Port of Baltimore became the first U.S. port to receive Honda automobiles manufactured in the United Kingdom. As a result, the Port of Baltimore’s Masonville Auto Facility, one of the most technologically advanced in the country, will import at least 70,000 Honda Civics and SUVs every year. Then, in February 2002, Ford announced an agreement solidifying the Port of Baltimore’s reputation as a national leader for automobile exports: consolidating some of its auto export business with the addition of approximately 27,000 vehicles over the Port’s docks en route to overseas markets. This move was estimated to save Ford some $2 million in annual transportation costs given the Port of Baltimore’s intermodal (rail) advantage while generating at least another 155 jobs throughout the state. Also, in May 2002, Hyundai Motor America announced the opening of a vehicle processing center at the Port of Baltimore. The Port is expected to process more than 47,000 vehicles under this agreement with Hyundai each year while creating 300 jobs in the region.

Finally in April 2003, Maryland state officials announced that Mercedes-Benz USA had signed a 10-year lease with Dundalk Marine Terminal at the Port of Baltimore, with options to extend for an additional 20 years. Mercedes has been shipping cars through the terminal since 1965, but this is the first time that the automaker has signed a lease directly with the Maryland Port Authority as opposed to contracting with a third-party automobile processor. As laid out in the deal, Mercedes will lease 16.5 acres of land from the Port with an option to expand. Last year, about 82,000 Mercedes vehicles were shipped through the terminal while about 86,000 are expected to come through this year.

GEORGIA PORTS AUTHORITY-PORT OF BRUNSWICK

The Georgia Ports Authority announced in late March 2003 that as a result of its Brunswick location’s ongoing expansion efforts, significant infrastructure investments and prime location, a record number of auto and machinery units moved through the Port in the first eight months of fiscal year 2003. Specifically, an unprecedented 211,592 auto and machinery units moved through the Port of Brunswick, a 33.3 percent increase between July 2002 and February 2003, or 52,832 more units than at this time last year. Just in the month of February 2003, the Port of Brunswick handled 22,568 units. In fact, as their press release notes, since 1994, car and machinery traffic at Brunswick has increased 250 percent with the increased business generating new jobs, including 500 new jobs at the state’s auto processors in just the past four years and many more in the trucking and other industries. Even though DaimlerChrysler decided in late September 2003 against building a cargo van plant in nearby Pooler, a move that would have resulted in significant cargo from northern Europe to Georgia, state officials indicate that they are in the process of aggressively pursuing a number of other prospective companies to set up operations at the site.

Figure 11 provides a glimpse into the steady expansion in automobile and auto machinery traffic at the Port of Brunswick in the last six fiscal years. (Please note that fiscal year 2003 figures reflect numbers for just the first eight months of the fiscal year. Given the pace set for these eight months, it is very possible that the fiscal year 2003 numbers will surpass the level reached in the prior fiscal year.)
Several additional details on the Port of Brunswick’s capabilities, the fourth largest autoport on the Eastern seaboard, helps illustrate the attractiveness of the South to automakers. For instance, BMW announced in June 2003 that the company would begin shipping the Z4 roadsters and X5 Sports Activity Vehicles, built exclusively at its Spartanburg, South Carolina manufacturing plant and destined for their Japan market, through the Port of Brunswick. In April 2002, Porsche Cars of North America moved its southeast distribution center to the Port of Brunswick. Today, a total of eight Ro/Ro carriers call on the Port of Brunswick’s Colonel’s Island Auto Facility and 14 automakers utilize the facility for the import or export of their automobile models. With three dedicated Ro/Ro berths, immediate rail and interstate access, terminal acreage encompassing 1,700 acres providing ample room for future growth, Colonel’s Island is strategically poised for expanding the Port’s important automotive cargo segment. An important factor that draws the auto industry to Brunswick is the naturally pristine, environmentally clean location that prevents damage or corrosion to automobile finishes fresh off the assembly line.

An integral part of BMW’s supply chain to the overseas market includes the ocean carrier, Wallenius Wilhelmsen Lines (WWL), which provides the car carrier vessels to load the product out of the Colonel’s Island Terminal at the Port of Brunswick. There also are a number of manufacturers that import their vehicles for the U.S. market through the Port of Brunswick. Once the product arrives at Colonel’s Island, Atlantic Vehicle Processors (AVP), a subsidiary of WWL, performs the minor cosmetics of auto processing to make the cars ready for dealer lots and showrooms. Hence, AVP is an important supporting link in these automakers’ supply chain leasing and maintaining 50 acres of space on Colonel’s Island. Twenty of these 50 acres are dedicated to processing for up to 3,000 vehicle units while the remaining space is reserved for the import and export of heavy farm and marine industry equipment and the transport of personal vehicles owned by U.S. military personnel. In addition to BMW, auto processing for Jaguar and Ford also are handled by AVP.
Importantly, AVP is one of three world-class auto processors in residence at the Port of Brunswick. In addition, Amports handles auto processing for Volkswagen, Porsche, Volvo and Mitsubishi, while International Auto Processing, Inc. handles auto processing for Mercedes, Hyundai, Saab, and Land Rover.

Another player active in processing vehicles at the Port of Brunswick is Waggoners Trucking Company, the motor carrier moving BMWs from the plant in South Carolina to the Port in addition to transporting Porsche, Volkswagen, Audi, Hyundai, and Mitsubishi from the Port of Brunswick to locations across the country. Waggoners Trucking has a team of almost 1,100 professional drivers and support personnel and has been in business since 1951.

SOUTH CAROLINA STATE PORTS AUTHORITY (SPA)–PORT OF CHARLESTON

The Port of Charleston is acknowledged as an invaluable resource for the state’s prominent automaker–BMW. In fact, BMW’s 1992 decision to locate its North American construction facility in South Carolina was driven by a set of fundamental assets associated with the state. Of these four assets, “accessible transportation facilities, including a deep-water port at Charleston, an airport, modern rail and road systems” were hugely important. In fact, the SPA was intimately involved in the project to secure BMW's location decision in South Carolina. The SPA acquired the property and assisted with site preparation, helping BMW set an auto-industry record for factory construction–23 months from announcement to first assembly. The SPA was later reimbursed by the state for a large portion of the expenses incurred to acquire the property and still owns the land today.

BMW’s decision to locate its plant in the state has reaped rich dividends for the Port of Charleston, a development that, in turn, has generated a range of economic benefits that ripples across the state. For instance, the fact that BMW is a major player in the Port is quickly apparent when one considers that 257,970 vehicles traveled through the Port as BMW exports vehicles to dozens of countries around the world between 1993 and 2001. In addition, BMW imports finished vehicles for regional distribution, and 213,064 vehicles transited through the Port as imports between 1993 and 2001. Then, between 1992 and 2002, the trade effects of BMW were further accentuated by the fact that $252.4 million in U.S. import fees were paid.

According to the SPA, in 2002, to support production at its Spartanburg plant, BMW imported more than 3,800 containers of parts and components through the Port. In addition, BMW’s containerized exports totaled more than 900 container loads in 2002. Alongside finished vehicle exports of the BMW X5 and Z4 automobiles, BMW imports its 3 series, 5 series, 7 series and its newest addition, the Mini Cooper, vehicles for regional and national distribution through the Port of Charleston. It is expected that in 2003, total finished vehicle shipments will exceed 120,000 cars, with nearly three dozen BMW suppliers in the state relying on the Port to source materials for production inputs. Given that approximately half of a BMW vehicle’s content is secured from overseas, a substantial volume of containerized import items are essential for both BMW and its suppliers.
Finally, BMW and related suppliers shipped more than half a billion pounds of cargo through the Port of Charleston in 2002. In this context, it is apparent that BMW’s decision to locate its facility in South Carolina was influenced by the Port of Charleston, one of the busiest, and one of the most efficient, ports in the country.

ALABAMA STATE DOCKS-PORT OF MOBILE

One of the most important–and prestigious–international automobile companies, Mercedes-Benz, operates a manufacturing plant in the South (in Vance, Alabama, specifically) and among the key considerations in this location calculation was the proximity of the Port of Mobile. Another deep-water port, with easy access to the Gulf of Mexico and beyond, the Port remains a crucial component of the Mercedes-Benz production cycle. According to the president of Mercedes-Benz in the United States, Eisenmann, the company responsible for building the new state-of-the-art paint shop associated with the $600 million expansion project at the Mercedes-Benz facility in Vance, selected the Alabama State Docks as its port of entry for all inbound equipment shipments. As a result, Eisenmann plans to ship approximately 600 containers through the Alabama State Docks between December 2002 and May 2003. The containers, inbound from Germany, will then be transported by truck to the Mercedes-Benz warehouse in Bessemer, Alabama. In addition to the ocean-going containers, the Alabama State Docks also will handle approximately 60 Lighter Aboard Ship (LAS) barge vessels for Eisenmann. Cargo on the LAS barges will consist of oversized paint system equipment that does not fit in ocean-going containers.
In a report released in 2002, the U.S. Department of Commerce’s Office of Automotive Affairs outlined the turmoil confronting the industry in recent years, even noting that “the year ahead will be filled with painful adjustments for some manufacturers,” while concluding with the more salutary expectation that “as it has been for over a century, the automobile industry will continue to function as an engine of economic wealth for the nation.” In exploring the rationale for the difficulties confronting the industry, undoubtedly, the sluggish nature of the U.S. economy remains the principal contributory factor. The 2001 recession, coupled with the September 11 terrorist attacks and the pervasive uncertainty caused by conflict in the Middle East, the potential for further terrorist attacks and several other structural issues, has prevented the economy from gathering momentum and surging ahead. Consequently, like so many other sectors, the automobile industry has been negatively affected by the dragging economy. The industry has been mired with diminished automobile sales prompting layoffs at both the manufacturing and retail ends of the industry.

A statistic in the industry that is carefully monitored and eagerly awaited each month involves new car and light truck (non-commercial) sales. Figure 12 documents these sales figures for the 1997-2002 period for the United States as a whole. The decline in 2001 capped a five-year uninterrupted growth track of progressively higher sales volumes that culminated in 2000, with 17.3 million vehicles sold, the highest sales level ever. The decline between 2002 and 2001, of 1.5 percent, followed the slightly smaller decline between 2000 and 2001 of 1.2 percent. In addition to the annual figures, more recently, in August 2003 (the latest month available in third week of October 2003), federal figures note that 11.3 million new cars and light trucks (non-commercial) were sold.

In terms of the specific breakdown of companies selling new cars and light trucks in the United States, Detroit’s Big Three (GM, Ford and Chrysler) experienced some setbacks given the downturn in the economy. In an effort to boost sales, the Big Three launched an ambitious raft of financial and other incentives in the aftermath of the September 2001 terrorist attacks and the
faltering economy. While October 2001 sales were the best ever in American automotive history, the Big Three continued to offer even more attractive incentives for months thereafter. These incentives took the form of 0% financing, i.e., interest free loans, and $2,000-$3,000 cutbacks in the price of these new vehicles as the Big Three opted to endure plunging revenues as opposed to losing sales. Yet, the Big Three can ill afford to continue hemorrhaging cash in an effort to garner more sales, and it is expected that these incentives will begin to diminish.

It is appropriate to review the Big Three’s sales figures for the most complete, recent year (2002) and October 2003. These data provide greater perspective in drawing certain conclusions about the challenges confronting the industry.

In 2002, the Chrysler Group sold 2,205,446 vehicles, compared to 2,273,208 in 2001, a decline of 3 percent. During this latest year, Jeep brand sales were 459,796 vehicles, an increase of 1 percent compared to the prior calendar year 2001. Similarly, the Dodge brand had sales of 1,264,782 units, an increase of 1 percent compared to calendar year 2001. At the end of October 2003, the Chrysler Group reported sales of 166,262 units, an 11 percent increase from October 2002.

General Motors delivered 4,858,705 new vehicles in calendar year 2002, down a modest 1 percent compared to the previous calendar year. In addition, the more than 473,000 new cars and trucks sold by GM in the month of December 2002 represented a 36 percent increase over December 2001 and was the highest since 1979. GM’s truck and SUV sales set an all-time record in 2002, with Chevrolet trucks, GMC trucks, Cadillac trucks and HUMMER sales all performing exceedingly well. In particular, GM’s HUMMER H2 is one of the best selling vehicles in the country. In October 2003, General Motors dealers sold 363,043 new cars and trucks in the United States, down 7 percent compared to a year ago.
In 2002, Ford sold 3,623,709 new cars and trucks, an 8.8 percent decline in comparison to calendar year 2001. Yet, Ford’s December 2002 sales’ record was impressive and represented an 8.2 percent expansion over December 2001 levels. Once again, in 2002, Ford’s best selling truck, the Ford F Series, was America’s best selling vehicle for the 21st year in a row with sales exceeding 800,000 vehicles for the fifth consecutive year. U.S. customers purchased or leased 282,468 cars and trucks from the Ford group (Ford, Mercury, Lincoln, Jaguar, Volvo, and Land Rover) in October 2003, down 2 percent compared with a year ago.

While the Big Three continue to see their profit margins erode, given dwindling sales and the increasing cost of incentives offered to consumers, several foreign automakers face a more encouraging scenario. For instance, boosted by strong sales in North America, Japanese automaker Honda Motor Corporation reported that its profits rose 9.4 percent in its fourth fiscal quarter, closing the fiscal year with record earnings for the second straight year. Then, in late September 2002, Hyundai Motor America, on a sharp rebound since dealing with a quality problem with its cars, announced that it intends to sell 1 million vehicles a year in the United States by the end of the decade, a tripling of its current pace. In early August 2003, the South Korean automaker announced that on the strength of cars and trucks sold in the United States, its second quarter earnings in 2003 soared to $483 million, an 86 percent jump from the same period the previous year. Similarly, for the same period in 2003 (second quarter), Toyota’s earnings reached $1.9 billion, while Honda reported $850 million, all levels that dwarfed those of Detroit’s automakers. Another foreign automaker, Nissan, under the helm of chief executive officer Carlos Ghosn since 1999, announced in April 2003 that it had wiped out all its debt (some $19 billion in 1999) alongside posting a 33 percent increase in profit in 2002. Based on these 2002 figures, Nissan achieved another one of its goals, reaching an operating profit level of at least 8 percent (Nissan secured an auto industry-leading 10.8 percent in 2002) and is working on selling at least 1 million new vehicles in the United States by the end of 2004.

Notwithstanding the continued dominance of the Big Three in America’s new vehicle sales, several major challenges loom ahead. On the one hand, as expressed in figure 13, there is a decline in the number of new vehicles sold and on the other hand, the Big Three face increasing competition from the growing number of foreign automobile manufacturers that continue to both import a greater number of cars into the United States and also manufacture their vehicles at U.S.-based assembly plants. As demonstrated earlier, there has been a steady slippage in Detroit’s share of the domestic automobile market: in 1996 the percentage breakdown was 73 percent Detroit and 27 percent foreign; by 2002, this proportion had shifted radically to 61 percent Detroit and 39 percent foreign. Figure 13 provides this breakdown between 1997 and 2002.
As indicated in figure 13, Detroit’s share of new car and non-commercial light truck sales declined from 71 percent of the total number in 1997 to 61 percent in 2002. In contrast, the sale of Japanese, German and Korean vehicles, the three major foreign vehicles sold in the United States, all increased with the Japanese share expanding from 24 percent to 28 percent; the German share increasing from 3 percent to 5 percent; and, finally, the Korean share growing from 1 percent to 4 percent. Hence, dealing with this foreign competition will remain a serious challenge to Detroit’s Big Three automakers in the coming years. In fact, as noted by *The Economist*, “[I]ncreasingly, Toyota Camrys, Honda Accords and Volkswagen Jettas rule the roads. California and other Pacific coastal states have long preferred foreign brands (albeit now mostly manufactured in America). Now, New England, New Jersey and Florida are going the same way.”

In addition, projections from experts in the industry indicate that auto sales will decline in 2003, to between 15.9 million and 16.2 million from the 16.8 million reached in 2002. Hence, the expected decline in auto sales will increase the intensity of competition among all automakers to sell new vehicles, an additional pressure point for Detroit’s Big Three alongside the long-term trend of a diminishing share of the total market. Hence, analysts stress that automakers will have to add new features to their vehicles and collaborate more with suppliers to control costs if they seek to boost their profit margins. In this realm, analysts maintain that customers will have to be induced into buying a new vehicle with features that were not included in the previous year’s model, a completely revamped model and crossover vehicles such as SUV features on a car frame.

As noted, the sluggish economy has resulted in a range of incentives, financial and otherwise, offered by Detroit’s automakers to lure consumers to purchase new vehicles. Yet, while these incentive packages helped stave off even more significant sales declines, the Big Three have seen drooping sales and probably will see even more declines for the rest of 2003. Inevitably, the flood of financial and other incentives offered by the Big Three will consume an increasing portion of their already diminishing profit levels. In terms of the slate of incentives offered recently, analysis from the Detroit-based CoMerica Bank indicates that it took 19.9 weeks of median family income to buy the average new vehicle in November 2002, a week less than the start of the year.
and the lowest since 1978.27 Table 13 provides more insights into the deals offered by the Big Three to entice would-be car and truck buyers to purchase their vehicles.

### Table 13: Automobile Incentives and Monthly Selling Rates (Annualized)

<table>
<thead>
<tr>
<th>Month</th>
<th>2003 Incentive Value</th>
<th>2003 Monthly Selling Rate (Seasonally Adjusted in Millions)</th>
<th>2002 Incentive Value</th>
<th>2002 Monthly Selling Rate (Seasonally Adjusted in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>$4,428</td>
<td>16.2 million</td>
<td>$3,982</td>
<td>16.7 million</td>
</tr>
<tr>
<td>April</td>
<td>$4,733</td>
<td>16.5 million</td>
<td>$4,019</td>
<td>17.3 million</td>
</tr>
<tr>
<td>May</td>
<td>$4,400</td>
<td>15.8 million</td>
<td>$3,681</td>
<td>16.0 million</td>
</tr>
</tbody>
</table>


As indicated, there has been a steady increase in the amount of incentives offered by automakers in their quest to protect sales from falling to intolerably unprofitable levels. As a quick comparison, in March 2002, incentives averaged $3,982; a year later in March 2003, they increased to $4,428. Similarly, in May 2002, they averaged $3,681, while they expanded to $4,400 by May 2003. Over the long term, the Big Three are averaging almost $3,000 per vehicle in incentive costs, compared with $1,861 in 2000. Asian automakers, in contrast, offered incentives worth $1,045 on average last year, while European automakers offered an average of $1,627 in incentives.28 In fact, incentive costs are soaring, especially for the Big Three, in a weakening market overflowing with historic numbers of unsold cars and trucks.

It should be noted that the impressive inroads into the U.S. automobile market made by foreign automakers have largely occurred devoid of the costly incentives extended by U.S. automakers, a trend that does not bode well for the Big Three. In sum, not only have these foreign automakers seen their share of the overall U.S. market increase, they have been able to capture this greater market share without sacrificing a greater portion of their profit margins.

The following table presents data on the profitability and productivity of automakers in 2002 over the prior year. While there have been some improvements among the Big Three, they still lag the foreign automakers in the country on these measures.
While this report revealed encouraging news for American automakers, the lethal combination of slimmer market share in a shrinking market and rising incentive costs continued to widen the gap between domestic automakers and Japan. Yet, General Motors continued to make impressive strides toward bridging the productivity gap with Japanese automakers. Furthermore, the Chrysler Group of DaimlerChrysler, “the least productive of the six largest automakers in North America, had the industry’s best year-over-year improvement in 2002.”

In terms of profitability, figure 14 demonstrates the difficulties faced by two of the Big Three in comparison to two Japanese automakers for the past four years (1999 through 2002).

A decline in auto sales not only hurts automakers, it negatively affects auto suppliers too. Hence, auto suppliers like Delphi (the world’s largest auto supplier with $27 billion in revenue in 2002, and ranking 67th in the most recent Fortune 500 listing), American Axle and Manufacturing Holdings (which depends on General Motors for most of its business), Visteon (a major parts supplier to Ford), Metaldyne Corporation (the consolidation of the former MascoTech, Simpson Industries and Global Metal Technologies), Lear Corporation, Johnson Controls, and Collins & Aikman all have experienced the downside of dwindling auto sales. Interestingly, Lear Corporation and Johnson Controls, sizable suppliers of dashboards, seats and other parts of car interiors, have been shielded from the recent sales drops to an extent because they perform much of their work for Asian and European automakers. In the context of auto manufacturers promptly looking to parts suppliers for cost reductions–70 percent of a vehicle’s cost comes from pieces supplied by outside manufacturers–the pressure on these auto parts suppliers will be substantial in the coming months.
THE AUTOMOBILE INDUSTRY IN THE SOUTHERN LEGISLATIVE CONFERENCE STATES

As emphasized throughout the preceding sections of the report, the automobile industry and its related operations play a substantial role in the economic affairs of the region. Based on 2002 figures, on average, almost 5 percent (4.9 percent to be precise) of the workforce in all the SLC states is involved in some aspect of the automobile industry. This ranges from a high of 10.5 percent in Kentucky, to a low of 2.6 percent in Florida. In terms of automobile industry-dependent employment, the numbers also are impressive, with Texas leading the SLC states (318,900), followed by Tennessee (229,000) and Missouri (221,200). Even in terms of wages generated by the automobile industry, Texas accounts for the largest amount among the SLC states ($11.5 billion), along with Florida’s $8.7 billion and Tennessee’s $8 billion, respectively.

The following section features the specific role played by the automobile industry in the 16 SLC states. The information presented in these state-specific pages was obtained from the different economic development agencies in the SLC states and a number of additional sources.
The Automobile Industry in Alabama

Overview

In less than a decade, Alabama has propelled itself to the top rung of automobile manufacturing states in the South. For a state that did not produce its first vehicle until 1996, Alabama’s record in attracting such prestigious automakers as Mercedes, Honda and Hyundai to establish major manufacturing operations remains noteworthy. Alabama currently ranks as the sixth-largest producer of automobiles in the South, but is expected to vault to the third spot by 2005, with a production level of 760,000 vehicles annually, an impressive achievement indeed.

According to a survey released in May 2003 by the Alabama Automotive Manufacturers Association, the state’s rapidly expanding automobile industry already accounts for 30,180 direct jobs and a $1.4 billion annual payroll. In surveying Alabama’s automobile industry, the study collated information from 162 companies “that produced raw materials, or manufactured or assembled parts, sub-assemblies, components or modules that end up in or on motor vehicles, as well as the assembly of the vehicles themselves.” In addition, the report included operations in Alabama “that manufactured floor equipment, tooling and fixturing and customized packaging used in automotive manufacturing.” Of the 162 companies that responded to the survey, there were six vehicle assembly plants in 2002 (compared to five in 2001), with remaining companies supplying parts and components to the assembly plants. While many of these supply companies are new to the state (60 of the 162 companies began their Alabama operations after 1995), a majority of them employ 100 or fewer employees (95 companies).

Automotive Operations in Alabama’s Four Major Regions

<table>
<thead>
<tr>
<th>Region of State</th>
<th>Floor Space (in Millions of Sq. Ft.)</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2001</td>
<td>2002</td>
</tr>
<tr>
<td>Region 1 (Huntsville, etc.)</td>
<td>13.8</td>
<td>16.4</td>
</tr>
<tr>
<td>Region 2 (Birmingham, etc.)</td>
<td>8.0</td>
<td>9.7</td>
</tr>
<tr>
<td>Region 3 (Montgomery, etc.)</td>
<td>3.1</td>
<td>5.5</td>
</tr>
<tr>
<td>Region 4 (Mobile, etc.)</td>
<td>2.4</td>
<td>3.7</td>
</tr>
<tr>
<td>Total</td>
<td>27.3</td>
<td>35.4</td>
</tr>
</tbody>
</table>

Source: Alabama Automotive Manufacturers Association, May 2003
Note: Floor space includes plants under construction.

State Facts

- Percent of Total Workforce: 5
- Direct Employment: 19,500
- Auto-Related Employment: 33,800
- Auto-Dependent Employment: 96,200
- Wages: $3 Billion
- New Vehicle Dealerships: 355
- Dealership Annual Sales: $8.9 Billion
- Production Facilities: 3
- Vehicles Produced: 79,946
- New Registrations: 227,020
- Registered Vehicles: 3,960,149
- Publicly-Owned Vehicles: 48,755
- Licensed Drivers: 3,522,000
- Total Miles Driven: 56.6 Billion

Source: 2002 Ward’s Motor Vehicle Facts & Figures
The growth pattern of Alabama’s automobile industry in the last two years is clearly apparent in table 15, which demonstrates this trend in terms of number of employees and in terms of floor space.

As presented in table 15, there has been significant growth between 2001 and 2002 in both floor space occupied by the industry and the number of employees. Specifically, total floor space occupied by the industry expanded by more than 29 percent (from 27.3 million square feet to 35.4 million square feet), while there was a 12.1 percent growth in the number of employees working in Alabama’s automobile industry. The increase from 26,924 to 30,180 employees is a notable achievement given that the nation was recovering (as it still is) from the throes of the recession that swept across the land in 2001. In terms of the specific regions of the state, Region 2 experienced a 17.3 percent expansion in employment numbers between the two review periods, a direct impact of the expansion efforts underway at the Mercedes-Benz and Honda plants in the vicinity. Similarly, Region 3’s floor space expansion was related to the announcement of the new Hyundai plant and supplier plants in the Montgomery area. Interestingly, Region 4, the state’s southernmost portion, has experienced some positive ripple effects of the Hyundai plant with the establishment of a number of supply operations.

**Capital Investments by Major Assembly Plants**

According to the Alabama Development Office (ADO), three major automobile manufacturers have significant capital investments directed at assembly operations (Mercedes-Benz, Honda, and Hyundai) in the state. In addition, three other manufacturers (Toyota, International Truck and Engine Corp., and DaimlerChrysler Corp.) have made substantial capital investments toward non-vehicle assembly operations in the state. A crucial point in assessing these sizable capital investments is that as a result of their investment decisions, a number of automotive parts suppliers have invested in the state. These twin capital investment categories have resulted in boosting the state’s economic output and potential significantly. The direct, indirect and induced economic benefits flowing from the activities of the manufacturers and suppliers remain an important reason for the state’s economic performance. The information provided on the following pages provides a breakdown of the capital investment by automobile manufacturer.

**Hyundai Motor Manufacturing of Alabama, LLC.**

<table>
<thead>
<tr>
<th>Company Name: Hyundai (in Montgomery)</th>
<th>Amount (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>» Announced New in 2002</td>
<td>$1,000.0</td>
</tr>
</tbody>
</table>

**Total Capital Investment - Automobile Manufacturer**

$1,000.0

**Suppliers (New and Expansion Announcement)**

<table>
<thead>
<tr>
<th>Supplier Name:</th>
<th>Amount (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>» Mobis Alabama (Chassis and dashboard instrument panels; new in 2002)</td>
<td>$30.0</td>
</tr>
<tr>
<td>» Shin Young Metal Industries (Frames and stamped parts; new 2003)</td>
<td>$110.0</td>
</tr>
<tr>
<td>» Halla Climate Control (Front-end module systems', HVAC assemblies; new in 2003)</td>
<td>N/A</td>
</tr>
<tr>
<td>» HS R &amp; A Co., Ltd. (Weather stripping, tubing, hoses; new in 2003)</td>
<td>$20.0</td>
</tr>
</tbody>
</table>

**Total Capital Investment - Automobile Suppliers**

$160.0

Source: Alabama Development Office, March 2003
**Mercedes-Benz US International Inc.**

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>Amount (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mercedes (in Vance)</strong></td>
<td></td>
</tr>
<tr>
<td>» Announced New in 1993</td>
<td>$520.0</td>
</tr>
<tr>
<td>» Announced Expansion in 1998</td>
<td>$40.0</td>
</tr>
<tr>
<td>» Announced Expansion in 2000</td>
<td>$600.0</td>
</tr>
<tr>
<td><strong>Total Capital Investment - Automobile Manufacturer</strong></td>
<td><strong>$1,160.0</strong></td>
</tr>
</tbody>
</table>

**Suppliers (New and Expansion Announcements)**

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>Amount (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Technologies (Windshields; new in 2000)</td>
<td>$10.0</td>
</tr>
<tr>
<td>ARKAY Plastics (Plastic injection refuse systems; auto panels; new in 1995)</td>
<td>$12.9</td>
</tr>
<tr>
<td>Benteler Automotive Corp. (Chassis systems; new in 2002)</td>
<td>$20.0</td>
</tr>
<tr>
<td>Borgers USA (Rear compartment interior trim; new in 2002)</td>
<td>$5.0</td>
</tr>
<tr>
<td>Carlisle Engineered Products (Injection molded auto parts; expansion in 2002)</td>
<td>$4.1</td>
</tr>
<tr>
<td>Delphi Packard Automotive (Wiring assemblies; instrument panels; consoles; new in 1994)</td>
<td>$6.0</td>
</tr>
<tr>
<td>Goodyear Dunlop Tires (Tires; new in 1969; expansion in 1993)</td>
<td>$8.0</td>
</tr>
<tr>
<td>Hopkins Assembly and Packaging (Sub-assembly and packaging; new in 2000)</td>
<td>$2.4</td>
</tr>
<tr>
<td>ISE Innomotive Systems (Bumpers and crash boxes; new in 2002)</td>
<td>$17.7</td>
</tr>
<tr>
<td>Johnson Controls (Seat assembly; new in 1995)</td>
<td>$42.5</td>
</tr>
<tr>
<td>Marubeni Metal Blanking (Stampings; new in 2002)</td>
<td>$11.5</td>
</tr>
<tr>
<td>Ogihara Alabama (Body stamping; new in 1995)</td>
<td>$132.0</td>
</tr>
<tr>
<td>Oris Automotive Parts (Parts and accessories; new in 1996)</td>
<td>$11.0</td>
</tr>
<tr>
<td>Oxford Automotive (Stampings; new in 2002)</td>
<td>$200.0</td>
</tr>
<tr>
<td>Recticel (Material for auto interiors; new in 2002)</td>
<td>$24.0</td>
</tr>
<tr>
<td>Rehau (Exterior moldings; parts and accessories; new in 1994)</td>
<td>$66.6</td>
</tr>
<tr>
<td>Tire and Wheel Assembly (Tire and wheel assembly; new in 2001)</td>
<td>$10.0</td>
</tr>
<tr>
<td>ZF Industries (Axle systems; new in 1994)</td>
<td>$40.5</td>
</tr>
<tr>
<td><strong>Total Capital Investment - Automobile Suppliers</strong></td>
<td><strong>$624.2</strong></td>
</tr>
</tbody>
</table>

Source: Alabama Development Office, March 2003

**Manufacturers Not Assembling Vehicles**

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>Amount (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toyota (in Huntsville)</strong></td>
<td></td>
</tr>
<tr>
<td>» Engines for Toyota Trucks; new in 2001</td>
<td>$220.0</td>
</tr>
<tr>
<td><strong>International Truck and Engine Corp. (formerly NaviStar International)</strong></td>
<td></td>
</tr>
<tr>
<td>» Manufactures diesel truck engines; new in 1999</td>
<td>$350.0</td>
</tr>
<tr>
<td><strong>DaimlerChrysler Corp.</strong></td>
<td></td>
</tr>
<tr>
<td>» Electronic instruments for DaimlerChrysler vehicles</td>
<td></td>
</tr>
<tr>
<td>» New in 1986</td>
<td>N/A</td>
</tr>
<tr>
<td>» Expansion in 1997</td>
<td>$31.4</td>
</tr>
<tr>
<td>» Expansion in 1999</td>
<td>$2.3</td>
</tr>
<tr>
<td><strong>Total Capital Investment - Major Automobile Suppliers</strong></td>
<td><strong>$603.7</strong></td>
</tr>
</tbody>
</table>

Source: Alabama Development Office, March 2003
Economic Incentives Offered by Alabama

Like practically every other state, Alabama competes vigorously to retain and attract new businesses. Toward this end, the state offers a range of incentives that run the gamut from infrastructure improvements (water and sewer improvements; road improvements; electrical; natural gas; telecommunications) to work force training to site purchase and development, to tax abatements (sales, corporate and property), and to corporate tax credits. The specific incentive package is most often a combination of state, local and private funds coalescing to retain/attract the business concerned and generate economic activity to enhance the potential of the region and the state at large. Given the tremendous, positive economic effects of automobile manufacturers setting up operations in the state, the public-financed incentive packages, often extending into the tens of millions and reported extensively in the media, are generally associated with these automakers.

In Alabama, the auto manufacturers Hyundai, Mercedes-Benz, Honda and Toyota have garnered the most attention in terms of state-directed incentive packages. (For a description of the major statutes dealing with economic incentives offered to companies operating in the state, as enumerated by the Alabama Development Office, see Appendix A.) According to the Alabama Development Office, the extent of the incentive packages offered to these four major auto manufacturers by the state of Alabama during the last decade are listed in table 16. As detailed in table 16, Hyundai’s incentive package totaled $252.8 million; Mercedes-Benz’s incentive package totaled $253.3 million initially and increased by $119.3 million for the expansion; Honda’s incentive package totaled $158.4 million; and Toyota’s incentive package (not an assembly plant) totaled $29.9 million. While these incentive packages comprised a range of funding sources (federal, state, local and private), they often involved multi-year commitments and were disbursed over a period

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### Honda Manufacturing of Alabama LLC

<table>
<thead>
<tr>
<th>Company Name: Honda (in Lincoln)</th>
<th>Amount (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Announced New in 1999</td>
<td>$400.0</td>
</tr>
<tr>
<td>Announced Expansion 2000</td>
<td>$40.0</td>
</tr>
<tr>
<td>Announced Expansion 2001</td>
<td>$140.0</td>
</tr>
<tr>
<td>Announced Expansion 2002</td>
<td>$425.0</td>
</tr>
<tr>
<td><strong>Total Capital Investment - Automobile Manufacturer</strong></td>
<td><strong>$1,005.0</strong></td>
</tr>
</tbody>
</table>

### Suppliers (New and Expansion Announcement)

- TS Tech (Seats; new in 2000) 
  - Amount: $9.0
- Rainsille Technology (Injected plastic parts; new in 2000) 
  - Amount: $10.0
- KTH Parts Industries (Metal frame components; new in 2000) 
  - Amount: $106.0
- Kumi Manufacturing (Injected plastic trim parts; new in 2000) 
  - Amount: $10.0
- Yachiyo Manufacturing (Welded and sub-assembled parts; new in 2000) 
  - Amount: $6.4
- AIT (Parts and accessories; expansion in 2002) 
  - Amount: $0.9
- AP Technoglass (Windshields; new in 2000) 
  - Amount: $10.0
- Tire and Wheel Assembly (Tire and wheel assembly; new to Birmingham in 2001) 
  - Amount: $10.0
- Assurance Packaging (Window glass; new in 2001) 
  - Amount: $2.2
- Precision Strip (Primary metals products; new in 2001) 
  - Amount: $12.0
- HiSan Inc. (Fluid handling systems products) 
  - Amount: $2.3
- Hunjan Moulded Products (Plastic injection molding; new in 2001) 
  - Amount: $2.0
- Topre America (Metal stamping; new in 2002) 
  - Amount: $100.0
| **Total Capital Investment - Automobile Suppliers** | **$280.7** |

Source: Alabama Development Office, March 2003
of several years. It should also be noted that the state has extended some incentives to automobile parts suppliers as well; the rationale for assisting these suppliers was to maximize the benefits to the state economy from the backward and forward linkages generated from the investment decisions of the automobile manufacturer.59

<table>
<thead>
<tr>
<th>Extent of Incentive Packages Provided by Alabama</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automaker</td>
</tr>
<tr>
<td>Hyundai (2002)*</td>
</tr>
<tr>
<td>Total Public Incentives</td>
</tr>
<tr>
<td>Total Private Incentives</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>$234.6 million</td>
</tr>
<tr>
<td>$18.2 million</td>
</tr>
<tr>
<td>$252.8 million</td>
</tr>
<tr>
<td>Mercedes-Benz (Initial-1993)</td>
</tr>
<tr>
<td>Infrastructure Incentives</td>
</tr>
<tr>
<td>Site Development</td>
</tr>
<tr>
<td>Education and Personnel Training</td>
</tr>
<tr>
<td>Statutory Incentives</td>
</tr>
<tr>
<td>Private Sector Commitment</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>$77.5 million</td>
</tr>
<tr>
<td>$92.1 million</td>
</tr>
<tr>
<td>$60.0 million</td>
</tr>
<tr>
<td>$8.7 million</td>
</tr>
<tr>
<td>$15 million</td>
</tr>
<tr>
<td>$253.3 million</td>
</tr>
<tr>
<td>Mercedes-Benz (Expansion-2000)</td>
</tr>
<tr>
<td>Site Development</td>
</tr>
<tr>
<td>Environmental Permitting</td>
</tr>
<tr>
<td>Access Roads</td>
</tr>
<tr>
<td>Training Facility/Equipment</td>
</tr>
<tr>
<td>Training Program</td>
</tr>
<tr>
<td>Foreign Trade Zone</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>$14.4 million</td>
</tr>
<tr>
<td>$230,000</td>
</tr>
<tr>
<td>$10 million</td>
</tr>
<tr>
<td>$2.5 million</td>
</tr>
<tr>
<td>$37.5 million</td>
</tr>
<tr>
<td>$250,000</td>
</tr>
<tr>
<td>$54.4 million</td>
</tr>
<tr>
<td>$119.3 million</td>
</tr>
<tr>
<td>Honda (2000)</td>
</tr>
<tr>
<td>Economic Improvements (including training, site development, access roads, site purchase etc.)</td>
</tr>
<tr>
<td>Tax abatements (including ad valorem, corporate, sales and use taxes)</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>$102.7 million</td>
</tr>
<tr>
<td>$55.6 million</td>
</tr>
<tr>
<td>$158.4 million</td>
</tr>
<tr>
<td>Toyota (2001)</td>
</tr>
<tr>
<td>Economic Improvements (including job training, site preparation, water/sewer service etc.)</td>
</tr>
<tr>
<td>Tax abatements (including ad valorem, corporate, sales and use taxes)</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>$14.9 million</td>
</tr>
<tr>
<td>$15.0 million</td>
</tr>
<tr>
<td>$29.9 million</td>
</tr>
</tbody>
</table>

Source: Alabama Development Office, March 2003

* As indicated, $234.6 million of the $252.8 million 2002 Hyundai package comprised public funds. Of this $234.6 million, $157.9 million involved economic incentives, and the remaining $76.7 million involved tax incentives.

Economic Impact of Alabama's Automobile Industry

The decision by the state of Alabama to pursue and then convince Mercedes-Benz to establish an assembly plant in Vance (near Tuscaloosa) a decade ago was the pivotal factor in the state’s progression to one of the nation’s top automobile centers. As a result of the Mercedes-Benz plant, a number of other automobile manufacturers set up operations in Alabama, a fact that has resulted in significant economic benefits to the state. In terms of intangible benefits, the prestige of Mercedes-Benz selecting Alabama to locate its manufacturing facility for the M-Class vehicles was a tremendous boost in attracting both other automakers and businesses. At a macro level, the contribution of the automobile industry to the economic vitality of the state has been monumental. For instance, during the past four years, almost one half of the announced investment in the state and almost one third of the announced jobs were automotive-related, according to the Alabama Development Office.80
As the ADO notes, in 1998, automotive investment in the state totaled $118 million, only 5.8 percent of the total investment in the state.\textsuperscript{81} By 1999, the industry’s investment leapt to 31.7 percent and by 2002, the percentage increased to 60.9 percent of the state’s total investment, with a total of $2.134 billion. Even in terms of employment levels, the expansion level has been staggering. From 884 jobs in 1998 (4.8 percent of total jobs) to 7,824 in 2002 (43.7 percent of total jobs), the industry’s economic impact remains extensive. It is important to note that the 1998 through 2002 statistics cited do not include the original 1993 Mercedes-Benz announcement figures and the numerous automotive suppliers that began operations in the state between 1993 and 1998. Furthermore, in 2003, a number of suppliers decided on setting up operations in Alabama and the investment and employee statistics are not included in the figures cited here. For instance, five major suppliers to the Hyundai and Honda plants, representing a $241 million investment and 1,550 jobs, announced their plans to begin operations in Alabama, a development that would further boost the industry’s impact in the state.

\textbf{Mercedes-Benz}

Mercedes-Benz USA locating an assembly in Vance, Alabama, was the catalyst for a number of additional automakers and auto parts suppliers setting up operations in the state, a trend that has resulted in a series of very positive economic benefits. In fact, the Mercedes decision in 1993 not only “represents one of the largest international economic development projects in Alabama’s history,”\textsuperscript{82} the $253 million incentive package used to lure Mercedes to the state “. . . still has not been matched by anyone, not even us [Alabama].”\textsuperscript{83} Yet, the decisions that led to the Mercedes plant in Vance have been hailed variously as “helping put Alabama on the map,” “the project that opened the door for the auto industry in the state,” and “a model for other foreign automakers flirting with locating new plants in the Deep South.”\textsuperscript{84}

In 1999, Auburn University completed an economic impact study of the Mercedes plant on the state. According to this report:

\begin{itemize}
  \item Total value-added at the Mercedes facility and at Tier 1 suppliers to the Mercedes facility is estimated at $363.5 million ($244 million + $119.5 million).
  \item The economic impact of that value-added amount is estimated to be $803 million.
  \item In addition to the $244 million, it is estimated that Mercedes spends $1.09 billion to purchase parts, supplies and other services from Alabama companies. Hence, this yields a total production value of approximately $1.3 billion.
  \item In terms of jobs created by the plant, the study estimates that 3,693 project-specific jobs and an additional 6,080 indirect jobs will be created in the state. Thus, the total jobs produced in the state is estimated to be 9,773.
  \item Total employee earnings at the Mercedes plant and Tier 1 supply facilities is estimated to be $354.5 million ($174.1 million direct and $180.4 million indirect).
  \item Housing demand in the state (in units) is estimated to be 2,073, while retail sales and business activity generated in the state is estimated at $111.9 million.
  \item State government revenue is estimated at $9.6 million in individual income taxes, $4.5 million in sales taxes and $66,723 in residential property taxes.
  \item Finally, local educational property and sales taxes were estimated to bring in $1 million.
\end{itemize}
More recent reports amplify these initial assessments, particularly in the context of the $600 million expansion—that would add 2,000 new workers—announced in August 2000. Since 1997—the year it started building cars in Vance—Mercedes has only added jobs. According to original estimates, the plant was supposed to have 1,500 employees and produce 60,000 to 65,000 cars a year; today, however, the plant produces 80,000 M-Class vehicles a year and employs nearly 2,000 workers. In fact, production has risen with demand for the vehicle and inched up last year when the company consolidated all M-Class production from Germany to Vance. The previously mentioned $600 million expansion of the facility, under way now and expected to be completed by early 2004, will add another 2,000 jobs. The expansion will involve a new assembly line for the Mercedes Grand Sport Tourer, a station wagon/SUV, debuting in 2005. In terms of worker benefits, employees start at $18 per hour; last year, they received bonuses, and between 700 and 800 employees take advantage of the very attractive auto-leasing program offered by the company. This positive scenario has resulted in 26,000 applications on file for the 2,000 new jobs being created at the plant with the expansion.

» Honda

Honda’s performance in the North American market has been stellar for decades, and its 1999 decision to locate a manufacturing plant in Lincoln, Alabama, has been a boon for both the auto manufacturer and the state. The plant, which manufactures the Honda Odyssey minivan, has proven to be extremely successful, a development confirmed by Honda’s decision to invest an additional $425 million to expand its Lincoln facility. The record demand for this best selling minivan enabled the facility to launch second and third shift operations in April 2002, and also produce its 100,000th Odyssey minivan in late 2002. The technological and infrastructure capabilities of the plant are so advanced that the Lincoln facility has the ability to produce both engines and vehicles under one roof, the only Honda plant in North America with this capacity. Currently, the facility concentrates on the production of the Odyssey minivans and 3.5 liter V-6 engines.

In April 1999, Auburn University’s Center for Government and Public Affairs released a report entitled “Economic Impact Study: Lincoln Motor Vehicle Assembly Plant.” According to this report, the following economic impacts are expected from the Lincoln plant:

» Direct jobs at the plant were expected to total 2,000 with an additional 4,876 indirect jobs generated across the state. The total employment impact of the facility was estimated to reach 6,876. A majority of these jobs were located in Calhoun and Talladega counties. (It should be noted that subsequent to publication of the 1999 study, the number of direct jobs at the facility increased by 300 to 2,300.)

» In terms of payroll earnings, total employee earnings at the plant were estimated to reach $86.2 million with an additional $176.6 million being generated across the state as a result of indirect jobs. Average earnings—statewide—were estimated to be $43,109, a ratio that was 159 percent of average earnings in the state.

» Total value-added production at the facility was estimated to number $396.4 million, while the statewide output impact, i.e., total market value of all goods and services—direct and indirect—produced at the facility, was estimated to be $865.3 million. In terms of housing demand as a result of the project, the statewide demand was estimated to stand at 1,025 units, a value of $213.1 million.

» Business activity generated as a result of the project was deemed to yield $68.3 million in additional retail sales across the state.
Additional tax revenue generated as a result of the project remained substantial, with $4.5 million in individual income taxes, $2.7 million in sales taxes and $35,342 in residential property taxes estimated per year.

As noted at the outset of this Honda section, strong sales of the Odyssey minivan line in the past few years led to the automaker’s decision to invest another $425 million in its Lincoln plant, a move designed to add another 2,000 direct jobs. While this would boost total employment at the facility to 4,300 jobs, the construction of the second assembly line will double production capacity to 300,000. Based on this additional investment, a chain reaction of positive indirect economic impacts safely can be factored into the state’s economy alongside the numerous direct impacts.

Hyundai

When Hyundai Motor Corporation selected Alabama to locate its first North American manufacturing facility, it became the fourth foreign automaker to set up a major facility in the state. Hyundai’s April 2002 decision eliminated Kentucky, Ohio, Michigan and Mississippi from consideration, further boosting the state’s record as a luminary in the U.S. automobile manufacturing industry arena. Ten years ago, Hyundai did not have a reputation for producing quality autos, but the company has changed this perception by reducing defects and offering 10-year warranties, a scenario that enabled Hyundai to achieve three consecutive years of record growth in the United States. Consequently, Hyundai surpassed both Mitsubishi Motor Corp. and Mazda Motor Corp. to rank eighth in U.S. sales in 2001.

Hyundai has also made a concerted effort to enhance its U.S. market presence and chose the strategy of a U.S. assembly plant as integral to this goal. Based on this strategy, in April 2002, Hyundai broke ground on its $1 billion assembly plant near Montgomery, Alabama, and expects to commence operations in 2005. While the plant is scheduled to employ as many as 2,000 people, it will have the capacity to build 300,000 vehicles a year. The plant will build the Sonata sedan and Santa Fe SUVs.

In terms of total incentives, Hyundai will receive a bounty of $252.8 million in a mixture of incentives, tax breaks and other perks to construct its assembly plant. State and local governments will pick up the tab on about 92 percent of this bill ($234.6 million to be exact), while the private sector will pay the remaining 8 percent (about $18.2 million). Government costs will include training the expected workforce of 2,000 and preparing the 1,600 acre site for the assembly plant. The incentives work out to $117,317 per direct job compared to $168,666 per job for the Mercedes plant in 1993. However, it should be noted that this breakdown does not include the myriad indirect jobs created as a result of the Hyundai plant. Some of the major components of the incentive package offered by Alabama include the following:
In October 2000, Toyota Motor Corporation visited a site in Huntsville to determine its suitability for the construction of V-8 engines for its acclaimed Tundra Trucks. Two other localities (Clarksville, Tennessee, and Buffalo, West Virginia) also were in the running for this project which was eventually awarded to Alabama. In particular, Toyota selected 200 acres in North Huntsville Industrial Park (with an additional 229 acres under option), with the announcement being made in February 2001. In order to secure this project, state and local government officials pulled together an incentive package totaling $29.9 million that included $14.9 million in economic improvements and $15 million in tax abatements. In turn, Toyota’s capital investment was estimated to be approximately $220 million.

Even though the Toyota operation in Alabama is not a complete assembly operation (unlike the Mercedes, Honda and Hyundai operations), the fact that one of the premier automobile manufacturing operations in the world decided to locate an engine production facility plant in the state remains noteworthy.

According to an Auburn University study released at the time of the project’s announcement, Alabama should recoup its $29 million investment by 2005. The aforementioned $220 million plant with 350 employees will maintain a payroll of $29.8 million, averaging $85,000 per employee in salaries and benefits, and is expected to be operational by 2003. While indirect jobs are expected to total 997, wages from indirect employment are expected to bring in about $30 million. In addition, workers in supporting industries are expected to earn an average of $45,000 a year. Also, 51 percent of the total employment associated with Toyota is estimated to be in manufacturing, a further indication that a majority of the jobs would be in the highly skilled category. Furthermore, the study estimates that by 2025, the project will generate more than 1,300 jobs and $197 million in state tax revenues.

Further evidence of the positive impact of this plant on the Alabama economy involved the July 2003 expansion announcement by Toyota. Specifically, Toyota announced a $20 million expansion of its Huntsville engine plant, a mere two months after the first engine rolled off the production line, that would add 150 employees, bringing the plant’s total employment to 500. While the first Toyota V-8 engine produced outside Japan was completed at this Huntsville plant in May 2003, the expansion will hike production levels to 130,000 V-6 engines annually for the automaker’s Tacoma and Tundra pickups, along with 120,000 V-8 engines for a total of 250,000 engines per year.

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**Incentive Type** | **Amount**
--- | ---
• Training (State) | $54.8 million
• Site Purchase and Development (State and Local) | $34.0 million
• Corporate Income Tax Credit (State) | $29.0 million
• Road Improvements (State and Local) | $29.0 million
• Property Tax Abatement (State and Local) | $26.9 million
• Water and Sewer Improvement (Local) | $21.0 million
• Sales Tax Abatement (State and Local) | $18.6 million
• Advertising (Retirement System of Alabama) | $10.0 million
• Rail Expansion (Private) | $8.0 million
• Training Facility (State) | $7.0 million
• Electrical Improvements (Private) | $6.0 million
• Other (mostly State and Local) | $8.5 million

**Total Incentives (Public and Private)** | **$252.8 million**

Parts Suppliers

Alongside the significant economic impacts of the automobile assembly plants, considerable economic impacts flow from the myriad auto parts suppliers that flock to the state. As noted earlier, the state often provides a range of incentives to these suppliers in order that they may be enticed to either locate or expand their activities in Alabama. The economic activities of these auto suppliers provide a significant boost to the local and state economies.

In response to the proposed Hyundai plant south of Montgomery, by April 2003, nine suppliers had announced their intentions to locate near the plant. Towns in such counties as Butler, Crenshaw and Lowndes have been successful in this sphere, already attracting Shin Young Metal Industrial to make stamped metal parts and employ 400 persons; Hwashin Company Ltd. to build chassis and body parts and employ another 400 persons; Sejong Industrial to make mufflers and exhaust systems and employ 100 persons; Daehan Solution Company to make sound insulation parts and employ 180 persons; and Hella Climate Control to build heating and air conditioning units and employ about 200 persons.\(^92\)

News reports in April 2003 also noted that two South Korean automotive suppliers had plans for factories in Alabama with investments totaling $68 million and creating almost 680 jobs. Samlip Industrial Company will build a $53 million plant in Alexander City, Alabama, and hire up to 400 individuals to produce lighting systems for the Hyundai plant. Daehan Solution Company will build a $15 million plant in Tyson and hire 100-180 workers to make sound and engineering parts.

Finally, officials were enthusiastic when a Tier 1 parts supplier decided to establish a $10 million to $15 million plant on a 20-acre property less than a mile from the Hyundai plant. While this plant would create 300 new jobs, it would produce interior car parts. Another Tier 1 parts supplier, Mobis Alabama, is building a $30 million plant near the Hyundai plant that will create 430 new jobs.\(^93\)

In October 2003, the Alabama Development Office forwarded the following list of auto parts companies that had come forward as suppliers to the Hyundai plant.
<table>
<thead>
<tr>
<th>Company Name</th>
<th>Product</th>
<th>Number of Jobs</th>
<th>Capital Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Technoglass Alabama</td>
<td>Automotive glass</td>
<td>51-75*</td>
<td>N/A</td>
</tr>
<tr>
<td>Assembly Inc.</td>
<td>Tire and wheel assembly</td>
<td>36</td>
<td>$11 million</td>
</tr>
<tr>
<td>Daehan Solution Company</td>
<td>Sun visors, interiors, sound proofing equipment</td>
<td>180-220</td>
<td>$15 million</td>
</tr>
<tr>
<td>Delphi Saginaw</td>
<td>Steering components</td>
<td>2001-2500*</td>
<td>N/A</td>
</tr>
<tr>
<td>Dongwon Metal Industrial</td>
<td>Door frames, side impact safety beams</td>
<td>100</td>
<td>$12 – $15 million</td>
</tr>
<tr>
<td>Engelhard Corporation</td>
<td>Catalysts</td>
<td>551-650*</td>
<td>N/A</td>
</tr>
<tr>
<td>Hella Climate Control Inc.</td>
<td>Heating and cooling systems, bumpers, headlights</td>
<td>150</td>
<td>$28 million</td>
</tr>
<tr>
<td>HiSan Inc.</td>
<td>Fluid handling systems</td>
<td>76-100*</td>
<td>N/A</td>
</tr>
<tr>
<td>HS R &amp;A Ltd.</td>
<td>Weather stripping, tubing and rubber hoses</td>
<td>350</td>
<td>$20 million</td>
</tr>
<tr>
<td>Hwashin Co. Ltd.</td>
<td>Chassis, drive train and body parts</td>
<td>380</td>
<td>$70 million</td>
</tr>
<tr>
<td>Hyundai Hysco</td>
<td>Steel sheeting</td>
<td>104</td>
<td>$30 million</td>
</tr>
<tr>
<td>Lear/Kyung Shin</td>
<td>Seats, wiring harnesses</td>
<td>285</td>
<td>$14 million</td>
</tr>
<tr>
<td>Mando Corporation</td>
<td>Brakes, steering and suspension systems</td>
<td>135</td>
<td>$30 million</td>
</tr>
<tr>
<td>Mobis Alabama</td>
<td>Front and rear chassis assemblies, instrument panels, steel cockpits</td>
<td>430</td>
<td>$30 million</td>
</tr>
<tr>
<td>PPG Inc.</td>
<td>Light stamping, drop glass assembly</td>
<td>41-50*</td>
<td>N/A</td>
</tr>
<tr>
<td>Samil Industrial Company</td>
<td>Lighting parts and systems</td>
<td>180</td>
<td>$23 million</td>
</tr>
<tr>
<td>Sejong Industrial Co. Ltd./Arvin Meritor Inc.</td>
<td>Mufflers, catalytic converters</td>
<td>100-275</td>
<td>$7 million</td>
</tr>
<tr>
<td>Shin Young Metal Industrial</td>
<td>Tailgates, hoods, sun roofs</td>
<td>400</td>
<td>$110 million</td>
</tr>
<tr>
<td>Teksid Inc.</td>
<td>Cylinder heads and blocks</td>
<td>251-300*</td>
<td>N/A</td>
</tr>
<tr>
<td>Tire and Wheel</td>
<td>Tires</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Venture Alabama</td>
<td>Interior, exterior plastics</td>
<td>500</td>
<td>$80 million</td>
</tr>
</tbody>
</table>

| Overall                              |                                                  | 3,330-3,545 jobs | $480-483 million   |

Source: Alabama Development Office
* These numbers represent jobs already existing. These plants received new Hyundai contracts.
**THE AUTOMOBILE INDUSTRY IN ARKANSAS**

**Overview**

Although Arkansas does not have an automobile assembly plant, the state has recently expended efforts to lure such a manufacturing facility within its borders. Specifically, in 2002, Arkansas was one of five states (along with Alabama, Mississippi, Tennessee and Texas) being considered by Toyota Motor Corporation for the construction of a facility to manufacture its Tundra pickup truck. While a location in San Antonio, Texas, was eventually selected for this purpose, Arkansas’ interest in pursuing this project raised a range of questions concerning the state’s role in the automobile manufacturing sphere.

**State Facts**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Total Workforce</td>
<td>4</td>
</tr>
<tr>
<td>Direct Employment</td>
<td>6,000</td>
</tr>
<tr>
<td>Auto-Related Employment</td>
<td>18,500</td>
</tr>
<tr>
<td>Auto-Dependent Employment</td>
<td>46,800</td>
</tr>
<tr>
<td>Wages</td>
<td>$1.3 Billion</td>
</tr>
<tr>
<td>New Vehicle Dealerships</td>
<td>284</td>
</tr>
<tr>
<td>Dealership Annual Sales</td>
<td>$5.3 Billion</td>
</tr>
<tr>
<td>New Registrations</td>
<td>141,245</td>
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<tr>
<td>Registered Vehicles</td>
<td>1,840,193</td>
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<td>Publicly-Owned Vehicles</td>
<td>26,283</td>
</tr>
<tr>
<td>Licensed Drivers</td>
<td>1,948,000</td>
</tr>
<tr>
<td>Total Miles Driven</td>
<td>29.1 Billion</td>
</tr>
</tbody>
</table>

Source: *2002 Ward’s Motor Vehicle Facts & Figures*

**Automobile-Industry Related Operations**

Notwithstanding the fact that Arkansas does not have a manufacturing facility within its borders, the state has a number of major automotive parts suppliers contributing significantly to its economic growth and potential. According to the Arkansas Department of Economic Development, since 1998, there have been 21 projects with a total investment of $158.6 million generating 2,120 net new jobs within the industry. Table 18 provides details on these projects.

In addition to these details, the department notes that there are 66 companies in Arkansas, each employing 10 or more workers, that manufacture motor vehicle parts. These companies produce a range of automotive-related products, including the following:

- commercial and school bus bodies and chassis assembly (American Transportation Corporation in Conway, Arkansas);
- automobile exhaust tubing and door impact beams (Century Tube Corporation in Pine Bluff);
- automotive oils and anti-freeze (Coastal Unilube in West Memphis);
- hydraulic hoists for trailers (Davis Trailer & Truck Equipment in Little Rock);
- aluminum headers for automotive air conditioners (De-Sta-Co Manufacturing in Russellville);
- wet and dry batteries (Exide Technologies in Fort Smith);
- diamond welded steel tubing for automotives (ITT Industries in Searcy);
- automotive shock absorbers (Monroe Auto Equipment Company in Paragould);
- radiator, oil, gasoline and locking gasoline caps (Stant Manufacturing Corporation in White Hall); and
- truck and trailer brake drums (Webb Wheel Products in Siloam Springs). These 66 companies employ thousands of employees, with most of them falling into the 100-199 employee category (16 companies).
## New and Expanded Motor Vehicle Parts Suppliers

<table>
<thead>
<tr>
<th>Company</th>
<th>City</th>
<th>County</th>
<th>Year</th>
<th>New or Expansion</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Stitchco</td>
<td>Mountain Home</td>
<td>Baxter</td>
<td>2000</td>
<td>E</td>
<td>Stitched auto components</td>
</tr>
<tr>
<td>Camaco</td>
<td>Marianna</td>
<td>Lee</td>
<td>1999</td>
<td>E</td>
<td>Auto seat frames</td>
</tr>
<tr>
<td>Camaco</td>
<td>Marianna</td>
<td>Lee</td>
<td>2002</td>
<td>E</td>
<td>Auto seat frames</td>
</tr>
<tr>
<td>Champion Parts</td>
<td>Hope</td>
<td>Hempstead</td>
<td>2001</td>
<td>E</td>
<td>Auto electronic parts</td>
</tr>
<tr>
<td>Cloyes Gear</td>
<td>Subiaco</td>
<td>Logan</td>
<td>1999</td>
<td>E</td>
<td>Auto gears and sprockets</td>
</tr>
<tr>
<td>Cooper Tire</td>
<td>Texarkana</td>
<td>Miller</td>
<td>2002</td>
<td>E</td>
<td>Tires</td>
</tr>
<tr>
<td>Cooper Tire</td>
<td>Texarkana</td>
<td>Miller</td>
<td>1999</td>
<td>E</td>
<td>Tires</td>
</tr>
<tr>
<td>Dana Corporation</td>
<td>Russellville</td>
<td>Pope</td>
<td>1999</td>
<td>E</td>
<td>Camshafts</td>
</tr>
<tr>
<td>Dana Corporation</td>
<td>Jonesboro</td>
<td>Craighead</td>
<td>1999</td>
<td>E</td>
<td>Truck transmissions</td>
</tr>
<tr>
<td>Dayco Automotive</td>
<td>Springdale</td>
<td>Washington</td>
<td>1999</td>
<td>E</td>
<td>Auto belt tensioners</td>
</tr>
<tr>
<td>Defiance Metal</td>
<td>Heber Springs</td>
<td>Cleburne</td>
<td>1999</td>
<td>E</td>
<td>Auto metal components</td>
</tr>
<tr>
<td>Defiance Metal</td>
<td>Heber Springs</td>
<td>Cleburne</td>
<td>2002</td>
<td>E</td>
<td>Auto metal components</td>
</tr>
<tr>
<td>Mid-South Manufacturing</td>
<td>Marked Tree</td>
<td>Poinsett</td>
<td>2000</td>
<td>E</td>
<td>Auto water pumps</td>
</tr>
<tr>
<td>OxBodies</td>
<td>Nashville</td>
<td>Howard</td>
<td>1999</td>
<td>N</td>
<td>Dump truck bodies</td>
</tr>
<tr>
<td>Prestolite Wire Corp.</td>
<td>Paragould</td>
<td>Greene</td>
<td>1999</td>
<td>E</td>
<td>Automotive wire &amp; cable</td>
</tr>
<tr>
<td>Superior Industries</td>
<td>Heber Springs</td>
<td>Cleburne</td>
<td>1999</td>
<td>N</td>
<td>Alum. castings &amp; forgings</td>
</tr>
<tr>
<td>Superior Industries</td>
<td>Rogers</td>
<td>Benton</td>
<td>2002</td>
<td>E</td>
<td>Wheels</td>
</tr>
<tr>
<td>Superior Industries</td>
<td>Fayetteville</td>
<td>Washington</td>
<td>1999</td>
<td>E</td>
<td>Wheels</td>
</tr>
<tr>
<td>Taylor Ambulances</td>
<td>Newport</td>
<td>Jackson</td>
<td>1999</td>
<td>E</td>
<td>Ambulances</td>
</tr>
<tr>
<td>Tokusen</td>
<td>Conway</td>
<td>Faulkner</td>
<td>2002</td>
<td>E</td>
<td>Tire cord</td>
</tr>
<tr>
<td>Tokusen</td>
<td>Conway</td>
<td>Faulkner</td>
<td>2001</td>
<td>E</td>
<td>Tire cord</td>
</tr>
</tbody>
</table>

Source: Arkansas Department of Economic Development

Figure 15 provides a breakdown of the number of employees at these companies, as reported by the state’s department of economic development.

### Automobile Parts Suppliers in Arkansas

<table>
<thead>
<tr>
<th>A=1-10 Employees</th>
<th>B=11-49 Employees</th>
<th>C=50-99 Employees</th>
<th>D=100-199 Employees</th>
<th>E=200-299 Employees</th>
<th>F=300-499 Employees</th>
<th>G=500-999 Employees</th>
<th>H=1,000-2,499 Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>3</td>
<td>14</td>
<td>16</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Arkansas Department of Economic Development

In July 2003, Arkansas Governor Huckabee and Japan-based DENSO Corporation executives announced the establishment of a new $35 million, 217,000-square foot thermal manufacturing plant in Osceola, just off I-55. The Arkansas plant will be the global automotive supplier’s sixth thermal manufacturing facility and 23rd overall production plant in North America. When it opens next year, the Osceola plant will produce heavy equipment...
radiators for customers such as Caterpillar and car air conditioning units for major automakers. At full production, the plant will produce up to 70,000 radiators and 1.5 million air conditioning units annually and generate 500 new jobs by 2008 in this area of the Delta, where unemployment levels remain very high. The plant will incorporate a new technological method, called blazing, in the production of radiators. (None of Denso’s other plants use the method, which increases the life span and durability of the products.) While the plant is expected to attract job applicants from a 75-mile radius, state and local officials are optimistic that other automotive suppliers will flock to the area given Denso’s decision.

According to the state’s department of economic development,

“although the state has not conducted an economic impact study specific to the automobile industry, a comprehensive report by Fluor GLS, commissioned by the state of Arkansas, evaluated the competitiveness of Arkansas in attracting large manufactures (such as automotive assembly plants). The results of this study confirmed that the strengthening of Arkansas’ competitive advantages in the recruitment of such projects could yield significant economic benefits.”

In addition, the department noted that while it conducts cost-benefit analyses for all projects that request state economic incentives, due to its confidential nature, the information could not be distributed externally.

Following up on the aforementioned Fluor GLS report’s recommendations, Governor Huckabee has been stressing the importance of Arkansas creating a “super projects” fund. According to the governor, the Fluor GLS report indicates that the state is not competitive with other states in securing so-called super projects and that the state should consider setting up such a fund to “prepare in advance for super projects.” In this light, during the competition among several states to secure the Toyota pickup truck assembly plant, there were reports that “the state [Arkansas] may have a harder time than others in the South that have landed auto plants in recent years.” This report notes that since it “takes a good deal of money to land an automobile plant, Arkansas has not been willing to make the investment in the past.” Furthermore, the report indicates that it is easier for states that have seen the visible economic impacts of these sizable automobile assembly plants to justify making another large investment to attract yet another plant as opposed to a state (like Arkansas) that has not made this kind of investment.

Another advantage favoring states that already have an assembly plant is that the infrastructure, suppliers and skilled labor so vital to the plant’s success, may already be in place at the point when another manufacturer approaches a state. Yet, there were several positive features of the potential Arkansas site. The site in eastern Arkansas, near Marion, reportedly under consideration was a 2000-acre property that already includes an intermodal rail facility, where highway freight trailers are loaded and unloaded from equipment allowing them to be transported on rails. While this site is near two cross-country interstates and the Mississippi River, it already handles more than 300,000 trailers a year at the aforementioned intermodal facility. It is also near Nucor Steel plants, which in theory, could be tapped to make steel for automobiles.
THE AUTOMOBILE INDUSTRY IN FLORIDA

Overview

The state of Florida does not have a major automotive vehicle assembly plant. Nevertheless, there are a host of automotive-related businesses, including suppliers of parts and components, suppliers of raw materials, and support services (engineering consultants) that have located their operations throughout the state. A sampling of these companies includes the following:

- internal engine components (Crane Cams in Daytona Beach and MTC Engineering in Cocoa Beach);
- air bag components (Breed Technologies in Lakeland, recently selected to make driver- and passenger-side air bags for the Hyundai Motor Company’s Montgomery, Alabama, assembly plant);
- heating and air conditioning systems (S & H Fabricating and Engineering in Sanford);
- steering mechanisms (Drive Line Specialists, Inc. in Fort Lauderdale);
- suspension systems (B.F. Goodrich Company in Jacksonville and Crane Carrier Company in Miami);
- computer chips (Superchips, Inc. in Longwood);
- radiators (Tropical Core Manufacturing in Fort Lauderdale);
- ignition systems (Madison Wire and Cable Inc. in Apopka);
- air filters (Filters, Inc. in Tampa); and
- seals (Auto Trim Manufacturing in Altamonte Springs and Findlay Industries in Lake Wales).

This list represents a small fraction of the many companies active in the industry in the state. In fact, Enterprise Florida, Florida’s economic development agency, notes that in 2002 there were at least 199 automotive-related establishments (excluding many more manufacturing and retailing tires and inner tubes and vehicular lighting equipment) with at least 10 employees.

Automobile-Industry Related Operations

In terms of the breakdown of these automotive-related businesses, 107 establishments manufacture motor vehicle parts and accessories; 28 manufacture motor vehicle and car bodies; 20 manufacture truck and bus bodies and another 20 manufacture truck trailers; nine manufacture motor homes; eight manufacture carburetors, pistons, rings and valves; and seven manufacture automotive stampings. As noted earlier, there were numerous other establishments manufacturing tires, inner tubes and vehicle lighting equipment, all with at least 10 employees, that are not included in this list of 199 establishments.

The following table provides additional details on a few of these companies.

<table>
<thead>
<tr>
<th>State Facts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Total Workforce</td>
<td>2.6</td>
</tr>
<tr>
<td>Direct Employment</td>
<td>45,400</td>
</tr>
<tr>
<td>Auto-Related Employment</td>
<td>47,300</td>
</tr>
<tr>
<td>Auto-Dependent Employment</td>
<td>182,900</td>
</tr>
<tr>
<td>Wages</td>
<td>$8.7 Billion</td>
</tr>
<tr>
<td>New Vehicle Dealerships</td>
<td>966</td>
</tr>
<tr>
<td>Dealership Annual Sales</td>
<td>$50.7 Billion</td>
</tr>
<tr>
<td>New Registrations</td>
<td>1,427,080</td>
</tr>
<tr>
<td>Registered Vehicles</td>
<td>11,781,010</td>
</tr>
<tr>
<td>Publicly-Owned Vehicles</td>
<td>287,564</td>
</tr>
<tr>
<td>Licensed Drivers</td>
<td>13,000,000</td>
</tr>
<tr>
<td>Total Miles Driven</td>
<td>152.1 Billion</td>
</tr>
</tbody>
</table>

Source: 2002 Ward’s Motor Vehicle Facts & Figures
A Sampling of Florida's Automotive-Related Businesses

<table>
<thead>
<tr>
<th>Name</th>
<th>City</th>
<th>Sales</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tires/Inner Tubes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridgestone Tire</td>
<td>Miami</td>
<td>$10 million - $24 million</td>
<td>50 to 99</td>
</tr>
<tr>
<td>Automotive Stampings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modern Tool &amp; Die</td>
<td>Pinellas Park</td>
<td>$10 million - $24 million</td>
<td>250 to 499</td>
</tr>
<tr>
<td>Florida Production Engineering</td>
<td>Ormond Beach</td>
<td>$50 million - $99.9 million</td>
<td>100 to 249</td>
</tr>
<tr>
<td>Carburetors, Pistons, Rings &amp; Valves</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal-Mogul World Trade</td>
<td>Fort Lauderdale</td>
<td>Not available</td>
<td>100 to 249</td>
</tr>
<tr>
<td>Experimental Aircraft</td>
<td>Brandon</td>
<td>$5 million - $9.9 million</td>
<td>50 to 99</td>
</tr>
<tr>
<td>Vehicular Lighting Equipment</td>
<td>Oldsmar</td>
<td>Not available</td>
<td>100 to 249</td>
</tr>
<tr>
<td>Goodrich Aerospace</td>
<td>Sarasota</td>
<td>$2.5 million to $4.9 million</td>
<td>25 to 49</td>
</tr>
<tr>
<td>Heico Parts Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Vehicles and Car Bodies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GMAC</td>
<td>Ocoee</td>
<td>Not available</td>
<td>1,000 to 2,499</td>
</tr>
<tr>
<td>Emergency One</td>
<td>Bellevue</td>
<td>$250 million to $499.9 million</td>
<td>1,000 to 2,499</td>
</tr>
<tr>
<td>Emergency One</td>
<td>Ocala</td>
<td>$250 million to $499.9 million</td>
<td>1,000 to 2,499</td>
</tr>
<tr>
<td>Truck and Bus Bodies</td>
<td>Hollywood</td>
<td>$10 million to $24.9 million</td>
<td>100 to 249</td>
</tr>
<tr>
<td>Ellwood, Inc.</td>
<td>Fort Lauderdale</td>
<td>$5 million to $9.9 million</td>
<td>50 to 99</td>
</tr>
<tr>
<td>Tesco Equipment, Inc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Vehicle Parts &amp; Accessories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Technology Automotive</td>
<td>Tampa</td>
<td>Not available</td>
<td>500 to 999</td>
</tr>
<tr>
<td>Metra Electronics</td>
<td>Daytona Beach</td>
<td>$25 million to $49.9 million</td>
<td>500 to 999</td>
</tr>
<tr>
<td>Truck Trailers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crossley Trailers, Inc.</td>
<td>Starke</td>
<td>$2.5 million to $4.9 million</td>
<td>25 to 49</td>
</tr>
<tr>
<td>Motor Homes</td>
<td>Family Motor Coach Assn.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fort Pierce</td>
<td>$100 million to $249.9 million</td>
<td>1,000 to 2,499</td>
</tr>
<tr>
<td></td>
<td>Featherlite Luxury Coach</td>
<td>Sanford</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Source: Enterprise Florida, Inc., Department of Research

Economic Impact of the Automotive Sector

According to Enterprise Florida, the most recent study assessing the economic impact of the automotive sector in the state was carried out in 1995. This report noted that Florida had 146 establishments dedicated to manufacturing motor vehicle parts, and employed 6,000 workers. These establishments were primarily entities that manufactured motor vehicle bodies, parts and accessories. The following table presents this information for the period 1990 to 1995.

Automotive Industry's Role in Florida's Economy 1990-1995

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment A</th>
<th>Employment B</th>
<th>Number of Establishments A</th>
<th>Number of Establishments B</th>
<th>Average Annual Wage A</th>
<th>Average Annual Wage B</th>
<th>Percent of Florida Manufacturing Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>2,085</td>
<td>2,532</td>
<td>18</td>
<td>89</td>
<td>$21,295</td>
<td>$24,163</td>
<td>0.40%</td>
</tr>
<tr>
<td>1991</td>
<td>1,960</td>
<td>2,443</td>
<td>18</td>
<td>89</td>
<td>$22,850</td>
<td>$21,384</td>
<td>0.46%</td>
</tr>
<tr>
<td>1992</td>
<td>2,083</td>
<td>2,363</td>
<td>19</td>
<td>87</td>
<td>$24,224</td>
<td>$22,025</td>
<td>0.43%</td>
</tr>
<tr>
<td>1993</td>
<td>2,167</td>
<td>2,532</td>
<td>23</td>
<td>98</td>
<td>$24,344</td>
<td>$22,729</td>
<td>0.45%</td>
</tr>
<tr>
<td>1994</td>
<td>2,284</td>
<td>2,767</td>
<td>29</td>
<td>122</td>
<td>$25,099</td>
<td>$23,566</td>
<td>0.47%</td>
</tr>
<tr>
<td>1995</td>
<td>2,451</td>
<td>3,391</td>
<td>26</td>
<td>120</td>
<td>$26,931</td>
<td>$27,928</td>
<td>0.51%</td>
</tr>
</tbody>
</table>

Source: Enterprise Florida, Inc., Department of Research

Note: The category A refers to Motor Vehicles and Passenger Car Bodies; Category B refers to Motor Vehicle Parts and Accessories.
As detailed in table 20, over the five-year period represented, 1990 to 1995, in terms of manufacturing motor vehicle bodies, Florida’s employment level grew by 17.6 percent. This expansion level compared very favorably to the U.S. level, which grew by only 7.1 percent over the same period. In terms of establishment growth for this category, Florida experienced a 44 percent increase during the review period compared to 47.9 percent nationwide. In terms of motor vehicle parts and accessory manufacturing, Florida’s employment level during the review period expanded by 33.9 percent; in contrast, the national growth rate in employment was 26.6 percent. When establishment data is evaluated for this category, the number of Florida firms grew by 34.8 percent from 1990 to 1995, while the number of U.S. firms grew by 22.6 percent over the same time period. In conclusion, while both these industry categories capture a larger share of total U.S. manufacturing employment, Florida grew by a faster pace in terms of both employment and number of establishments.

**Florida’s Advantages in the Automobile Industry**

Even though Florida currently does not have a major automotive assembly and manufacturing plant, the state has a number of significant advantages that it can effectively maneuver to entice such a plant. As noted in the previously-referenced August 1997 study, these advantages include low manufacturing wages; exceptional transportation infrastructure; low taxes; competitive electricity and natural gas costs; and superior education and training. Further details on some of these advantages are as follows:

- **Low Manufacturing Wages**: Florida’s manufacturing wages remain considerably lower than the national average. Specifically, while the national average for motor vehicle manufacturing remains at $59,269, Florida’s rate for manufacturing motor vehicle bodies stands at $26,931. Similarly, wages for manufacturing motor vehicle parts and accessories at the national level stood at $41,359, while the average in Florida remained at $27,928.

- **Exceptional Transportation Infrastructure**: Florida’s statewide multi-modal transportation network enables companies to swiftly move their products to their destinations at considerably reduced costs. This impressive network includes:
  - Four major interstate highways, a 12,000 mile state highway system and more than 100,000 miles of local roads;
  - 3,000 miles of rail lines connecting the state’s 14 freight rail roads to major business centers and distribution nodes;
  - 22 major commercial airports, 12 of which offer international service;
  - 14 deep-water seaports, including four of the nation’s top 25 container ports. (As demonstrated in the first section of the report, the Port of Jacksonville is the busiest port in the nation for transporting vehicles, with a number of the South’s assembly plants using this port to ship their vehicles to overseas markets.); and

- **Low Taxes**: Florida’s low tax structure makes the state very attractive to businesses alongside the lack of a personal income tax.
The Automobile Industry in Georgia

Overview
Georgia’s connection to the automotive industry goes back almost a 100 years, when Ford Motor Corporation set up operations in the state in 1909. Since that time, Georgia has consistently been in the forefront of automobile manufacturing, assembling and distributing parts. According to the Georgia Department of Industry, Trade and Tourism, there are five automobile production facilities in the state, 268 parts manufacturers and suppliers, and seven automobile company headquarters. The more than 46,000 Georgians employed in the industry ranks the state sixth nationally in automotive employment and seventh in total vehicle production. (There are 9,000 Georgians currently employed directly by automobile assembly plants.) Furthermore, 83 percent of all U.S. car assembly plants are within 13 highway hours of Georgia’s extensive, efficient and modern intermodal transportation network.

In terms of vehicle production, as noted earlier, Ford Motor Company has been in the state since 1909. Similarly, the Blue Bird Corporation, the world’s largest producer of school buses, began manufacturing in Georgia in 1927, while General Motors has been manufacturing Chevrolet, Opel, Oldsmobile, and Pontiac automobiles at its Doraville plant since 1947. In addition to these manufacturers, Georgia also has an impressive line-up of parts suppliers, with such companies as Pirelli North America, Toyota Industries North America, Allied Signal, Caterpillar, Cooper Tire, Panasonic, and Siemens Automotive, all locating major operations within the state. In fact, Pirelli Tires’ North America headquarters—and 500 jobs—relocated to Rome, Georgia, from New Haven, Connecticut.

The late 2002 announcement that DaimlerChrysler would establish a $754 million plant in Pooler (near Savannah) to produce Sprinter and Vito minivans was greeted with a great deal of enthusiasm in the area and across the state. Unfortunately, less than a year later, in September 2003, DaimlerChrysler officials announced that the company had decided against building this facility due to currency fluctuations, a weak American economy and the $1.1 billion second-quarter loss posted by its Chrysler Group unit as reasons for the decision. The DaimlerChrysler project would have been the state’s largest development project in history and the first auto plant to set up in Georgia since the 1909 Ford and the 1947 General Motors assembly facilities.

Another major aspect of the Georgia automobile industry is the role played by the Port of Brunswick. More than 200,000 vehicles move through the deep-water Port of Brunswick’s domestic and international processing center each year, including vehicles for automakers such as Audi, General Motors, Land Rover, Saab, and Volkswagen of America. In addition, Toyota operates a major inland processing and distribution center northeast of Atlanta. In terms of distribution networks operating in the state, Ford, Advance Auto Parts, Robert Bosch, Pep Boys and Hella all have distribution facilities in Georgia. Furthermore, Genuine Parts, with the world’s largest automotive distribution network, is headquartered in metro Atlanta and Decoma Facts

| Percent of Total Workforce | 5  |
| Direct Employment          | 31,200 |
| Auto-Related Employment    | 64,400 |
| Auto-Dependent Employment  | 184,800 |
| Wages                      | $6.4 Billion |
| New Vehicle Dealerships    | 614 |
| Dealership Annual Sales    | $21.7 Billion |
| Production Facilities      | 2  |
| Vehicles Produced          | 441,957 |
| New Registrations          | 530,909 |
| Registered Vehicles        | 7,155,006 |
| Publicly-Owned Vehicles    | 103,173 |
| Licensed Drivers           | 5,316,000 |
| Total Miles Driven         | 105 Billion |

Source: 2002 Ward’s Motor Vehicle Facts & Figures
International, a Mercedes-Benz parts supplier with 350 workers, is situated in Carrollton, Georgia.

A number of major automobile and automobile-related operations maintain their headquarters in Georgia. Specifically, Porsche relocated its North American headquarters to Atlanta in 1998, while other notable companies headquartered in Atlanta include BBS, Daewoo, Genuine Parts, Hella, Lotus, Panoz Auto, Saab and Siemens Electro-Mechanical Components. Finally, Road Atlanta, located less than an hour from Atlanta, is a world-class testing facility for passenger and racing vehicles, in addition to serving as an ideal location for product launches. In sum, the automobile industry remains one of the state’s most important economic drivers, an industry that generates tens of thousands of jobs and hundreds of millions of dollars in income, revenue and economic effects.

**Georgia's Advantages in the Automobile Industry**

In touting Georgia’s attractiveness to the automobile industry, the department of industry, trade and tourism lists two major advantages: superior infrastructure and high quality labor. While these two advantages can be sub-divided into further categories, they provide a useful starting point toward assessing the state’s role in the automobile industry.

» **Infrastructure**

Atlanta, just as it has been a major transportation hub for more than 100 years, remains the center of the Southern automotive corridor. The state’s extensive network of highways and railroads makes transportation seamless; 83 percent of all U.S. car assembly plants are within 13 highway hours of Georgia.

Georgia’s coastline provides a tremendous boost to the state’s transportation capabilities in the automobile industry. The two deep-water ports at Brunswick and Savannah and barge docks at Columbus and Bainbridge remain pivotal in this connection. As noted earlier, the Port of Brunswick processes more than 200,000 import and export shipments for more than 20 major automobile manufacturers.

Atlanta’s Hartsfield-Jackson International Airport, the world’s busiest passenger airport for the fourth consecutive year, is another important component of the state’s infrastructure system. In 2002, the airport accommodated more than 77 million passengers and more than 730 thousand metric tons of air cargo. All these aspects work in combination to elevate Georgia’s infrastructure capabilities to a very high level and, consequently, not only have a number of automakers and suppliers located in the state, Georgia also is he choice of suppliers serving BMW, DaimlerChrysler, Honda, and other facilities in neighboring states.

» **Quality of Labor**

In the past decade and a half, Georgia has been on the top rung of the fastest growing states in terms of economic performance and population. Consequently, the state’s labor pool remains another of its strongest assets. In addition, the state conducts a number of specific programs to further enhance this labor pool. For instance, *Quick Start*, the state’s no-cost, employee training program, has trained nearly 300,000 employees for more than 2,850 businesses. The customized training is delivered at 34 technical colleges, 17 satellite campuses, and four associated university programs throughout the state.
Georgia’s Automobile-Industry Related Operations

As alluded to earlier, a number of the world’s automakers maintain manufacturing operations in Georgia, including Ford and General Motors alongside the Blue Bird Corporation, one of the nation’s premier bus manufacturers. Myriad other major companies maintain parts manufacturing operations in the state, another factor that contributes significantly to Georgia’s economic potential. Some of the highlights of these manufacturers and allied operations are listed below.

» Ford Motor Company

Ford’s connection to Georgia is a lengthy one, going back to 1909, barely six years after the founding of the company, when Ford built the Model T in a small factory on Ivy Street in downtown Atlanta. Its current plant in Hapeville, just south of downtown, off I-75, was established in 1947. The city of Hapeville is built around transportation ranging from the world’s busiest airport, Atlanta’s Hartsfield-Jackson International nearby, to the aforementioned Ford facility.

The Hapeville plant, which employs 2,300 persons and extends over 128 acres (2.3 million-square foot plant), manufactures the Ford Taurus and Mercury Sable models. Both these models have been assembled at the Hapeville facility for almost two decades, since 1985. In recent times, Ford has spent $380 million to upgrade the facility, and this plant is ranked among the most efficient in the auto industry. In fact, the facility has won a number of awards for quality and efficiency from such industry raters as J. D. Power & Associates and the Harbour Report. In calendar year 2002, the Hapeville plant turned out 190,000 Taurus cars and nearly 54,000 Sables. In October 2002, the Hapeville plant was the scene of a ceremony commemorating the 6 millionth Taurus to be sold.

The city of Hapeville’s fiscal situation is integrally reliant on the Ford plant since the company’s annual tax contribution is almost $1 million, 10 percent of the city’s $10 million annual budget. In addition, the city assesses Ford a $60,000 bill every month for water. However, according to reports, most of the plant’s employees do not live in the city, with employees living in nearby Hampton and Griffin and other employees commuting from as far away as Macon and neighboring Alabama.

In spring 2003, Ford announced the introduction of a new line of mid-size cars called the Futura. The model will expand in the coming years to nine or 10 products, eventually reaching an annual North American volume of 800,000 units, and would start with the 2006 model year. The new Futura line, which will include some hybrid gas-electric models, will be aimed at consumers interested in the auto segment between the Taurus and less-expensive Focus. At that point, Ford also announced the phase-out of the Taurus and Sable lines, both of which are manufactured at its Hapeville facility.

During the time of the Futura announcement, there were “unofficial sources” at the company indicating that Ford was running out of space at its Hapeville facility and that it was considering moving to another Georgia city. Ford’s goal was to construct a state-of-the art facility, incorporating many of the recent technological advancements at a location unhindered by the constraints of space. There were two Georgia locations that were strongly considered during this evaluation period: Madison in Morgan County, off I-20, 60 miles east of Atlanta, and Greenville in Meriwether County, off I-85, 63 miles south of Atlanta. After much debate among policymakers at
the state, county and city levels, the company and residents, Ford made an
official announcement in mid-July 2003, that the company would stay on in
Hapeville, at least until the end of the decade. In addition, the company and
union officials indicated that contrary to previously-released information, Ford
would continue production of the Taurus through the 2009 model year.

A short while after this mid-July 2003 announcement, concerns about the
future of the Hapeville plant and what vehicles might be built there re-surfaced
with reports that Ford intended to build a new line of cars in Mexico and
Canada. According to these reports, Ford supposedly will build its mid-size
Futura car line in Hermosillo, Mexico, starting in 2005, and sport wagons
under the Ford and Lincoln names a year later in Oakville, Canada. Ford’s
Hapeville plant is one of the most productive car factories on the continent
and in the most recent Harbour Report, a closely watched study of labor
productivity in the automobile industry, this plant was among the five most
efficient assembly plants in North America.

» General Motors (GM)

The GM plant in Doraville, a few miles from Atlanta’s city limits, is
another one of Georgia’s long-standing automobile manufacturing facilities
having also been in production since 1947. This plant, which encompasses
3.6 million square feet, currently manufactures the Chevrolet Venture and the
Pontiac Montana and, until 2001, the Oldsmobile Silhouette. Total payroll
for the plant’s 3,600 employees, 3,300 of whom are paid hourly, totaled $220
million in 2002.

The Doraville plant is the sole producer of GM minivans (Chevrolet
Venture and Pontiac Montana). In response to the growing demand for
minivans, GM, in 1995 and 1996, converted this plant to make minivans, since
it previously produced the Oldsmobile Cutlass Supremes. By August 2000,
the Doraville facility had produced 1 million minivans. The Doraville plant’s
production figures for 2001-2002 are reflected in table 21.

<table>
<thead>
<tr>
<th>Year</th>
<th>Model</th>
<th>Production Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>Chevrolet Venture</td>
<td>115,330</td>
</tr>
<tr>
<td>2001</td>
<td>Pontiac Montana</td>
<td>75,625</td>
</tr>
<tr>
<td>2001</td>
<td>Oldsmobile Silhouette</td>
<td>35,902</td>
</tr>
<tr>
<td>2002</td>
<td>Pontiac Montana</td>
<td>85,190</td>
</tr>
<tr>
<td>2002</td>
<td>Chevrolet Venture</td>
<td>130,028</td>
</tr>
</tbody>
</table>

Source: General Motors

As indicated in table 21, output at this facility totaled 226,857 in 2001,

In early February 2003, GM announced that it would invest an additional
$150 million at its Doraville plant to pave the way for the production of a
new generation of minivans. While the models currently made at the facility
would be phased out, the injection of new funding will be used to renovate
and retool the plant’s body shop and general assembly areas in preparation
for the production of new minivans from Chevrolet, Pontiac and, for the first
time, Buick and Saturn. In fact, Doraville will be the only plant to build the
minivans. While the new minivans are expected to resemble a cross between
SUVs and minivans, neither their names nor the production numbers were
disclosed. The four new minivans, to be released in 2005, will include the
Buick Terrazza, Chevrolet Uplander, Saturn Relay and Pontiac Montana
models. The Buick and Saturn models are the brand’s first minivans.

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108
109
110
General Motor’s $150 million expansion investment will result in greater economic benefits to the county, city, and state. For instance, GM is expected to pay about $5.5 million in property taxes, of which $1 million is in addition to the amount paid prior to the expansion. Reports also note that DeKalb County (the county where Doraville is located) faced national competition for the new production line and that the county “provided enough incentives to help make this deal.” While no major changes in personnel levels are expected at the plant as a result of the expansion and retooling effort, the retention of the plant at its current location remains of great economic import to the area.

Coincidentally, the GM renovation announcement was made around the same time that DaimlerChrysler made its own announcement regarding plans to construct a production facility in Pooler to build its own line of minivans (the Sprinter). (As explained at the outset, Daimler-Chrysler has decided against a plant in Pooler.) Even though sales of car, light trucks, and minivans are expected to decline again this year, there is considerable pressure among the automobile manufacturers to compete aggressively for customers.

» Blue Bird

Blue Bird Corporation is yet another long-standing player in the industry, manufacturing school buses, commercial buses, and motor coaches. Founded in 1927, Blue Bird has nearly 3,000 employees and four facilities in three countries. In addition to a major location in Arkansas, Blue Bird maintains a manufacturing facility in Fort Valley, Georgia. Recently, Blue Bird Corporation, a subsidiary of the British-based Henlys Group, announced an additional investment of $59 million for its Fort Valley facilities. This additional investment is expected to generate 630 new jobs at the plant, raising the total of its employees to 2,130 at its Peach County, Georgia, location. To convince Blue Bird to proceed with this additional investment and the expansion effort, the state of Georgia provided a total incentive package of $17 million to the company.

» DaimlerChrysler

In mid-October 2002, when DaimlerChrysler made a much-awaited announcement that it had chosen a site in Georgia to construct its acclaimed Sprinter passenger and Vito cargo van plant, Florida and South Carolina were eliminated from the competition to secure this facility. While there was great enthusiasm in the state about the plan’s expected economic benefits and symbolic significance, as mentioned at the outset of this section, in late September 2003, the company announced that it had decided against proceeding with the construction of the facility. According to DaimlerChrysler officials, their decision was the result of negative currency fluctuations, a weak American economy, and the $1.1 billion second-quarter loss posted by its Chrysler Group unit as reasons for the decision. Georgia officials were quick to indicate that they would aggressively pursue other potential clients to relocate to the 1,550-acre site Governor Perdue terms “world-class.” The state already had spent $60 million ($24 million to acquire the site and another $36 million to prepare it for the automaker), and the state’s ownership of the property certainly enhances its future prospects.

Hence, even though DaimlerChrysler will not proceed with its proposed assembly facility in Pooler, the ream of economic impact information collated on the plant’s impact remains relevant for the purposes of this report. This information provides an insight into the kind of positive economic impacts that might be realized if and when the state convinces another client to locate their operations at the site.
When Georgia won the bidding war against South Carolina and Florida to construct the $754 million assembly plant in Pooler (12 miles west of Savannah), the expectation was that construction would begin in July 2003, “barring any unforeseen changes in the economy.” In order to secure this plant, Georgia offered $320 million in incentives, or $67,000 per job. While the state portion of this incentive package totaled $220 million (an amount that would be paid back in 10 years according to state officials), the remaining $100 million came through local governments.

The new plant was expected to create 3,000 new jobs with a payroll of $155 million, or an average of $47,000 per worker, and would generate an additional 700 jobs once parts suppliers located nearby. While the direct economic impact of the facility was expected to be about $180 million annually, the average salary was expected to total about $19 per hour. The factory would absorb 2.3 million square feet, on 1,560 acres, near both the Savannah and Brunswick ports and the Savannah airport. As indicated before, these important intermodal transportation links remain critical variables in the calculations of automakers to locate their assembly operations in a state.

Once the plant reached full capacity in 2010, it was expected to produce 110,000 vans per year. The Sprinter cargo van has not made inroads into the U.S. market, even though it is quite popular in other parts of the world. In 2001, DaimlerChrysler sold 2,000 Sprinters in the United States, less than 2 percent of the 120,000 sold worldwide. In the context of DaimlerChrysler’s decision to phase out Dodge Rams this summer, the 7-year old Sprinter line was perceived as the ideal replacement model. The Sprinter’s target audience is electricians, contractors, carpenters and plumbers, who value fuel-economy and large cargo areas. The Sprinter already had secured its first domestic, large-scale corporate order: 1,900 Sprinters by Federal Express. While General Motors and Ford retain the majority of the U.S. commercial van market (39 percent and 46 percent, respectively in 2001), DaimlerChrysler occupies the remaining 15 percent. DaimlerChrysler expects to retain this margin and preferably increase it with the introduction of the Sprinters.

In terms of sequence, DaimlerChrysler was supposed to invest a little over $450 million and create 1,800 jobs in the project’s first phase while building the Sprinter vans. The project’s second phase was supposed to amount to a $300 million investment and create an additional 1,500 jobs. This expansion would have been to produce Vito passenger vans.

In an effort to lure the automaker to its borders, South Carolina reputedly offered an incentive package that totaled $346 million, a record for the state. Florida, the other state that was in the running for the plant, was prepared to set aside $15 million—as part of a much larger incentive package—to help build a DaimlerChrysler job training center in Jacksonville. Florida was eliminated from the race earlier in the process. Despite the plant not locating in South Carolina, the state and Jasper County, South Carolina, just across the Savannah River from the proposed Pooler, Georgia, site, was expected to see significant “spillover” economic activity as suppliers set up operations in proximity to the facility.

In July 2003, DaimlerChrysler announced that it had decided to postpone construction at the Pooler facility even though the state had already begun preparing for the plant’s construction. The land tract, purchased for $24 million last year, has already been cleared of trees in addition to filling ponds, laying drainage pipes and building other essential infrastructure, all at an additional cost of $36 million. The expectation was that when DaimlerChrysler decided to go ahead with construction, the site would have been ready.
In response to the swirling uncertainty about DaimlerChrysler proceeding with the Pooler plant, news reports in August 2003 indicated that state officials had given the company until the end of 2003, to decide on the plant.\textsuperscript{115} State officials noted that if there was no commitment by the end of the year, they would begin looking for an alternate company to use the land that the state already had begun preparing. While stressing that the notice was not an attempt to “force the issue,” the Georgia Department of Industry, Trade and Tourism noted that it was “only a report of where the state was in preparing a site that the automaker has said it was considering.” Given the September 2003 decision by DaimlerChrysler not to proceed with the plant, the state has made clear that it would in fact pursue other corporate possibilities for the site. In the aftermath of this DaimlerChrysler decision, state officials hinted strongly that they would scour the globe for a replacement automaker, including discussions at the highest level during Governor Perdue’s fall 2003, East Asia trip with executives at Toyota, Honda, Hyundai.\textsuperscript{116}

\textbf{Audi}

In June 2003, Governor Perdue and other officials with the state’s department of industry, trade and tourism traveled to Germany to meet with DaimlerChrysler officials regarding the Pooler facility. During this German visit, Georgia officials also met with senior management at Audi AG in Ingolstadt, near Munich.\textsuperscript{130} The goal of this meeting was to convince Audi officials that if and when they decide on building a North American facility, they should locate their plant in Georgia. Audi, a subsidiary of Volkswagen, AG, has for the last decade or so repeatedly considered building cars in the United States. Once again, the presence of a high-end, European car manufacturer like Audi establishing its North American operations in Georgia would be a tremendous boon to the economic potential of the state.

\textbf{Mahindra USA}

In May 2003, Mahindra USA, the U.S. subsidiary of Mahindra & Mahindra Ltd., the Bombay, India, based tractor manufacturer, established an assembly plant and manufacturing facility in Calhoun, Georgia.\textsuperscript{118} Mahindra & Mahindra is one of the largest tractor and light commercial vehicle manufacturers in the world and began selling their products in the United States in 1994. The company’s 60,000 square foot facility, located about 70 miles north of Atlanta, is located in an industrial park close to I-75 and has a planned annual production capacity of 6,000 tractors. According to Mahindra company officials, Calhoun was chosen over several other cities (Charlotte, North Carolina; Jonesboro, Tennessee; and Jacksonville, Florida) as the location for the company’s newest assembly plant because of its easy access to interstate highways, ports and Hartsfield-Jackson International Airport.\textsuperscript{119} This superior transportation network and the logistics benefits that would flow to dealers and suppliers was termed the pivotal factor in the company’s decision-making to locate in Calhoun.

\textbf{Toyota Industries Automotive Supplier Plant}

In July 2002, Toyota Motor Corporation announced that it would build a $60 million parts plant in Jackson County, Georgia, that would create 120 jobs by 2005. This Toyota operation, a joint venture with Denso Corporation, Japan’s largest auto parts maker, will manufacture compressors for automobile air conditioners and is located an hour north of downtown Atlanta off I-85. The initial investment calls for a 185,000 square foot plant to be constructed on a 152-acre tract of land near Pendergrass, Georgia. The jobs will have an average salary of $60,000 a year, an amount three times the average salary in the county.
THE AUTOMOBILE INDUSTRY IN KENTUCKY

Overview

In December 1985, when Governor Martha Layne Collins and Toyota Motor Corporation announced the construction of a plant in Scott County, Kentucky (near Georgetown), to assemble passenger motor vehicles, it signaled the beginning of a wave of automobile plants that would soon be constructed across the South. Since that historic announcement, automobile assembly plants have been announced and/or established in Alabama, Georgia, Mississippi, South Carolina, Tennessee, Texas, and Virginia. As a result of the tremendous success of Kentucky’s Toyota plant, the state has vaulted to the very top rung of automobile assembly plants in the United States, and as documented by the state’s Cabinet for Economic Development, Kentucky’s national standings remain impressive.

For instance, Kentucky is the fourth largest producer of cars and light vehicles and third largest producer of trucks in the country; in addition, the state accounts for 10.2 percent of all cars and trucks produced in the country and ranks sixth in total light vehicle production in North America. Furthermore, Kentucky produces one of the three top selling cars in America (Toyota Camry in Georgetown); the number one and number three top selling trucks in the United States (Ford F-Series pickup and Ford Explorer, both in Louisville) and the country’s top selling premium sports car (Chevrolet Corvette in Bowling Green). The contribution of the industry represents more than 8 percent of the state’s gross state product (GSP) totaling $9.6 billion in 2000. In 2001, the latest year available, it was $10.3 billion. In terms of employment, Kentucky has the nation’s third highest level of auto-industry related employment as a percent of total state employment, a further indication of the critical role played by the sector.

Economic Impact of the Automotive Sector

According to an October 2002 study released by the Kentucky Cabinet for Economic Development, the automobile industry has “a very strong presence” in the state and “has impacted the economy and people of the Commonwealth in a very positive manner.” As noted in this report, while the industry employs 36,700 across the state, there are 20,200 in the motor vehicle manufacturing industry. Employment growth in the industry has expanded significantly, more substantially than other industries; 35 percent since 1995 compared to 11 percent for all industries and 2.5 percent for manufacturing. Consequently, Kentucky’s employment growth in the industry ranks second among the top 10 automobile producing states in the country.

In terms of GSP figures, the contribution from the industry has been stellar. The latest figures from the Bureau of Economic Analysis at the U.S. Department of Commerce notes that the motor vehicle industry’s contribution to the state’s GSP increased from $2.4 billion in 1991, to $5.8 billion in 1996, to $10.3 billion in 2003. Even in terms of the industry’s proportionate contribution to the GSP, the growth was substantial. While in 1991, it stood at 3.4 percent of total GSP, in 1996 the number increased to 6.1 percent and, finally, to 8.5 percent in 2001. Of note, this was the highest level among...
all 16 SLC states. Even in terms of GSP growth, the expansion has been solid; between 1991 and 2001, the industry’s contribution to GSP grew by an astounding 332 percent, the third highest rate among the SLC states for the decade. (The SLC average stood at 207 percent while the U.S. average was 145 percent).

Another area that the industry has impacted the economy involves wages. As noted earlier, the industry provides for thousands of well-paying jobs. In 2000, the average weekly wage for the industry was $1,373 compared to $723 for manufacturing industries and $551 for all industries. Employers in the auto industry paid over $2 billion in wages to employees in 2000, and wages paid totaled over $1.4 billion in just the motor vehicle manufacturing industry in 1999. Furthermore, in 1999, the value added by the auto industry was over $13.3 billion while automobile manufacturers’ value added totaled over $10.6 billion. The latter number amounts to about 25 percent of the value added by Kentucky’s manufacturers.

**Kentucky’s Advantages in the Automobile Industry**

Like so many other states in the South, Kentucky pro-actively seeks to attract, retain and maintain automobile industry operations within its borders. In this regard, the October 2002 report referenced earlier, notes that “Kentucky continues to be the state with the lowest overall cost of doing business in the eastern United States.” Table 22, presents information to this effect in comparing Kentucky with the 10 top auto producing states.

| Automobile Industry Cost of Doing Business, Index and National Rankings 2000 |
|---|---|---|---|---|---|
| Top 10 State | Overall Cost | Unit Labor Cost | Energy | Taxes |
| | Index | Rank | Index | Rank | Index | Rank | Index | Rank |
| Kentucky | 89.5 | 44 | 92.3 | 41 | 69.9 | 49 | 97.8 | 25 |
| Tennessee | 93.8 | 37 | 98.4 | 23 | 79.5 | 43 | 80.6 | 49 |
| Missouri | 95.2 | 31 | 97.6 | 24 | 86.9 | 34 | 89.9 | 45 |
| Georgia | 95.3 | 30 | 96.3 | 30 | 92.8 | 24 | 91.8 | 42 |
| Indiana | 96.0 | 28 | 99.3 | 17 | 82.4 | 40 | 91.6 | 43 |
| Ohio | 99.1 | 20 | 97.4 | 25 | 102.0 | 17 | 107.4 | 10 |
| Illinois | 102.5 | 12 | 103.5 | 8 | 103.1 | 14 | 93.7 | 37 |
| California | 107.2 | 9 | 101.9 | 10 | 135.5 | 10 | 104.4 | 16 |
| Michigan | 108.7 | 6 | 109.2 | 3 | 109.6 | 12 | 103.6 | 20 |
| New Jersey | 114.8 | 2 | 110.4 | 2 | 143.5 | 9 | 104.9 | 15 |

Source: North American Business Cost Review (Updated November 2001) and reported by Kentucky Cabinet for Economic Development

Note: A ranking of one (1) represents the highest cost; U.S. average cost index = 100.0.

As demonstrated in table 22, Kentucky’s overall score ranks the state lowest in terms of cost among the nation’s top 10 auto producing states. In terms of labor (fifth lowest among the top 10); state and local tax costs (second lowest); and utility costs (lowest), all remain powerful incentives for companies operating in the automobile industry to consider operations in the state. In terms of its transportation system, the state remains very competitive. In this regard, the state’s highway system, rail freight utilization, thriving airports, both passenger and cargo (Cincinnati/Northern Kentucky International and Louisville International), low state fuel taxes and fees, remain important.

The Drive to Move South, page 72
Kentucky’s Major Automotive Assembly Plants

» Ford

Ford’s operations in Kentucky involve two distinct units, both located in Louisville. One unit manufactures the Explorer, Explorer Sport Truck and Mountaineer, while the other manufactures the F-Series Truck and the Excursion. Ford first came to Kentucky 90 years ago in 1913 when Henry Ford established a factory in Louisville. Later on in 1925, Henry Ford created “the first modern assembly plant” in Louisville. This plant manufactured the Model A and other Ford trucks and cars. During World War II, the plant produced a range of military equipment.

While the current Louisville plant was opened in 1955, the eastern Jefferson County truck plant (F-Series) was established in 1969. Employment at the former facility stands at 3,800 (as of 2001) while the latter facility employs 7,100 persons. Given the growing demand for its F-Series pickup, Ford’s truck plant expanded in 1997 and now covers 4.6 million square feet, the second largest Ford assembly plant in North America.

» General Motors

In June 1981, General Motors moved production of its flagship Corvette line to Bowling Green, Kentucky, from its former location in St. Louis. This location now remains the exclusive home of the Corvette. More recently, in 2002, General Motors also decided to produce the new Cadillac XLR at this location. This 1 million square foot plant produces about 35,000 vehicles annually and, as of 2001, had about 1,000 employees.

» Toyota

Signaling the start of a wave of automobile assembly plants locating in the South, Toyota’s Georgetown, Kentucky, plant began producing vehicles in 1988. This plant, Toyota’s largest production facility in North America, manufactures the Avalon, Camry and Solara, along with engines (both 4 and 6 cylinder), steering components, axles, blocks, cylinder heads and crankshafts. More than 7,600 employees are based at this plant, and they manufacture about 500,000 vehicles and 400,000 engines each year. In addition, Toyota’s North American headquarters is located in Erlanger, Kentucky (employing about 800), and Toyota’s North American Parts Logistics Division is located in Hebron, Kentucky (employing about 400).

The Economic Impact of Kentucky’s Toyota Facility

The quick and resounding success of the Toyota plant in Kentucky was certainly a catalyst for automakers to consider and then establish a number of other plants across the South. While analysts have noted that the incentive package offered by Kentucky to Toyota has been more than justified, the direct, indirect and induced economic benefits have multiplied several times by the expansion decisions made since the initial announcement in 1985. In order to capture the full extent of this economic impact, the University of Kentucky’s Gatton College of Business and Economics completed a study of the plant’s activities in 1992; this study was then updated in 1998, the most recent study carried out of the plant. Now, even though the data in this report is some five years old, it contains valuable information reinforcing the positive impact played by the Toyota plant in the Kentucky economy. Hence, it is useful to consider the report’s 1998 findings despite the passage of five years.

Prior to evaluating the economic impact of the plant, it is important to consider the financial incentive package provided by Kentucky to Toyota. As reported by the Kentucky Cabinet for Economic Development, the initial incentive package provided to Toyota by the state is presented in table 23.
While the total initial incentive package amounted to $147 million in 1985, the return on this investment has been significantly more in the ensuing years. Toyota’s commitment at that time was to invest $800 million to build and operate an assembly plant to produce 200,000 passenger cars, employ a work force of 3,000 and maintain an annual payroll of $90 million. As detailed in the 1998 University of Kentucky report, the following conclusions remain important:

» Employment was projected in 1986 to reach between 3,000 and 3,200 jobs at the point of full production at the Scott County plant. At the end of 1997, this target number was more than doubled; it was 7,689. (By the end of 2002, total employment at the plant was 7,600; when one factors in the 800 at Toyota’s North American Headquarters in Erlanger and the additional 400 at Toyota’s North American Parts Logistics Division, the total leaps to a resounding 8,800.)

» Annual payroll was projected to reach approximately $90 million at the time of full production. In 1997, payroll was $470.4 million with an additional $125.6 million in employee benefits.

» Originally, Toyota’s investment at the plant was projected to be $800 million. By the end of 1997, the automaker’s total investment at the plant was $4,524.4 million (or $4.5 billion).

» In 1985, full production capacity was expected to reach 200,000; in 1998, this level was more than doubled with capacity reaching 435,000 motor vehicles and 500,000 engines.

» In 1985, it was forecasted that the domestic content of the motor vehicle produced at the plant would be approximately 60 percent of the value of the finished product. At the time of the 1998 report, the domestic content of the finished product was in excess of 75 percent.

» In terms of state revenue collections, discounted cash flow analysis in 1985 indicated an annual rate of return of 8.5 percent from increased revenue collections attributable to the direct and indirect effects of the plant’s operations. A 1992 economic impact study, also carried out by the University of Kentucky, revealed that the projected rate of return had increased to 16.8 percent per annum. These projections were revised upward again in the 1998 study which indicated that the updated annual rate of return stood at 36.8 percent. Between 1986 and 2005, this 1998 study noted that Kentucky would collect over and above the costs of the incentive package, approximately $1.2 billion in tax revenues, attributable to the direct and indirect effects of Toyota’s operations in the commonwealth.
Cumulatively, Toyota’s 1997 outlays of $1,702.7 million in Kentucky for parts and materials, payroll, plant and equipment generated $4,408 million total spending, $1,407 million in household earnings, and 34,544 jobs in the state. Outlays for the period 1998-2005 are projected to rise only by the amount of expected increases in wage rates and costs of parts and materials; after increasing to 34,797 in 2000, the employment effect is expected to remain stable at about 35,000 jobs through 2005.

Finally, through the expenditures of its subsidiaries and affiliates in the United States, Toyota has multiplier effects, roughly estimated in the 1998 report, at $25.2 billion for the total spending effect, $6.1 billion for the household earnings effect, and 150,000 jobs for the employment effect. More importantly for Kentucky, the Scott County and other operations in the commonwealth account for about two-thirds of the economic multiplier effects of automaker’s U.S. operations.

**Kentucky’s Automobile-Industry Related Operations**

Alongside the motor vehicle manufacturing facilities, the presence of several hundred motor-vehicle related facilities adds considerably to the economic potential of the industry in Kentucky as well. According to the latest compilation from the Kentucky Cabinet for Economic Development (July 2, 2003), there are 461 facilities employing 87,794 people, a concrete demonstration of the economic power of the industry throughout the state. (These figures do not include establishments with fewer than five employees.) These companies range from Bluegrass Spring Co., LLC in London with eight employees (established in 1993) manufacturing compression, extension and formed wire and flat springs, to Intertec Systems, LLC in Bardstown with 162 employees (established in 1988) manufacturing automotive interiors, to Lear Corp. in Louisville with 607 employees (established in 1990) manufacturing automobile and van seats, to AMBRAKE Corp. in Elizabethtown with 1,005 employees (established in 1987) manufacturing automotive disc and drum brakes. Additional details on the number of employees at Kentucky’s motor vehicle-related facilities drives home the point about the importance of the economic impact of this entity. Table 24 provides some of these details and as indicated a majority of the firms fall into the category of maintaining somewhere between one and 99 employees. The commonwealth’s prominent employers, those facilities retaining more than 1,000 employees, number seven and are specifically mentioned in table 24.

<table>
<thead>
<tr>
<th>Number of Employees at Kentucky’s Motor Vehicle-Related Facilities July 2003</th>
<th>Number of Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1,000 + Employees</strong></td>
<td></td>
</tr>
<tr>
<td>Toyota Motor Manufacturing Kentucky (7,600 employees in 2002)</td>
<td>7</td>
</tr>
<tr>
<td>Ford Motor Company-Truck Plant (7,100 employees in 2002)</td>
<td></td>
</tr>
<tr>
<td>Ford Motor Company-Assembly Pit (3,800 employees in 2001)</td>
<td></td>
</tr>
<tr>
<td>AK Steel Corporation (1,400 employees in 2002)</td>
<td></td>
</tr>
<tr>
<td>Continental Tire North America (1,300 employees in 2002)</td>
<td></td>
</tr>
<tr>
<td>AMBRAKE Corporation (1,005 employees in 2001)</td>
<td></td>
</tr>
<tr>
<td>General Motors Corporation (1,000 employees in 2002)</td>
<td></td>
</tr>
<tr>
<td><strong>500 to 999 Employees</strong></td>
<td>26</td>
</tr>
<tr>
<td><strong>200 to 499 Employees</strong></td>
<td>92</td>
</tr>
<tr>
<td><strong>100 to 199 Employees</strong></td>
<td>87</td>
</tr>
<tr>
<td><strong>1-99 Employees</strong></td>
<td>245</td>
</tr>
<tr>
<td><strong>Total Number of Facilities as of July 21, 2003</strong></td>
<td>459</td>
</tr>
</tbody>
</table>

Source: Kentucky Cabinet for Economic Development, Division of Research
Motor-vehicle related establishments continue to establish their operations in Kentucky, boosting the economic potential of the commonwealth. One of the more recent such decisions was Kobe Steel, a major Japanese steelmaker that is building a $32.7 million plant in Bowling Green to produce an aluminum material used in making parts for car suspensions. While the production of aluminum forgings, a lightweight material made of pressed metal, is expected to begin in June 2005, the demand for these items has been growing steadily in recent years. As cars are fitted with more safety features and options, the demand for lighter parts has been increasing too. Kobe Steel forecasts annual sales at the new plant to reach $25 million by its second year; the plant will employ 78 persons. The plant’s products will be marketed to both United States and Japanese automakers across the country.
THE AUTOMOBILE INDUSTRY IN LOUISIANA

Overview

Louisiana is another Southern state that maintains an automobile manufacturing plant along, or very near, the famed Auto Alley, the corridor along I-20 that has attracted seven assembly plants.\(^{127}\) The Louisiana plant in Shreveport joins the ones in Arlington, Texas; Vance and Lincoln, Alabama; Doraville and Hapeville, Georgia; and Canton, Mississippi. Louisiana’s initial foray into the automobile assembly business began in 1978 when General Motors established a plant in Shreveport in Caddo Parish. Even though the state has devoted some efforts to secure additional automobile manufacturing plants in subsequent years, these efforts have not proved fruitful. Nevertheless, the motor vehicle industry continues to play an important role in the state’s overall economic calculations with the automotive parts industry being particularly active.

Louisiana’s Major Automotive Operators

» General Motors

By far, General Motors is the most important automotive player in Louisiana. The company’s 2.1 million square foot plant in Shreveport, established in 1978, retains 1,927 hourly and 188 salaried employees. In calendar year 2001, the plant manufactured 120,633 Chevrolet S-10 and 33,415 GMC Sonoma pickup trucks; in 2002, the plant produced 138,386 Chevrolet S-10 pickup trucks.\(^{128}\) While this plant will only produce these two vehicles through October 2003, in the final quarter of 2003, the plant will begin production of two new vehicles for model year 2004, the Chevrolet Colorado and the GMC Canyon, both mid-sized pickup trucks. The latter move, announced early in 2002, was coupled with the announcement that General Motors intended to retool its Shreveport facility to accommodate the new models with an investment that will total $880 million. This expansion effort, financed largely with General Motors funds, was one of the top five auto-related construction projects in the country in 2002. Not only would this expansion and retooling effort retain the almost 2,500 employees at the plant, it will create more than 1,000 new jobs as a result of the relocation of a number of automotive suppliers to cater to the enhanced opportunities given the expansion.

In terms of General Motors’ initial investment in this Shreveport plant in 1978, it was about $400 million. The aforementioned expansion effort, resulting in enlarging the current plant size by an additional 1.8 million square feet, will result in close to $880 million. To secure this expansion, the state, parish and city cumulatively offered General Motors an $11.9 million incentive package in 2002.

While the state has not carried out a formal economic impact study of this plant, several related pieces of information remain useful. For instance, as a result of the recent expansion effort, 16 new automobile suppliers will relocate to the Shreveport community. This will generate

State Facts

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
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<tr>
<td>Percent of Total Workforce</td>
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<td>Direct Employment</td>
<td>15,500</td>
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<td>Auto-Related Employment</td>
<td>19,100</td>
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<td>Auto-Dependent Employment</td>
<td>67,900</td>
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<tr>
<td>Wages</td>
<td>$2.2 Billion</td>
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<tr>
<td>New Vehicle Dealerships</td>
<td>338</td>
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<td>Dealership Annual Sales</td>
<td>$9.6 Billion</td>
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<td>Production Facilities</td>
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<tr>
<td>Vehicles Produced</td>
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<td>New Registrations</td>
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<td>Registered Vehicles</td>
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<td>Publicly-Owned Vehicles</td>
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<td>Licensed Drivers</td>
<td>2,736,000</td>
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<tr>
<td>Total Miles Driven</td>
<td>40.8 Billion</td>
</tr>
</tbody>
</table>

Source: 2002 Ward’s Motor Vehicle Facts & Figures

...
in excess of 1,300 new jobs, more than $40 million in annual payroll, over $84 million in initial capital investment, about 615,000 square feet of new construction and the use of 700,000 square feet of existing commercial property for supply operations. These new developments have to be evaluated in the context of The Center for Automotive Research’s (CAR) assertion “that for each automotive job created, an additional 5.5 spin-off jobs are created.”

In addition to the proposed expansion at the plant and the manufacture of the new Chevrolet Colorado and GMC Canyon lines later on this year, a September 2003 report announced that General Motors is considering the addition of a new truck line to its Shreveport facility. This new truck line will create at least an additional 500 jobs in addition to bringing in a raft of new suppliers. According to reports, the state is negotiating tax incentives with the automaker while General Motors is currently conducting a feasibility study for the new truck line.

**Parts Suppliers**

A number of auto parts suppliers continue to locate their operations in Louisiana, contributing significantly to the economic well-being of the state. One of the earliest to locate in the state was Delphi Interior and Lighting Systems in 1975, in the city of Monroe. In March 1998 (when the source document was authored), the company was producing 30,000 headlamp units and supplying 98 percent of the new vehicle headlamps for General Motors, as well as headlamps for over 80 foreign and other domestic automakers. In 1994, the plant produced the first reflector optic headlamp in addition to supplying the high-density lights for the Cadillac Seville.

In 1981, Johnson Controls Inc., one of the world’s leading auto seating suppliers, began its Louisiana operations. The company supplied seats for the pickup trucks assembled at the nearby General Motors plant in Shreveport. Another company, Tifton Aluminum Company, has been in continuous production in Delhi, Louisiana, since 1983. About a quarter of its production is devoted to aluminum extrusion products such as bumpers, door and windshield frames, seat tracks, brackets, air conditioning fittings, and safety components for air bags. This plant produces all extrusions for the frame of the Plymouth Prowler and the bumpers for the Chrysler minivan; it also supplies parts to the General Motors, Ford and Toyota assembly facilities.

In more recent times, there has been a spate of automotive suppliers locating their operations in the state, particularly in the aftermath of the 2002 General Motors expansion program. These companies include the following:

- Continental Structural Plastics invested $15 million to establish a facility in Sarepta, Louisiana, in northern Webster Parish. The plant, a 65,000 square foot facility (with the capacity to expand to 200,000 square feet), employs 125 workers and will manufacture composite bumper beams, underbody shields and engine oil sumps to supply the General Motors facility in Shreveport and other automakers across the South. With a $207,000 injection from the state’s Opportunity Fund, the company will take on 89 new workers.

- Intier Automotive, with assistance from the state’s Opportunity Fund to the tune of $135,680, decided to locate its newest facility in Shreveport. Intier Automotive will supply the new Chevrolet Colorado with instrument panels and will employ 200 people (at full production), with an estimated payroll of $6 million. The plant, a $15 million facility, will consist of 200,000 square feet with an estimated 100,000 square foot expansion in 2005.

- A-1 Shreveport is another supplier that has set up operations in the Shreveport area to meet the demands of the new models to be
manufactured at the General Motors facility. This plant will provide new engine, powertrain and chassis support for the new Chevrolet Colorado and GMC Canyon pickup trucks. The $15 million, 200,000 square foot warehouse and assembly center is currently under construction. With $882,677 allocated as an incentive from the state’s Opportunity Fund, 219 new jobs will be created at this facility.

NYX, headquartered in Livonia, Michigan, is another company setting up operations in southwest Shreveport to support the General Motors expansion. NYX will produce door panels and other plastic parts and create 350 new jobs. The plant will have an initial investment of $16 million and an annual payroll in excess of $11 million for its 350 new employees.

**Louisiana’s Advantages in the Automobile Industry**

Louisiana offers a number of incentives for automotive-related companies contemplating locating their operations within the state. A sampling of these advantages includes excellent transportation linkages; an abundant supply of labor at competitive wage rates; a vocational/technical school in almost every parish of the state; fully-funded industrial training programs; attractive tax incentives including ad valorem tax exemptions for the first 10 years of operation; and a legislative climate conducive to industrial investment.

Further expansion on some of these features is helpful here. A state transportation trust fund provides $540 million each year for the improvement and maintenance of the state’s transportation network. Six individual interstate highways form the basis of the state’s highway system; 14 railroads operate either main or branch line routes in the state; and the state’s location at the mouth of the Mississippi River provides exceptional deep-water transportation to the world, and the state’s ports are among the busiest in the world.

In the sphere of tax policy, the state offers a 10-year exemption from local property taxes on manufacturing facilities and equipment, inventory tax credits, jobs tax credits, Enterprise Zone benefits, sales tax rebates on building materials and equipment, and tax exemption for goods in transit. There is also no state property or inventory tax.

On the education and training front, the state offers three cost-free training programs through its Workforce Development and Training Program, its Quick-Start Training Program and the federally-funded Job Training Partnership Act. The state’s higher education system includes 26 public and private four-year degree colleges and universities, including two engineering programs that are particularly relevant to the automotive industry: the Robotics Research Laboratory at Louisiana State University in Baton Rouge and The Center for Plastics, Composites and Polymers at the University of Southwestern Louisiana in Lafayette. Another advantage touted by the state’s economic development professionals is the lower labor costs in the state compared to locations in the Midwest and certain other parts of the South.
The Drive to Move South, page 8

THE AUTOMOBILE INDUSTRY IN MARYLAND

Overview

According to the Maryland Department of Business and Economic Development, the state has a significant number of automobile and related operations within its borders. As far back as 1935, General Motors established a truck assembly plant in Baltimore, and this facility continues to be a vital cog in the economic wheel of the city and state. On a cumulative level, based on 2001 third quarter estimates, the department notes that there were an estimated 4,900 employees in 69 motor vehicle manufacturing establishments with total estimated wages of $218,400,000 in 2001. Maryland holds a unique position along the U.S. East Coast, halfway between Boston and Atlanta. Straddling several U.S. regional groupings, Maryland often is the northernmost state within the Southern region or the southernmost jurisdiction within a northeastern grouping. This mid-point location gives the state strategic advantages in many sectors, particularly the manufacturing, transportation and distribution arenas. Furthermore, the state retains a number of other advantages, such as training opportunities; reasonable wage rates; the Port of Baltimore’s location, capabilities and service; and automotive research and development capacity, that make it attractive to automakers.

Economic Impact of the Automobile Industry in Maryland

Maryland’s workforce includes thousands that are involved in different aspects of the automotive industry. The fundamentals of the industry—vehicle and power train assembly, sheet metal stamping, interiors, air conditioning, electrical systems, research and development—all have some presence in the state. As noted by the department, this prowess in the automobile industry flows from the state’s rich manufacturing tradition. Despite a shrinking manufacturing base both in the United States and among the states, Maryland has continued to promote and nurture its production sector. According to a report released in December 2002 by the Maryland’s Advisory Commission on Manufacturing Competitiveness:

“Manufacturing has 168,000 jobs in Maryland. This represents 7.2 percent of all private sector workers in Maryland (2001 data), far below the national average of 13.4 percent. However, the impact of manufacturing is far greater than those numbers may imply. In Maryland, every $2 million in sales of manufactured product supports 10 manufacturing jobs and 13 additional jobs in other sectors such as service, construction and agriculture. Each manufacturing job supports an additional 1.3 wage earning positions, creating approximately 400,000 Maryland jobs.

Manufacturing jobs also pay well; manufacturing jobs, on average paid an annual salary of $47,136, 30 percent higher than the $36,097 average salary paid by the remaining private sectors in the state. Manufacturing [of which the automotive industry is a key component] generated $8 billion in wages. Directly and indirectly, the industry contributed $536 million in state and local taxes.”

State Facts

<table>
<thead>
<tr>
<th>Percent of Total Workforce</th>
<th>3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Employment</td>
<td>19,400</td>
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<tr>
<td>Auto-Related Employment</td>
<td>26,900</td>
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<td>Auto-Dependent Employment</td>
<td>85,900</td>
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<tr>
<td>Wages</td>
<td>$3 Billion</td>
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<td>New Vehicle Dealerships</td>
<td>371</td>
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<tr>
<td>Dealership Annual Sales</td>
<td>$13.9 Billion</td>
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<td>Production Facilities</td>
<td>1</td>
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<td>Vehicles Produced</td>
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<td>New Registrations</td>
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<td>Publicly-Owned Vehicles</td>
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<tr>
<td>Licensed Drivers</td>
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<tr>
<td>Total Miles Driven</td>
<td>50.1 Billion</td>
</tr>
</tbody>
</table>

Source: 2002 Ward’s Motor Vehicle Facts & Figures
To hone in on the state’s automotive industry, Maryland has developed a solid truck manufacturing base. Some of the individual entities of this base include the previously-mentioned General Motors van assembly plant in Baltimore, Allison Transmission in White Marsh, Mack Trucks’ engine and transmission plant in Hagerstown, Wartsila Diesel’s engine manufacture, repair and technician training facility in Annapolis, Mobile Tool International’s truck body and vehicle add-ons production in Frederick, and Electric Transit’s bus body fabrication in Cockeysville. In addition, the state is home to Johnson Controls (automotive seats); Marada (bumpers); Bowles Fluidics (heating and cooling systems); and Rayloc and Converter Source (rebuilt parts).

Undoubtedly, the most important aspect of Maryland’s automobile industry is the General Motors van assembly plant in Baltimore. Since 1935, this plant has been important in the Baltimore corporate community and a significant employer, too. In calendar year 2001, the 3 million square foot plant manufactured 59,585 Chevrolet Astro minivans and 22,679 GMC Safari mid-size vans; the plant employed 1,220 hourly and 146 salaried employees. When General Motors was considering the option of closing this plant due to the declining consumer demand for minivans in the late 1990s, state and local officials worked closely with the company to retain this productive operation and workforce. As a result of these discussions, General Motors decided in early 2002 to continue production, at least through 2005. According to the department, this facility alone has a $1 billion annual impact in the Baltimore region, generating state and local tax revenues in excess of $20 million.

In late September 2003, however, some ominous news regarding the plant emerged when speculation was a rife that the Baltimore plant on Broening Highway in southeast Baltimore might be shuttered even before the 2005 closure date indicated previously. Despite the verbal commitment to keep the plant operational through November 2005, the tentative four-year contract clinched between General Motors and the United Auto Workers suggests that the plant’s closure might arrive sooner. During the 2003 summer, GM cut production by one-third and extended by three weeks its regular two-week summer shutdown because of weak van sales.

The ensuing agreement between Maryland and General Motors also served to retain the numerous automotive suppliers that cater to the plant alongside spawning new investment in neighboring Baltimore County. Important in this connection is the $200 million Allison Transmission facility built, equipped, staffed and made operationally ready in just 15 months. The Allison Transmission plant in White Marsh is reputedly the definitive, state-of-the-art facility in the industry. It is designed to produce 140,000 automatic 5-speed transmissions along with providing approximately 400 skilled workers well-paid manufacturing jobs in the region. This facility is located on a 65-acre site in the northeastern part of Baltimore County and spans 425,000 square feet.

Another important addition to the state’s automotive roster and economic output is the Mack facility in Hagerstown in Washington County. The state worked hard toward convincing AB Volvo, the Swedish parent company of Mack Trucks, to build a new generation of engines at this site. In fact, Mack Trucks’ Powertrain Operation in Hagerstown is the North American manufacturing site for the project. The facility is extremely important for the economic vitality of the state, particularly western Maryland, since it includes a capital investment of more than $100 million and 1,200 skilled jobs for workers in the region.

Table 25 provides more information on the state’s top 10 automotive sector employers.
Economic Incentives Offered to Automotive Industry Players

The state of Maryland has extended a range of economic incentive packages to attract and/or retain these automotive industry players. In general, according to information provided by the department, they have been of a financial nature, extracted from a number of sources, especially the Maryland Economic Opportunities (Sunny Day) Fund. The information below provides some insights into these incentive packages.

» Garden State Tanning (leather automotive interiors): consisted of a $50,000 Maryland Industrial Training Program grant and a $250,000 conditional loan from the Maryland Economic Development Assistant Authority in 2002;

» Marada Industries (metal stamping and bumpers): $1.4 million loan from the Maryland Economic Opportunities (Sunny Day) Fund in 1995 and $125,000 in Maryland Industrial Training Program funds in 1997;

» Allison Transmission (truck transmissions and engines): $2.25 million Maryland Economic Opportunities (Sunny Day) Fund loan for phase I activities in 1999/2000; an estimated $420,000 Job Creation Tax Credit; $2 million micro-finance loan from the Maryland Economic Development Authority; up to $1.5 million in state funds and $400,000 in local funds for training; and up to $252,000 in local funds for infrastructure;

» Kaydon (pistons, rings and seals): Approximately $30,000 in workforce grants in 1999, 2000 and 2001;

» Mack Trucks (diesel engines and transmissions): $2 million conventional loan from the Maryland Economic Opportunities (Sunny Day) Fund in 2002/2003; $1.5 million in Maryland Economic Development Assistance Authority funds; $1.3 million in training funds; potential job creation credits of up to $1 million allowable per facility during one year period; potential miscellaneous tax credit and exemptions; and local incentives; and

» Rayloc (re-manufactured parts): less than $5,000 in workforce funding grants in 1998.

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
<th>Year Founded</th>
<th>Number of Employees</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Motors</td>
<td>Baltimore</td>
<td>1935</td>
<td>1,100</td>
<td>Astro and Safari vans</td>
</tr>
<tr>
<td>Mack Trucks</td>
<td>Hagerstown</td>
<td>1962</td>
<td>1,275</td>
<td>Diesel engines and transmissions</td>
</tr>
<tr>
<td>Garden State Tanning</td>
<td>Hagerstown</td>
<td>1930</td>
<td>1,000</td>
<td>Leather interiors</td>
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<tr>
<td>Marada Industries</td>
<td>Westminster</td>
<td>1983</td>
<td>300</td>
<td>Bumpers and frames</td>
</tr>
<tr>
<td>Rayloc</td>
<td>Hagerstown</td>
<td>1972</td>
<td>450</td>
<td>Re-manufactured parts</td>
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<td>Allison Transmission</td>
<td>White Marsh</td>
<td>2000</td>
<td>420</td>
<td>Transmissions</td>
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<tr>
<td>Bowles Fluidics Corp.</td>
<td>Hanover</td>
<td>1961</td>
<td>300</td>
<td>Air conditioning and washer systems</td>
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<tr>
<td>Kaydon</td>
<td>Baltimore</td>
<td>1950</td>
<td>300</td>
<td>Pistons, rings and seals</td>
</tr>
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<td>Johnson Controls</td>
<td>Aberdeen</td>
<td>1984</td>
<td>160</td>
<td>Seats</td>
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<tr>
<td>Monarch Manufacturing</td>
<td>Aberdeen</td>
<td>1983</td>
<td>100</td>
<td>Plastic parts</td>
</tr>
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</table>

Source: Maryland Department of Business and Economic Development, November 5, 2003
Maryland's Advantages in the Automobile Industry

The department lists a number of automotive assets in the state that cumulatively work to attract and retain interested companies to the state. In addition to those listed previously in this section, i.e., the presence of a strong automotive tradition and a number of companies operating in the state for decades, the following remain important:

- **Proximity to Major Automotive Assembly Facilities**: There are a number of assembly facilities in neighboring states. For instance, in Delaware, both DaimlerChrysler and General Motors operate facilities; Pennsylvania has Mack Trucks and Harley Davidson facilities; Virginia has a Ford car assembly plant, a Bering Truck assembly plant and a Volvo heavy truck assembly plant; finally, West Virginia has producers making engines, sheet metal stampings and automotive electronics. A company locating in Maryland can easily supply parts to these facilities.

- **Training Opportunities**: Maryland actively fosters the preparation and improvement of the state’s workforce through a number of training grants that are awarded to companies and apprenticeship programs. The state’s community college network provides useful training courses in related areas. For instance, the system’s Salisbury campus provides customized training in the relevant areas to employees at Allison Transmission.

- **Reasonable Wage Rates**: The state’s long-standing automotive industry, coupled with training programs that are constantly evolving, continue to provide skilled workers very competitive wage rates.

- **Port of Baltimore**: Arguably one of the state’s strongest assets, the Port of Baltimore offers a combination of modern facilities and an experienced labor force. As described extensively in an earlier section, the Port continues to maintain a solid reputation as one of the nation’s leading automobile ports. Over the past decade, more than 3.5 million cars and small trucks have rolled across the Port’s piers. Currently, the Port’s automotive customers include DaimlerChrysler, Toyota, Mitsubishi, Volvo, Ford, Suzuki, Isuzu, Honda, Porsche and Hyundai.

- **Automotive Research and Development**: The state’s capacities in this area remain world-class with such institutions as the University of Maryland and Johns Hopkins University working in conjunction with a number of federal agencies to carry out cutting-edge research in a number of automotive-related fields.
The Drive to Move South, page 84

**The Automobile Industry in Mississippi**

**Overview**

Mississippi Governor Ronnie Musgrove’s November 9, 2000, statement that Nissan Motor Company would build a new manufacturing plant in Canton, Mississippi, 15 miles north of Jackson, ranked among the most significant economic development projects announced in the state. For a small state like Mississippi, the presence of a major international automaker like Nissan is a substantial boost across a number of categories, including economic, political and psychological. Immediately, Mississippi became an active and viable player in the country’s automobile assembly process, an elevation that enabled the state to compete vigorously with several other states to secure additional plants.

For instance, in February 2002, Mississippi became one of the states under strong consideration for the first Hyundai auto plant in the United States. (Hyundai finally decided to locate this plant outside Montgomery, Alabama.) Then, Toyota Motor Corporation included Mississippi in its short list of possible sites for the construction of a 2,000-job, $750 million automobile plant to produce pickup trucks. (Toyota finally decided on locating this plant outside San Antonio in Texas.) Finally, U.S. Senator Trent Lott indicated that Kia Motors Corporation was “the next major international automaker that will be selecting a site for a new plant” and that Mississippi “cannot afford not to vie for another automaker.”

The important point here is that the presence of the Nissan assembly plant in Mississippi catapulted the state to the status of a serious contender in securing additional assembly plants. Without the Nissan plant, these automakers might not have included Mississippi on their list of possible sites. Hence, the economic impact of the Nissan plant will extend significantly beyond the direct, indirect and induced impacts into the realm of substantial intangible benefits as Mississippi likely will be in the calculations of automakers considering assembly plants in the South.

Given that the Nissan facility, which began at the end of May 2003, slightly ahead of schedule, remains the state’s only automobile production facility, the focus of this Mississippi section will be this plant. The facility will include $930 million in initial funds and an additional $500 million in expansion funds invested by Nissan to eventually generate 5,300 new direct jobs at the 3.5 million square foot site (2.5 million square feet initially and an additional 1 million square feet with the expansion). While the property will extend for 1,400 acres, the facility will produce 400,000 vehicles annually once the expansion is completed. Specifically, the plant will produce the full-size pickup truck (the Titan), the full-size sport-utility vehicle (the Pathfinder Armada), the next generation Nissan minivan (the Quest) and, in spring 2004, the Nissan Altima, the popular passenger car and an Infiniti sport-utility vehicle.

---

**State Facts**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Total Workforce</td>
<td>4.2</td>
</tr>
<tr>
<td>Direct Employment</td>
<td>8,800</td>
</tr>
<tr>
<td>Auto-Related Employment</td>
<td>15,600</td>
</tr>
<tr>
<td>Auto-Dependent Employment</td>
<td>47,400</td>
</tr>
<tr>
<td>Wages</td>
<td>$1.3 Billion</td>
</tr>
<tr>
<td>New Vehicle Dealerships</td>
<td>250</td>
</tr>
<tr>
<td>Dealership Annual Sales</td>
<td>$4.9 Billion</td>
</tr>
<tr>
<td>Production Facilities</td>
<td>1</td>
</tr>
<tr>
<td>Vehicles Produced</td>
<td>0</td>
</tr>
<tr>
<td>New Registrations</td>
<td>124,020</td>
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<tr>
<td>Registered Vehicles</td>
<td>2,289,411</td>
</tr>
<tr>
<td>Publicly-Owned Vehicles</td>
<td>34,352</td>
</tr>
<tr>
<td>Licensed Drivers</td>
<td>2,008,000</td>
</tr>
<tr>
<td>Total Miles Driven</td>
<td>35.5 Billion</td>
</tr>
</tbody>
</table>

Source: 2002 Ward’s Motor Vehicle Facts & Figures
Several entities within Mississippi’s state government apparatus worked together to ensure the success of the Nissan plant and thereby, the state’s economic potential. For instance, the Workforce Investment Network (WIN) Job Center in Canton, Mississippi, is a one-stop shop where residents can claim unemployment benefits, use computers to aid the search for work and forward applications for working at the Nissan plant or the myriad suppliers that have established operations in the vicinity. As an example, Lextron-Visteon has recently relied on the Canton WIN office to accept applications for assembly and material-handling positions, maintenance technicians and quality control personnel. The WIN office then evaluates the applications and conveys information on suitable candidates to Lextron-Visteon, thus ensuring that the company only spends time and effort involved in processing the most suitable candidates.

**Nissan’s Timeline in Mississippi**

Officials at every level of Mississippi government, the private sector and Nissan were successful in setting a record pace for converting a thousand-acre plus rural area into a bustling and fully operational automobile plant equipped with the latest technological advancements in the industry. In fact, site selection and preparation of a 2.5 million-square foot automobile assembly plant is reputed to take between 12 and 18 months; Mississippi was able to achieve this major undertaking in a record five months (November 9, 2000 to April 1, 2001). Collaboration among a range of Mississippi officials and private contractors enabled some impressive gains in the entire process, completing assigned projects well before the established deadlines. Some of these results are presented below:

- 78 days from groundbreaking to turnover of the building pad to Nissan;
- 8 months from project award announcement to first employee training;
- 12 months for all water and wastewater systems to be in place and serviceable;
- 14 months from groundbreaking to completion of new I-55 interchange; and
- 32 months from announcement to production.

Some insights into the time period for the Nissan project’s evolution also are important. Madison County officials held their first meeting with Nissan officials on June 21, 2000; at that time, the identity of the company was held confidential and officials had to sign confidentiality agreements. On November 6, 2000, the Mississippi Legislature met in a special session to pass an economic development bill that included infrastructure improvements and tax incentives to lure Nissan to the state. Then, three days later, on November 9, 2000, a joint announcement was made by the governor and Nissan officials regarding the establishment of the plant. About five months later, on April 1, 2001, Mississippi handed over the building pad to Nissan and the company began the building construction process. Finally, on May 27, 2003, the plant was opened for production and on July 2, 2003, the first Nissan Motor Company vehicle made in Mississippi, a $34,000 Quest minivan, was sold to BankPlus, a company providing banking services to the plant’s employees.

**Advantage Mississippi: Economic Incentives Provided by the State**

In order to be competitive among so many other locations, the Mississippi Development Authority offers a number of incentives to potential companies considering relocating to the state. In order to secure Nissan’s relocation within its borders, Mississippi provided the company $363 million in direct incentives; including the additional funds allocated for the expansion effort, in 2002, which was initiated ahead of schedule. In return, Nissan’s planned
The incentives offered to Nissan, and potentially available to other companies contemplating establishing their operations in the state, may be divided into five broad categories:

- **Tax Breaks:** While tax incentives are a major component of the package pulled together for companies, there are many more features such as a tax credit program, the 4 percent payroll rebate, tax free zones and the Regional Economic Development act—which allows local governments to form alliances with other political subdivisions—and job tax credits for positions that pay more than 125 percent of the average annual wage rate.

- **Employee Training and Support:** Since training is key to a company’s success, updated legislation now gives the Mississippi Development Authority the flexibility to offer highly specialized technology training and multi-year training commitments as incentives.

- **Infrastructure:** The state constantly seeks to enhance its capacities in air, rail, road and port, including intermodal connections, so as to broaden its appeal to companies. Telecommunication improvements, especially in the area of high-speed data and broadband access, remain important.

- **University Resources and Research:** Given the network of universities, technical and two-year colleges across Mississippi, the state seeks to effectively use these knowledge-based resources to increase its attractiveness to companies.

- **Government Support:** The MDA offers government accessibility, accountability and responsiveness to business and industry leaders either looking to locate or expand in the state.

### The Economic Impact of Nissan in Mississippi

For a state of Mississippi’s economic size, a project that includes several hundred million dollars in incentives to attract a large international corporation like Nissan is a tremendous responsibility. The significant fiscal commitment was made all the more onerous since the deal was agreed upon a short while before the U.S. economy began faltering and, eventually, plunging into recession. Hence, the state carried out a careful analysis of the project, including a comprehensive economic impact study that forecasted the plant’s impact during a 25 year period, beginning with 2001, when construction of the initial facility began; continuing through 2002, when construction of the expansion began, and 2003, when vehicle production associated with the initial project began; extending through 2023, when the primary incentive expenses conclude; and ending in 2025.

In this analysis, the plant’s economic impact is measured in several ways:

- Direct economic impact associated with the construction, investment, operation, and employment of the facility;
- Indirect economic impact associated with new businesses that the direct impact generates throughout the state economy;
- Induced economic impact that the direct and indirect growth will have on the retail sector of the state through expenditures by direct and indirect employees;
- Revenues to Mississippi from sales, income, and other taxes; and
- Tax revenues to local jurisdictions.
In reviewing the indirect and induced economic impacts generated by the Nissan plant, a range of economic activities from companies supplying auto parts to the plant, to major infrastructure projects (highways to waste water treatment plants to rail connections), to retail and service industry entities setting up operations all have sprung up in response to the plant. Details on a fraction of these different enterprises help further illustrate the economic ripple effect of the Nissan plant:

» Eutaw Construction Company’s $2.5 million contract involved earthwork preparation for the Nissan Rail Facility and extending two large box bridges under the Canadian National Railroad;

» Nelson Plumbing of Nesbit, Mississippi, was awarded a $1.5 million contract to work on the plant;

» City of Canton, the location of the plant, was awarded a grant to support the design and construction of the Canton Fire Station and purchase of equipment;

» Construction of the $6 million Center for Advanced Vehicular Systems at Mississippi State University in Starkville, Mississippi; and

» Auto parts suppliers like Yorozu Corporation, which invested millions in its 83,000-square foot building in Vicksburg, Mississippi, will have 120 employees once it is operational; TKA Fabco’s 200 employees making body panels in Tupelo, Mississippi; and PPG Industries, an automotive coverings plant with seven employees in tiny Gluckstadt, Mississippi.

In further exploring the economic impact of the facility, the following conclusions are reached in the report for the categories of employment; personal income; tax revenues; and future value of state expenditures.

**Employment**

Based on the projects’s economic assumptions, table 26 provides estimates for the number of jobs created and to be created as a result of the Nissan facility in Mississippi. Direct jobs refer to the construction jobs created during the plant’s construction (initial and expansion) and the workers hired to staff the plant once it is fully operational (both in the initial and expansion phases). Indirect jobs are created as a result of the multiplier effect with the additional jobs created throughout the state, such as at Tier I and Tier II supplier plants and other related jobs. Due to a natural lag in achieving the full multiplier effect, this analysis employs a graduated multiplier for the first six years of vehicle production. For instance, The Brown Corporation’s 240 employees, located in Greenville, Mississippi, supplies metal stampings, welded assemblies and seat frames to the Nissan plant and ranks as one of the Tier I suppliers. Induced jobs are created in the retail sector from activity generated by the statewide expenditures of the wages and salaries paid to the direct and indirect employees. For instance, Gray-Daniels Nissan North dealership, a dealer that sells vehicles manufactured at the Canton plant, ranks as an entity generating induced economic effects. Similarly, BankPlus, which provides banking services to the plant’s employees is another example of an entity generating induced economic effects.
As indicated in table 26, the 5,519 jobs (mostly construction) created as a product of the plant's initial work balloons to a projected 31,683 by 2010, an impressive achievement. After 2010, since the multiplier effect would have been fully realized, it is estimated that any additional job growth will be relatively minor.

**Personal Income**

Table 27 demonstrates that the projected personal income levels generated by the Nissan plant remain significant. Specifically, the $130 million in personal income generated in 2002, is eclipsed by the $502.9 million to be generated in 2005, and the even more sizable $903 million to be garnered in 2010.

**Tax Revenue**

As indicated in table 28, the tax revenues to be collected as a result of the Nissan plant are very substantial. These revenues, based on business and employee earnings, will trickle down to the county and city levels as well as the state level. The analysis begins in 2005, the first year of full employment at the Nissan facility, and in 2005 total quantifiable state tax receipts are projected to be $26.8 million. Similarly, in 2010, it is expected to grow steadily to reach $48.1 million. Total (state and local) cumulative receipts for the period 2002 through 2005 are expected to be $95.5 million and, by 2010, this cumulative amount is expected to leap to $287.1 million. By 2015, cumulative tax receipts at both the state and local levels are expected to have reached more than half a billion dollars ($537.7 million precisely).
Finally, it is important to note that by 2025, two years after the end of Mississippi’s repayment of the initial incentive payments to Nissan, the state is forecasted to have received a total of just over $1 billion ($1.1 billion precisely) in taxes that would not have been generated without the Nissan plant. Hence, the importance of the Nissan plant from a purely tax collections perspective is impressive.

<table>
<thead>
<tr>
<th>Category</th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property</td>
<td>$21,398,594</td>
<td>$90,905,968</td>
<td>$167,654,196</td>
</tr>
<tr>
<td>Personal Income</td>
<td>$21,348,243</td>
<td>$96,232,459</td>
<td>$180,167,745</td>
</tr>
<tr>
<td>Gas</td>
<td>$3,566,432</td>
<td>$15,150,995</td>
<td>$27,942,367</td>
</tr>
<tr>
<td>Car Tag</td>
<td>$1,827,797</td>
<td>$7,764,885</td>
<td>$14,320,462</td>
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<tr>
<td>Contract: Building</td>
<td>$2,800,000</td>
<td>$2,800,000</td>
<td>$2,800,000</td>
</tr>
<tr>
<td>Contract: Equipment</td>
<td>$2,555,000</td>
<td>$2,555,000</td>
<td>$2,555,000</td>
</tr>
<tr>
<td>Transport Fuel</td>
<td>$1,380,000</td>
<td>$3,680,000</td>
<td>$5,980,000</td>
</tr>
<tr>
<td>Franchise</td>
<td>$75,000</td>
<td>$200,000</td>
<td>$325,000</td>
</tr>
<tr>
<td>Suppliers’ Franchise</td>
<td>$750,000</td>
<td>$2,000,000</td>
<td>$3,250,000</td>
</tr>
<tr>
<td>Nissan Direct Sales</td>
<td>$2,250,000</td>
<td>$7,250,000</td>
<td>$12,250,000</td>
</tr>
<tr>
<td>Sales</td>
<td>$37,538,820</td>
<td>$164,593,053</td>
<td>$316,005,634</td>
</tr>
<tr>
<td>Total (State and Local)</td>
<td>$95,489,886</td>
<td>$393,132,360</td>
<td>$733,250,404</td>
</tr>
<tr>
<td>State</td>
<td>$70,524,859</td>
<td>$287,075,397</td>
<td>$537,653,841</td>
</tr>
<tr>
<td>Local</td>
<td>$24,965,027</td>
<td>$106,056,963</td>
<td>$195,596,563</td>
</tr>
</tbody>
</table>

Source: Mississippi Development Authority

The Cumulative Adjusted Payout vs. Tax Collections, Mississippi Nissan Plant

Source: Mississippi Development Authority
While this analysis has focused more on the tax receipts accrued to the state, the impact on localities cannot be underestimated. For instance, localities will have cumulatively secured $24.9 million by 2005, $106.1 million by 2010, and $195.6 million by 2015. It should be noted that the local tax receipt estimates in table 28 do not include local school taxes; hence, the inclusion of these tax receipts further boosts the overall collection levels.

**Future Value of State Expenditures**

The several hundred million the state of Mississippi is slated to provide Nissan in direct incentives sometimes attracts criticism within certain sectors. It is important to compare these state expenditures with the state tax revenues forecasted as a result of the economic activity generated by the plant. The study performs this task by projecting and accumulating the future value (taking inflation into consideration) of the present dollar spending stream and the projected tax revenues over a 25-year period, 2001-2025. Figure 16 graphically presents this analysis.

A comparison of these two values—cumulative adjusted (future value) payout and tax collections—demonstrates a break-even point in 2007; the point when accumulated revenues exceed the accumulated cost of Nissan to the state. After 2007, Mississippi will experience a net financial benefit even though the incentive expenditures continue. As noted in the earlier section on tax revenue, a total of $1.1 billion in quantifiable taxes would have been collected by the state treasury on account of the Nissan project. As noted in the report:

> “State spending associated with Nissan also increases throughout the period, but at a slower rate. By 2025, adjusted, cumulative spending will total $626.1 million, and Nissan-related tax revenues are expected to exceed Nissan-related incentives by $467.4 million. Mississippi will have received a 175 percent return on its investment in Nissan. While the economic and quality of life benefits of Nissan to Mississippi will be realized throughout the life of this study, by 2007, Mississippi will experience net positive financial growth. Based on these results, it is reasonable to conclude that the incentives to Nissan’s initial project and expansion have been a very good investment for Mississippi.”

However, it should be noted that there is some disagreement on the break-even point referenced in the report. A more conservative economic impact report prepared by the state College Board notes that the state will “not break-even until 2015.” However, officials connected with this report insist that the “state’s pursuit of Nissan and the incentives offered to get Nissan to choose Mississippi are going to be good for the state.” In terms of the two reports, the biggest disagreement appears to concern the size of the average multiplier. According to the first economic impact study, a multiplier of 6 is entirely feasible given that is the multiplier found in six sites where foreign auto plants have recently been built in the South. In contrast, the other study used a multiplier of less than 3, concluding that the state would break-even by 2015, as opposed to 2007, cited by the first study.

In conclusion, it is important to note that despite the different break-even points of the two reports, they both consider the luring of Nissan to construct an automobile assembly plant a tremendously positive economic development for the state.
THE AUTOMOBILE INDUSTRY IN MISSOURI

Overview

Missouri’s connection to the automobile industry extends back many decades to the 1920s, when the Ford Motor Company began production of its Model T at a multi-story factory on Forest Park Boulevard in St. Louis. General Motors followed soon thereafter, constructing a large multi-story complex, first in St. Louis and then two assembly plants in the Kansas City area. The industry’s dominance in the state’s manufacturing base resulted in Missouri being considered second only to Michigan in the production of cars and trucks for many years. While this scenario has changed in recent decades, Missouri’s automotive industry continues to be a strong player in national figures. For instance, in 2000, Missouri ranked second in the United States in truck production, trailing only Michigan (1,112,230 trucks in 2000). Among the SLC states, Missouri ranked second in 2001 gross state product figures (GSP), both in terms of the actual number ($5.6 billion contribution to the state’s GSP) and in terms of percentage contribution to GSP (3 percent).

Automobile Production in Missouri

According to 2003 information forwarded by the state’s department of economic development, Missouri has five major automobile assembly plants: two DaimlerChrysler plants in Fenton; two Ford plants in St. Louis and Kansas City; and a General Motors plant in Wentzville. In fact, the location of four of the five plants in the St. Louis metropolitan area makes St. Louis the only metropolitan area outside Michigan to have plants of all the Big Three. Figure 17 graphically presents the location of these plants while table 29 provides some additional details.

State Facts

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Percent of Total Workforce</td>
<td>8</td>
</tr>
<tr>
<td>Direct Employment</td>
<td>36,200</td>
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<tr>
<td>Auto-Related Employment</td>
<td>91,200</td>
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<td>Auto-Dependent Employment</td>
<td>221,200</td>
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<tr>
<td>Wages</td>
<td>$7.6 Billion</td>
</tr>
<tr>
<td>New Vehicle Dealerships</td>
<td>519</td>
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<tr>
<td>Dealership Annual Sales</td>
<td>$14 Billion</td>
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<tr>
<td>Production Facilities</td>
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<tr>
<td>Vehicles Produced</td>
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<tr>
<td>New Registrations</td>
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<td>Registered Vehicles</td>
<td>4,579,629</td>
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<td>Publicly-Owned Vehicles</td>
<td>33,347</td>
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<tr>
<td>Licensed Drivers</td>
<td>3,857,000</td>
</tr>
<tr>
<td>Total Miles Driven</td>
<td>67 Billion</td>
</tr>
</tbody>
</table>

Source: 2002 Ward’s Motor Vehicle Facts & Figures
As noted by the Missouri Department of Economic Development, the importance of the automobile industry to the Missouri economy is probably greater than reflected in charts displaying employment levels. As a result of the high wages of the industry, along with the high value added in automobile assembly processes, the industry tends to have a disproportionate impact on economic measures such as total wages, personal income and GSP. Figure 18 demonstrates the share of Missouri GSP produced by the automobile industry, along with a graphical representation of the state’s total manufacturing sector.

<table>
<thead>
<tr>
<th>Company</th>
<th>City &amp; County</th>
<th>Vehicle Produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>DaimlerChrysler</td>
<td>Fenton North, St. Louis County</td>
<td>Caravan; Town &amp; Country; Voyager; Ram Pickup</td>
</tr>
<tr>
<td></td>
<td>Fenton South, St. Louis County</td>
<td></td>
</tr>
<tr>
<td>General Motors</td>
<td>Wentzville, St. Charles County</td>
<td>Savana; Express</td>
</tr>
<tr>
<td>Ford</td>
<td>Claycomo, Clay County</td>
<td>F-150; Explorer; Escape; Mountaineer; Tribute</td>
</tr>
<tr>
<td></td>
<td>Hazelwood, St. Louis County</td>
<td></td>
</tr>
</tbody>
</table>

Source: Missouri Department of Economic Development

As indicated in figure 18, manufacturing’s contribution to Missouri has been inching downward over the past two decades, to slightly less than 20 percent. (Even nationally, the contribution of the manufacturing sector to overall gross domestic product has been declining, with the service sector’s output gaining significantly.) It should be noted that the motor vehicle industry’s performance remains much more variable in comparison to total manufacturing. The drastic fluctuations, with the industry’s contribution falling by more than half in certain years and then advancing rapidly in other
years, does have serious ramifications for the stability of the overall state economy.

Alongside the automobile industry juggernauts in Missouri, employing hundreds of workers—the five assembly plants each employ several thousand workers (Ford in Kansas City: 5,600 employees; DaimlerChrysler in Fenton North: 5,000 employees; Ford in Hazelwood: 3,000 employees; General Motors in Wentzville: 3,000 employees; the second DaimlerChrysler plant in Fenton South: 2,700 employees)—there are myriad parts suppliers that cumulatively employ thousands of Missourians. For instance, Holland Binkley Company in Warrenton manufactures truck and trailer steel parts, landing gear, tandem sliders and roll-formed components and employs 550 workers; Modine Manufacturing in Joplin produces truck engine oil coolers and employs 180 workers; Hayes Lemmerz International in Sedalia manufactures steel and aluminum automobile and truck wheels and employs 770 workers; Avatar Components Corporation in Marshfield manufactures transmission components and employs 50 workers; and Best Built Parts in Springfield manufactures truck and automobile clutches and drivelines and employs 20 workers. Hence, the economic impact of these numerous firms continues to contribute to the state’s GSP and revenue base along with providing thousands of jobs.

Ford

As indicated at the outset, Ford’s relationship with the state of Missouri goes back to the 1920s, when the company established an assembly plant in the city of St. Louis. In the late 1940s, the company closed its St. Louis plant and set up a new facility in Hazelwood, a suburb of St. Louis, close to the city’s international airport. In the early 1960s, the company also built a plant at the western end of the state in Claycomo, near Kansas City, Missouri. In 1977, the company began production of the Ford Fairmont at its Claycomo facility and very soon, production of the Fairmont and full-size pickup trucks pushed employment at this facility to over 5,000 employees. In 1983, Ford ceased production of the Fairmont and began production of the Ford Tempo and Mercury Topaz at its Claycomo site. Then, in 1993, Ford discontinued production of the Tempo and Topaz and replaced these cars with the Ford Contour and Mercury Mystique, also at the same site. In the mid-1990s, in response to the growing demand for sport-utility vehicles, Ford phased out production of the Aerostar minivan series at its Hazelwood plant and converted the plant to manufacture Explorer SUVs. Then, in 1999, at its Claycomo plant, Ford discontinued passenger car production and converted the facility to solely manufacture SUVs. Finally, in 2002, Ford announced that it will close its Hazelwood facility later in this decade.

According to the Missouri Department of Economic Development, employment levels at both these Ford facilities remain quite substantial. In particular, the Claycomo facility employs 5,600 individuals and the Hazelwood facility employs another 3,000 persons. Hence, the announcement in 2002, that the company intended to phase out its production plant in Hazelwood by the middle of this decade was met with great concern by current employees, their families and government officials. In response to the possible closure of this facility, the department initiated, and released in 2002, a study assessing the potential impact of this closing on the state’s economy. While the study’s estimates hinged on the facility closing in 2004, the
potential losses were estimated for the next decade. Some of the key findings of the study concluded that:

» In 2004, the state would lose 0.41 percent of total GSP due to the layoffs, a $753.3 million loss. By 2013, the state would have lost 0.32 percent of total GSP, a $714.9 million loss.

» In 2004, the loss of 2,600 jobs at the facility would translate into the loss of 8,950 ancillary jobs in the state; a total of 11,550 jobs and $546.3 million in lost wages. By 2012, the state would lose 8,369 jobs and $457.7 million in lost wages. These job losses would percolate to the durable manufacturing (most pronounced), services and retail trade sectors.

» In 2004, the state is expected to lose $25.16 million in state tax revenue due to the plant closure. However, decreased demand for public services due to the decline in population in the town of Hazelwood would save the state $2.62 million. Hence, by 2012, it is estimated that the state’s net losses would amount to $17.73 million.

» Along with the state’s expected economic losses, the St. Louis metropolitan area, the immediate vicinity of the plant, would face the pinch of this Ford plant closure more directly. In this regard, the forecast is that the metropolitan area would lose 0.8 percent of total gross regional product, or $631 million, as a result of the layoffs in 2004. By 2013, the region would continue to lose 0.62 percent of total gross regional product (or $612 million).

In late September 2003, more information on the status of the possible closure of the Ford plant in Hazelwood emerged when it was announced that the state of Missouri had offered a $9 million incentive package to Ford to ensure the operation of the Hazelwood assembly plant for at least the next four years. Although the package is smaller than many had expected, it is the first step in a long-term effort to keep the plant open beyond 2007. (This initial figure does not include any county or city tax breaks even though the city of Hazelwood and St. Louis County are planning to provide tax abatements to help with the financing on the plant.) A critical factor in the plant’s continued operation is finding a new vehicle to replace the lineup of Ford Explorer, Mercury Mountaineer and Lincoln Aviator sport-utility vehicles now assembled there, a task that may require more incentives in the future. Analysts contend that as these models face growing competition, demand for them probably will ebb in coming years, and Ford would have to introduce newer models to compete with other manufacturers. The $9 million incentive package announced by Missouri Governor Holden includes job-training assistance as well as brownfield and development tax credits to Ford.

» **General Motors**

After Ford, General Motors is the automobile company with the longest association with Missouri, having built a large multi-story assembly complex in St. Louis in the 1920s. The company followed this St. Louis plant with two additional assembly plants in the western corner of the state, one in the Leeds district of Kansas City, Missouri, and one in the Fairfax district of Kansas City, Kansas, during the 1930s. Given the widespread global economic contraction in the early 1970s, General Motors was forced to lay off workers on its second shift at its Leeds facility in 1974. The improving economy enabled the company to reinstate this second shift with the introduction of its front wheel-drive “X-Car.” In addition, by the late 1970s, employment levels at its St. Louis facility reached a peak of 12,000 workers producing full-size
Chevrolet passenger cars, Chevrolet pickup trucks and Corvettes. By the early 1980s, though, souring economic conditions and engineering and quality control problems resulted in both the X-Car at the Leeds facility and Corvette production at the St. Louis facility being discontinued. In fact, in 1983, General Motors decided to close the Leeds facility and consolidate operations at the Fairfax plant. General Motors also ended production of its truck line at the St. Louis facility. In 1989, after phasing out the St. Louis facility, General Motors opened a new assembly plant in Wentzville, Missouri. In 1993, once again in response to the negative economic climate, the company shuttered the Wentzville plant, though by 1995, this facility was refurbished and re-opened to manufacture full-size vans.

According to the Missouri Department of Economic Development, the Wentzville facility, which manufactures the Savana and Express full-size vans, employs about 3,000 workers.

» **DaimlerChrysler (formerly Chrysler)**

Chrysler Corporation’s beginnings in Missouri occurred several decades after Ford and General Motors entered the state in the 1960s, when the company built two assembly plants in Fenton, a suburb of St. Louis, Fenton North and Fenton South. Manufacturing continued at these facilities for about two decades, and then in 1980 the company discontinued pickup truck production at its Fenton North facility, resulting in the plant’s closure. The improving global economy enabled the company to reopen the facility to produce its new line of Dodge Caravan and Plymouth Voyager minivans by 1986. Then, in 1990, Chrysler discontinued passenger car production and shut its Fenton South location, even though Fenton North operated with about 5,000 employees. In 1995, after completing a refurbishing of Fenton South, including an automated and roboticized production line, Chrysler reopened this facility to produce the hugely popular minivan lines. Fenton North was reconfigured to produce pickup trucks.

According to the Missouri Department of Economic Development, Chrysler’s Fenton North plant employs about 2,700 workers, while the Fenton South facility operates with about 5,000 workers.

**Automobile Industry’s Impact on Employment Levels in Missouri**

The automobile industry’s impact on generating direct, indirect and induced jobs remains one of its most positive features and the Missouri Department of Economic Development presents valuable information in this connection. Even though employment levels in the industry have held up reasonably well over a period of three decades, the overall trend has been downward as automakers have shifted their operations to locations farther South. The other concern in this area has been its cyclical nature, as consumer demands for vehicles produced at the different Missouri plants have shifted radically with the ebb and flow of the overall economy. Hence, graphing the employment trend in the automobile industry presents a line that fluctuates rather significantly. Yet, this cyclical nature enables multiple shifts to be deployed at the different plants during positive economic times when demand remains high. Similarly, during economically-sluggish times, production is curtailed with shifts at these plants being reduced as well. Another factor that has to be considered in employment levels is the larger consumer shifts being reflected in automobile production. For instance, the growing demand for sport-utility vehicles in recent times has resulted in certain plants being shuttered for extensive periods while they are retooled and reconfigured to reflect the production demands of these vehicles.
As depicted in figure 19, motor vehicles’ share of total employment in Missouri has declined over the past three decades, from about 2 percent in the 1970s, to about 1.2 percent in more recent times. (It is important to note that these employment figures refer to direct employment levels in Missouri’s auto plants.)
North Carolina ranks among the nation’s foremost automotive parts and supply states and has actively promoted this sphere within the automotive industry for several years. Although the state has no passenger car assembly plants, the state does have several truck, bus and heavy construction equipment assembly operations. North Carolina’s focus on developing its automotive cluster has resulted in well over 1,000 companies operating in the state. In fact, Harvard Business School’s Cluster Mapping Project reported that North Carolina’s automotive cluster ranked 10th in the nation in total employment; in the South, only Tennessee had a higher national ranking (5th) in the area of automotive clusters. In fact, the enormity of the cluster is quickly apparent when one considers that the state’s top 30 companies in the automotive cluster cumulatively employ just under 30,000 employees. (See table 30.) In addition, according to the Cluster Mapping Project, North Carolina had more people employed in its automotive cluster than Georgia, South Carolina, Virginia and Alabama; however, Tennessee and Kentucky were two SLC states that had more people employed in their automotive cluster than North Carolina.

North Carolina’s Automotive Cluster

Michael E. Porter, a renowned management expert at Harvard University, often is credited with conceptualizing the idea of clusters. For him, and others studying this trend in contemporary production and manufacturing circles, clusters are much more than loose conglomerations of like-minded companies. To these experts, a successful cluster system refers to the concentration of a number of firms within a related industry alongside numerous strands of cooperation among public and private sector organizations to effectively promote the flourishing of this industry. Specifically, Porter defines clusters in the following manner:

“Clusters are geographic concentrations of inter-connected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include, for example, suppliers of specialized inputs such as components, machinery, and services, and providers of specialized infrastructure. Clusters also often extend downstream to channels and customers and laterally to manufacturers of complementary products and to companies in industries related by skills, technologies or common inputs. Finally, many clusters include governmental and other institutions - such as universities, standard-setting agencies, think tanks, vocational training providers, and trade associations - that provide specialized training, education, information, research, and technical support.”

According to the North Carolina Department of Commerce, the state has pursued the cluster approach for the automotive parts industry pro-actively. Consequently, North Carolina has recruited a variety of car components ranging from the textile fabrics used in car interiors (Visotec Automotive Products in Burke County) to the ceramic filters used in automotive catalytic exhaust systems (NGK Ceramics USA in Iredell County). In 2003, the

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Source: 2002 Ward’s Motor Vehicle Facts & Figures
department inventoried 1,010 company sites in North Carolina’s automotive, truck and heavy equipment cluster. These businesses were identified based on the department’s database searches, web page reconnaissance of companies, and survey of departmental regional staffs. Approximately 400 company sites are primary manufacturers of automobile, truck or bus bodies, construction vehicles and other heavy equipment or motor vehicle parts and accessories. The remaining over 600 firm locations supply equipment, components or materials to primary motor vehicle and heavy equipment manufactures. The latter group manufactures industrial and commercial machinery, primary and fabricated metals, rubber and plastic products, auto or cab interior fabrics, electronic equipment, chemical and petroleum products, and other miscellaneous items used to produce motor vehicles and construction equipment. The activities of these more than 1,000 companies generate a significant economic impact in North Carolina.

A number of the firm sites in the state’s automotive, truck and heavy equipment cluster are located in the Charlotte region, specifically, 416 of the 1,010 companies. The Greensboro-Winston-Salem-High Point region had the next highest number of firms (214). The Asheville (western North Carolina) and the Raleigh, Durham, Chapel Hill regions each had over 100 companies in their regional automotive, truck and heavy equipment clusters.

In October 2002, the state’s department of commerce identified 88 North Carolina motor vehicle manufacturing locations employing 150 or more workers. (See figure 20.) Most of these facilities are near interstate corridors running from and to the Asheville, Charlotte, Winston- Salem, Greensboro and Raleigh-Greenville areas. Also, there are well over 120 other equally large North Carolina companies (e.g., plastics, rubber, electronics, metals, textiles, glass) that supply materials, parts and equipment to these motor vehicle manufacturing facilities. Between 1990 and 1999, just under 16,100 jobs were created in North Carolina’s automotive cluster, a trend that ranked the state 10th among the 50 states in terms of its automotive cluster’s size. In fact, there were 36,663 persons employed in the cluster in 1999, almost 3 percent of the cluster’s total national employment level.

![North Carolina Motor Vehicle Facilities Over 150 Employees](image)

Source: North Carolina Department of Commerce

In terms of contributions to the state’s gross state product (GSP), the department notes that it “is clear that companies in the automobile cluster are continually adding capacity and upgrading machinery and equipment.”

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For example, from 1990 to 2000, the contribution of the motor vehicles and transportation industries to the state’s GSP grew by 212 percent; in contrast, the national growth rate for these industries during the same time period amounted to 68 percent. The department indicates that since 2000, its community investment reports “show continued job growth and investment in the sector.” The department also notes that between 2000 and 2002, $663.5 million in investments flowed into the sector, creating 3,000 new jobs. According to another report, in 1988, the state had 65 Japanese companies, employing about 4,752 workers, supplying parts to the automobile industry; by 2003, the state was home to about 160 such companies generating about 16,000 jobs with a cumulative investment of $3.3 billion. About 65 percent of those companies are manufacturing companies, with sales and service (30 percent) and research and development (5 percent) making up the rest.

While the state’s expertise in the automotive parts industry is internationally-renowned, there are indications that the industry will expand in the coming years. In 2002, the state landed three new Japanese companies and had three expansions in the parts business. These investments totaled $202.5 million while adding 635 jobs. In January 2003 alone, there were two major announcements concerning Honda Power Equipment in Sweepsonville and NT Techno in Oxford. While Honda Power Equipment, which makes engines for lawn mowers and other power equipment, indicated it would expand its site by about 70,000 square feet and hire 200 additional full-time workers and seasonal help, NT Techno, which makes auto transmission parts, announced plans to build a 63,000-square foot plant and employ 40 workers.

Two more examples of North Carolina-based companies servicing the automobile industry are AW North Carolina and Viscotech Automotive Products, both recent additions to the state’s manufacturing base. AW North Carolina, located in Durham with 700 workers, makes parts for the Toyota Camry, while Viscotech Automotive, based in Morgantown, makes car fabrics and plans to employ an additional 200 workers in the next two years.

A thriving research and development component remains a vital ingredient in the expansion of an effective cluster. In this regard, North Carolina is fortunate to have several stellar research programs related to the automobile industry at two of its premier higher educational institutions. At the University of North Carolina in Charlotte, the Center for Precision Metrology, the Motorsports and Automotive Engineering program and the Cameron Applied Research Center are important here. Similarly, at North Carolina State University, the Institute for Transportation Research and Education, the Precision Engineering Center, the Integrated Manufacturing Systems Engineering Institute and the Center for Robotics and Intelligent Machines are vital components in the state’s automotive research area. In addition to these major programs, a number of other institutions of higher education scattered across the state carry out industrial engineering, technical and design programs for the automotive industry. Finally, the state’s community college system offers a number of programs in motor sports and automotive systems technology that undoubtedly bolster the level of technical competence in the state’s automotive cluster.

In promoting the state as one with a thriving automotive cluster, the department notes a number of North Carolina advantages. Some of these advantages include the state’s central location; existing automotive parts cluster, racing industry and truck components; skilled workforce; convenient transportation systems; deep-water ports; and the applied auto
industry research at the University of North Carolina system, the automotive manufacturing and technology programs at Duke University and the auto industry technology training programs at the state’s community college system.

Another point worth the making is that North Carolina automotive, trucking and heavy equipment cluster has a thriving and growing motor sports component. This relatively new industrial sector includes companies manufacturing race cars, racing engines and other high tech automotive racing components. North Carolina is home to almost every major NASCAR Winston Cup, Busch Series and Craftsman Truck Team. Morrisville is North Carolina’s center of racing activity, the location of the $100 million NASCAR research and development lab as well as to a NASCAR-sanctioned trade school. There are over 50 racetracks and 10 racing museums in the state. North Carolina’s motor sports industry complements the state’s automotive, truck and heavy equipment cluster, engages universities in applied research and community colleges in technical training, stimulates tourism and hospitality industries, and provides numerous investment and trade opportunities.

Even though the department indicated that the state has not conducted an economic impact study of the automobile cluster’s impact on the state economy, it did provide information related to the 30 largest companies (of the 1,010) in the state’s automotive cluster. Table 30 details this information.
As demonstrated in table 30, the history of automobile parts manufacturing in North Carolina is a lengthy one, going back as much as 80 to 90 years and continues to be a vital aspect of the state’s economic prowess in the South. Thomas Built Buses, for instance, (now a part of DaimlerChrysler when the latter purchased Freightliner, LLC) maintains a thriving manufacturing plant in High Point, North Carolina.  

Manufacturing mostly school buses, the company is in the process of completing a $39.7 million, 275,000 square foot new production facility on a 90-acre site. The three-quarter mile-long assembly line will have 75 work stations and be capable of producing 22 buses per shift. This expansion effort will add 178 new jobs to the current employment level (estimated at 1,600) when production reaches capacity. Thomas school buses outside the company’s facility under construction in High Point, North Carolina.
Built Buses holds approximately one-third of the conventional school bus market in the United States, all manufactured at the High Point location.

Another automobile industry-related company located in North Carolina is Marconi Commerce Systems (formerly Gilbarco). This Greensboro-headquartered company is one of the largest suppliers of fully integrated point-of-service systems in the world to the retail petroleum industry. The company is also the leading supplier of fuel dispensing equipment to the retail petroleum market and employs over 4,000 employees worldwide, with about 1,600 of them situated in North Carolina. In addition to the manufacturing, research and development facilities in Greensboro, Marconi maintains production operations in Germany, Italy, the United Kingdom, Argentina, Brazil, China and Australia.

Another North Carolina-based company active in the automobile parts industry is Douglas Battery Manufacturing Company of Winston-Salem. Established in 1921, the company now manufactures over 5 million battery units per year at two state-of-the-art manufacturing facilities. Estimated to have about 860 employees at its North Carolina facility, the company’s automotive division is its largest business segment, offering a full range of battery types including automotive; commercial/heavy duty vehicles; marine/RV/personal watercraft; lawn and garden; fleet series; motorcycle; lawn and garden tractor; and golf cart and sweeper/scrubber batteries.

Economic Incentives Offered by North Carolina

According to the North Carolina Department of Commerce, the state provides two types of incentive packages to companies in the automotive cluster:

» Discretionary funds available in the form of loans and grants under such programs as the One N.C. Fund and the Job Development Investment Grant Program (JDIG); and

» Statutory funds available under the William S. Lee (WSL) Tax Credit Act.

Discretionary Funds

Like a number of other states, North Carolina maintains a recruitment fund to attract new companies to the state or to help retain companies already in the state from relocating to another state. While the One N.C. Fund has awarded nearly $30 million in cash to 181 companies in the past decade, at the end of the 2003 legislative session in late July 2003, the fund was almost completely depleted. Of the nearly $6.5 million left in the fund, only $59,000 remained unallocated. The list of companies approved for funds this year includes an automobile parts distributor amongst several other companies. According to a 10-year review (1993 to 2003) of 76 North Carolina projects that received cash awards under this program, the conclusion was that:

» As a matter of policy, North Carolina does not limit the number of times a company may receive funding, and 5 percent of companies received two or more awards for different projects;

» The amount awarded for each job created since late 2001 varied from $312.50 to $7,894.74; and

» About a dozen companies may have closed after receiving about $2.5 million from the One N.C. Fund with only about $700,000 recovered.

In response to this report, North Carolina Commerce Secretary James Fain noted that “lawmakers established broad guidelines to give officials maximum flexibility to decide which companies receive money.”
Statutory Funds

William S. Lee Act

In 1996, the North Carolina General Assembly enacted the William S. Lee Quality Jobs and Business Expansion Act to help existing firms in North Carolina stay competitive by encouraging modernization and investment in new technologies; fostering new investment in North Carolina’s economy, from both new and existing industries; and ensuring that economic growth reaches all people in all parts of the state, particularly distressed rural counties and high-poverty urban areas. In addition, the Act sought to entice existing firms to enlarge their facilities in North Carolina—so as to expand the state’s economy—as opposed to expanding and/or relocating to other states; specifically encourage businesses to locate or expand in Tier 1 and 2 counties; and, finally, to assist in making North Carolina companies more profitable as a result of the Act’s tax incentives, further reasons for the companies to expand employment and investment in the state.

A detailed analysis of the Act’s impact was carried out by the department, and these evaluations indicate that based on the tax credit incentives provided, qualifying companies secured tax concessions for expanding employment, training employees, modernizing machinery, equipment and facilities and/or performing incremental research and development. Companies that met the requirements of the program were then eligible to receive up to a 50 percent reduction of their North Carolina corporate income or franchise tax liability. The analysis also indicated that the program did encourage investment in economically-distressed areas of the state while promoting business activities sought by state policymakers. The program also was found to be equitable as any qualifying company was eligible to receive the tax concessions, whether existing or new, large or small, in-state or out-of state.

However, the report indicated that the incentive program had not been very effective in attracting new start-up businesses to the state. A majority of the companies that took advantage of the Act were businesses already established in North Carolina. Importantly, the report also noted that there was no evidence that the expansion activities at these companies would not have taken place without the enticement of the concessions granted under the Act.

In conclusion, the analysis noted the following regarding the William S. Lee Act:

» It helped firms stay competitive by encouraging modernization and investment in new technologies;

» It encouraged investment in the North Carolina economy from both new and existing industries; and

» It fostered economic growth that percolated to all parts of the state, particularly rural counties and high-poverty urban areas.

Job Development Investment Grant Program

In the fall of 2002, the General Assembly in North Carolina added another tool to its arsenal to retain and recruit business activity in the state. The Job Development Investment Grant (JDIG) program was intended to function as a “flexible, selective, targeted and substantive incentive that can provide front-end monies to induce significant business expansions and new projects.” Once the company meets the stipulated conditions, the statute authorizes JDIG awards from 10 percent to 75 percent of withholdings for eligible positions with a term of up to 12 years. The program became effective in January 2003.
THE AUTOMOBILE INDUSTRY IN OKLAHOMA

Overview
While Oklahoma does have an automobile manufacturing facility, the General Motors plant in Oklahoma City, the state’s prominence in the automobile sphere is in tire production. Specifically, Oklahoma is the largest tire producing state in the country, with all the major players maintaining a significant presence in the state. In addition, the state has a series of parts suppliers that maintain operations across the state.\(^{158}\)

As indicated, almost 5 percent of the state’s workforce is employed directly in either the automobile industry or in a job dependent on the auto industry.

Details on Oklahoma’s Auto Industry
The most significant player in the state’s automobile scenario is the General Motors assembly plant, established in 1979, located in Oklahoma City. In calendar year 2001, this 3 million square foot plant manufactured 60,171 Chevrolet Malibu vehicles. In the following calendar year, the plant produced 77,637 Chevrolet Trailblazers and 43,060 GMC Envoy vehicles.\(^{159}\) While the facility employs 3,400 workers, General Motors secured an ad valorem tax exemption in 2002 as part of an incentive package provided by the state. In 2001, General Motors also initiated an $800 million expansion project.

The other major assembly operation in the state concerns AmTrans of OK (Navistar) which manufactures school buses. Established in Tulsa in 2001, the company currently has 1,550 employees. While this facility’s initial investment extended to $45 million, the company qualified for state assistance under the Quality Jobs Program in 2001.

As noted, a number of auto parts suppliers maintain their manufacturing operations within the state. Some of these suppliers include:

- ASEC Manufacturing, a company established in 1973 and located in Tulsa that manufactures catalytic converters and employs 500 persons;
- BorgWarner Air Fluid Systems, Inc., yet another company established in 1973 (located in Sallisaw) that produces automotive oil and emission control air pumps and employs 300 persons;
- Inalfa Roof Systems, a company set up in Oklahoma City in 2002, with an initial investment of $6.75 million, that manufactures modular auto roof systems for the General Motors plant. (This facility employs 86 persons.);
- Logistics Insights Corporation, another Oklahoma City-based company, supplying the General Motors facility (established in 2002), with an employee count of 100 persons; and
- Textron Automotive Inc, a company established in 1999, in Oklahoma City, that assembles auto dashboards. While the company’s initial investment was $2 million, it employs 75 persons.

State Facts

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Source: 2002 Ward’s Motor Vehicle Facts & Figures
**Tire Manufacturing**

As indicated previously, Oklahoma produces more automobile tires than any other state in the United States. This has resulted in the three major tire manufacturers all maintaining impressive facilities in Oklahoma City (Bridgestone/Firestone); Lawton (Goodyear Tire & Rubber); and Ardmore (Michelin North America).

The earliest facility was set up by Bridgestone/Firestone Inc. (Dayton Tire) in 1969, and this plant manufactures tires for passenger cars and light trucks. While the facility retains 1,800 employees, in 1992, the company injected $28 million in additional investment to boost production.

Michelin North America was established next, in 1970. In February 2003, the company announced plans to augment its investments at its Ardmore, Oklahoma, tire manufacturing facility with an additional capital investment of $144 million. The decision to enhance the plant’s capacity for producing larger tire sizes brings its total anticipated investment to $200 million. While Ardmore, Oklahoma, competed vigorously for this additional capital investment with a number of other Michelin production facilities across the world, the 75,000 square foot expansion will be built by the Ardmore Development Authority and then leased to Michelin upon completion. (The plant currently covers an area of 1,500,000 square feet and has 1,841 employees.) The plant manufactures radial passenger and light truck tires for the original equipment as well as replacement markets. Michelin North America is headquartered in Greenville, South Carolina, and employs 24,640 individuals worldwide. Its Ardmore site is one of 22 plants in 18 locations.

Goodyear Tire & Rubber Company set up its Oklahoma facility in 1979 in Lawton. In 1992, the company implemented an expansion program estimated at $8 million and, then more recently, announced plans to begin the largest single plant modernization effort in the company’s history at its Lawton facility. The $250 million expansion will result in 100 new hires in the Lawton area. It will also increase the plant’s ability to produce higher value-added tires and to utilize the company’s new IMPACT tire manufacturing technology. The company’s Lawton plant is considered one of the best and most productive in its worldwide system. Current employment at the plant amounts to about 2,500 employees. In 2002, the company took advantage of economic incentives passed during the legislative session and could receive between $30 million and $35 million.
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.‡ 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

‡ South Carolina had little previous experience with automobile assembly. For instance, the Anderson Motor Company built a total of 5,553 specialty 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.
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. 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.

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 automakers’ 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, the current achievement of 4,398 in just 10 years is a major accomplishment.

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.) 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

![Figure 21: Jobs Created at the BMW Plant 1993-2001](source: University of South Carolina, May 2002)
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.

<table>
<thead>
<tr>
<th>Total Wages Paid at the BMW Plant 1993-2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Bar chart showing total wages paid at the BMW Plant from 1993 to 2001](source: University of South Carolina, May 2002)</td>
</tr>
</tbody>
</table>

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.

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). 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. (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.
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;

Source: University of South Carolina, May 2002
» 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). 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.

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. 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.
The Drive to Move South

The Automobile Industry in Tennessee

Overview

In mid-June 2003, the much-awaited and closely-watched Harbour Report on manufacturing efficiency in North America’s automobile plants was released. According to this report, the Smyrna, Tennessee, plant that manufactures Nissan’s Altima sedan was deemed the most efficient in North America. (Leading the nation’s automakers in efficiency, Tennessee’s Nissan plant also secured this honor in the 2002 Harbour Report.\textsuperscript{170}) While this impressive achievement serves as concrete evidence of the automaker’s formidable turnaround in recent years, it also amplified the strength of the Tennessee plant and its workers. Since 1977, when Nissan officials first considered Tennessee as a potential site for its first U.S. assembly plant, the state has clearly emerged as a major force in the domestic production of automobiles, ranking 8\textsuperscript{th} in the nation in combined car and light truck production and only trailing Kentucky (3\textsuperscript{rd} in the nation) among Southern states.\textsuperscript{171} Along with the Nissan production facility in Tennessee, the state is also home to a Saturn production facility; in addition, the state harbors hundreds of other companies that manufacture and distribute parts to the automobile industry, a distinct automotive cluster. In fact, these automotive parts companies supply manufacturers beyond the borders of Tennessee to practically the entire North American continent.

According to information provided by the Tennessee Department of Economic Development and Community Affairs in March 2003, the three automotive assembly plants in the state (Nissan, Saturn and Peterbilt [manufacturer of heavy-duty trucks]) and hundreds of automotive suppliers employ tens of thousands of workers. Approximately 38 percent of the state’s manufacturing employment roster is linked to the automobile sector, and employment in Tennessee’s automotive industry can be found in 16 of the state’s 20 manufacturing sectors and three non-manufacturing sectors. Not only has the state’s automotive sector forged ahead in the past decade or so, it has contributed significantly to overall U.S. production levels of cars and light trucks. Table 32 provides this information for the 1984 to 2002 period.

<table>
<thead>
<tr>
<th>State Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Total Workforce</td>
</tr>
<tr>
<td>Direct Employment</td>
</tr>
<tr>
<td>Auto-Related Employment</td>
</tr>
<tr>
<td>Auto-Dependent Employment</td>
</tr>
<tr>
<td>Wages</td>
</tr>
<tr>
<td>New Vehicle Dealerships</td>
</tr>
<tr>
<td>Dealership Annual Sales</td>
</tr>
<tr>
<td>Production Facilities</td>
</tr>
<tr>
<td>Vehicles Produced</td>
</tr>
<tr>
<td>New Registrations</td>
</tr>
<tr>
<td>Registered Vehicles</td>
</tr>
<tr>
<td>Publicly-Owned Vehicles</td>
</tr>
<tr>
<td>Licensed Drivers</td>
</tr>
<tr>
<td>Total Miles Driven</td>
</tr>
</tbody>
</table>

Source: 2002 Ward’s Motor Vehicle Facts & Figures

| Tennessee Production of Light Cars and Trucks 1984 to 2001 |
|---|---|
| Year | Total Production | Percent of U.S. Production |
| 2002 | 643,146 | 5.2 |
| 2001 | 501,418 | 4.4 |
| 2000 | 552,583 | 4.3 |
| 1999 | 561,280 | 4.3 |
| 1998 | 552,813 | 4.6 |
| 1997 | 669,779 | 5.7 |
| 1996 | 728,352 | 6.2 |
| 1995 | 767,884 | 6.5 |
| 1990 | 225,758 | 2.5 |
| 1985 | 151,232 | 1.4 |
| 1984 | 100,510 | 0.9 |

Source: Tennessee Department of Economic Development and Community Affairs
In addition to the assembly plants currently operating in the state, Tennessee continues to aggressively pursue other firms to locate within its borders. For instance, news reports in the early part of 2003, indicated that Mitsubishi Motors America had contacted Tennessee officials seeking information on possible economic incentives available if the company chose to build a plant in the state.\textsuperscript{172} The Japanese automaker, currently with a manufacturing plant in Normal, Illinois, is mulling over expanding its Illinois plant or setting up an assembly plant in another location. While the company’s Normal plant reached its full capacity of 260,000 vehicles last year, company sources indicate that they intend to boost production to about 600,000 vehicles by 2007.

Then, in March 2003, the recently-inaugurated Bredesen Administration made its first major economic development announcement unveiling Toyota Motor Corporations’ plans to build a state-of-the-art facility in Jackson, Tennessee.\textsuperscript{173} The new $124 million engine block plant is expected to generate 200 new, high quality jobs with site preparation and plant construction scheduled to commence later on this year and production starting in late 2005.

**Tennessee’s Assembly Plants**

As indicated previously, there are three automobile assembly plants in the state, and information on these operations, including economic impact details, follows.

\textit{Nissan North America, Inc.}

After a six-year search that was reputed to have extended to some 34 states, Nissan finally decided to locate its third overseas production facility outside Japan (the other two being in Australia and Mexico) and its first North American facility in Smyrna, Tennessee.\textsuperscript{174} This plant represented the company’s single largest investment (an investment value of $660 million) and was intended to produce Nissan trucks. While Nissan’s site selection was announced in April 1980, production of vehicles at the facility began some three years later, in June 1983. The plant currently manufactures one of its best selling vehicles, the Altima, the Xterra SUV and the Frontier pickup truck. In terms of incentives, according to the department, the state provided $22.2 million to assist in industrial training and an additional $22.4 million to the department of transportation to construct roads.

Professor William Fox at the University of Tennessee hypothesizes that there were five factors that remained pivotal in Nissan’s calculations before deciding to locate an assembly plant in Tennessee. He lists these factors as the state’s proximity to a region of the country where a majority of light trucks are purchased; the labor force’s work ethic; lower wage rates compared to other states; lower unionization of employees; and stronger bedrock surface and its ability to withstand the heavy equipment involved.

In terms of the plant’s economic impact, data contained in Professor Fox’s 1988 report remains instructive for the plant’s initial years. Some of the conclusions reached in this report include:

\textit{The plant had the obvious benefit of providing employment during the construction phase and continuing employment during the operations phase. While the plant was scheduled to employ 2,200 persons, by 1987, the size and expectations of the plant expanded rapidly and employment reached 3,300 with the facility operating two shifts. While more than 85 percent of those jobs have gone to Tennesseans, these jobs pay considerably higher than the state average and are highly desirable. (In fact, the department interviewed 52,000 applicants for the 700 positions that opened up at the plant with the introduction of the second shift.)
The economic benefits flowing from the increasing number of automotive parts suppliers to the Nissan plant located in the area surrounding Smyrna was another point stressed by the report.

The department also provides a breakdown of Nissan’s investment flows in the state for the period between 1980 and 2000; this information is presented in table 33. As noted, Nissan has invested almost $3 billion ($2.96 billion) during its involvement in the state and created 8,365 jobs during the review period. Currently, the plant employs 5,451 persons.

According to Nissan, which also opened an engine and transmission production facility in Decherd, Tennessee, in May 1997, global production levels at its Smyrna facility have been increasing steadily in the past few years. For instance, this facility produced 352,927 units in the company’s fiscal year 2001 (April 1, 2000 to March 31, 2001), 363,366 in fiscal year 2002, and, finally, 392,587 in fiscal year 2003, certainly impressive achievements at a time when the U.S. economy was in the throes of the current economic malaise. In terms of Nissan’s sales specifics, the Altima produced at this facility fared the most impressively, recording seven straight months of record sales in early 2003.

Saturn Corporation

In early January 1985, General Motors (GM) formed the Saturn Corporation and began the complicated process of identifying a suitable U.S. location for a manufacturing facility. This prompted an intense competition among states to secure this production facility within their borders, and it is reputed that 38 states competed (with over 20 governors visiting GM’s offices in Detroit to woo the company) aggressively for this project, one of the most sought after projects in the history of industrial recruitment. An important goal of the Saturn project was GM’s decision to depart from the traditional corporate culture found among U.S. automakers and engender a cooperative spirit between labor and management. After an exhaustive process, GM announced its decision in July 1985, that its Saturn plant would be located in...
Spring Hill, Tennessee, a small community approximately 30 miles south of
Nashville.

In terms of incentives, Tennessee secured the Saturn project even though there were other states that offered the company substantially more in financial incentives. In fact, Professor Fox notes that the Saturn experience in Tennessee supports the view that tax concessions and expenditure give-away programs remain of limited consequence in location decisions; in the Saturn example, geographic considerations and transportation considerations were of greater significance. Even though no tax concessions were provided to secure the Saturn project, the state of Tennessee did provide assistance to the company. This came in the form of the construction of an interstate quality road to the site from existing I-65 (totaling about $29.3 million) and state funded industrial job training (totaling about $21.7 million), a total of about $50 million.

According to the Tennessee Department of Economic Development and Community Affairs, Saturn’s investments at its Spring Hill facility have taken the following pattern between 1985 and 2002.

<table>
<thead>
<tr>
<th>Saturn’s Investments in Tennessee 1985 to 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Activity</strong></td>
</tr>
<tr>
<td>« New Project</td>
</tr>
<tr>
<td>« Expansion</td>
</tr>
<tr>
<td>« Expansion</td>
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<td>« Expansion</td>
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<td>« Expansion</td>
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<tr>
<td>« Expansion</td>
</tr>
<tr>
<td>« Expansion</td>
</tr>
</tbody>
</table>

| Source: Tennessee Department of Economic Development and Community Affairs |
| Note: Investment total includes amounts not listed in table |

As documented in table 34, Saturn’s almost $4 billion investment ($3.9 billion to be exact) in the 17-year period between 1985 and 2002 is substantially more than the financial outlays made by the state of Tennessee and probably accounts for the intense competition that unfurled among the states back in early 1985. Furthermore, the plant created 6,860 new jobs over the review period.

According to Saturn, the facility in Spring Hill operated with 5,761 hourly employees and 913 salaried employees. In terms of production, in 2001, this plant manufactured 171,909 Saturn S-Series and 3,284 Saturn Vue vehicles, both in 2001; in 2002, the facility manufactured 34,489 Saturn Ion and 110,968 Saturn S-Series vehicles.

In terms of the plant’s economic impact, the results are quite impressive. As noted by Stuart C. Gilbert, who published an article on the Saturn plant in the fall of 1994, Saturn’s economic benefits percolated down to direct, indirect and intangible economic benefits. While his analysis focused on the direct benefits, the other benefits he lists were significant as well. Specifically,

- Saturn’s presence resulted in 40 suppliers locating in Tennessee, with 26 of them situated in middle Tennessee. In the first four years of operations, these Saturn suppliers carried out purchases that

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Another area of direct economic impact was payroll and the increased economic growth related to the positive effect of Saturn’s payroll activities. In this regard, once again, for the first four years of operation, total gross wages related to the Saturn plant amounted to $137 million in 1990; $253 million in 1991; $341 million in 1992; and $425 million in 1993. In addition, Gilbert concludes that personal income in Maury County, the county housing the Saturn plant, grew by 16 percent in 1988/89, and 13 percent in 1990/91, and that these increases were directly related to Saturn construction activity and high Saturn wages.

On the employment front, in 1989, with the start-up of production at the Saturn plant, unemployment rates for Maury County dipped below state and U.S. averages for the first time during the 1980s, a development attributable to the new facility. In June 1994, there were 8,100 plant employees with 47 percent of this workforce living in Maury County. Approximately, 80 percent of all the new single family housing units built in Maury County have been attributed to the Saturn plant.

Sales tax revenues related to Saturn activity have altered the distribution of local revenue sources. For instance, in 1985, prior to the opening of the Saturn plant, total sales taxes collected by Maury County amounted to $16.5 million; in 1989, with all other variables being held equal, sales tax collections leapt to $28.4 million and $32.3 million in 1990. (In 1991, it was $28 million and $26.5 million in 1992.) Even though these sales tax numbers are based on fiscal activity for the entire county and not just Saturn, the increase in sales tax is predominantly from Saturn construction and the increase in retail sales prompted by the added payrolls.

Peterbilt Motors Company

Since the company’s founding in 1939, Peterbilt has remained a premium quality heavy-duty truck manufacturer in the country. Currently headquartered in Denton, Texas, Peterbilt opened a manufacturing facility in Madison, Tennessee (near Nashville), in 1969. As reported by the Tennessee Department of Economic and Community Development in March 2003, the company had 764 employees. The following information pertains to the company’s activities in the last decade or so.

<table>
<thead>
<tr>
<th>Peterbilt's Investments in Tennessee</th>
<th>New Jobs</th>
<th>Investment</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Activity</strong></td>
<td><strong>0</strong></td>
<td><strong>Confidential</strong></td>
<td><strong>1992</strong></td>
</tr>
<tr>
<td>Expansion</td>
<td>172</td>
<td>$1,845,550</td>
<td>1993</td>
</tr>
<tr>
<td>Expansion</td>
<td>275</td>
<td>Confidential</td>
<td>1994</td>
</tr>
<tr>
<td>Expansion</td>
<td>105</td>
<td>Confidential</td>
<td>1995</td>
</tr>
<tr>
<td>Expansion</td>
<td>0</td>
<td>Confidential</td>
<td>1998</td>
</tr>
<tr>
<td>Expansion</td>
<td>0</td>
<td>Confidential</td>
<td>2000</td>
</tr>
</tbody>
</table>

Source: Tennessee Department of Economic Development and Community Affairs
Note: Investment total includes amounts not listed in table
Tennessee's Automotive Suppliers

A report prepared for the Tennessee Department of Economic and Community Development notes that understanding the factors that have shaped the automobile industry’s growth remained crucial for the long-term sustainability of the industry both in the state and in the region. In this regard, the focus of this particular report was the location determinants of automobile manufacturers and the role played by the presence of an automotive cluster, or host of automotive suppliers, to facilitate just-in-time (JIT) manufacturing capabilities. As the report’s findings suggests, the shortened distance to the closest assembler positively affects the location of suppliers and vice-versa.

According to the aforementioned report, on average, automotive supplier operations in Tennessee maintained about 150 employees with an average annual salary of $56,412. A majority of these firms provided employees with health and dental insurance, tuition reimbursement, training programs and 401-K retirement plans. Importantly, even though the firms were identified as automotive suppliers, on average only 39.4 percent of their total output is sold specifically to the automotive industry, an indication of a substantial level of market diversity. In addition, nearly 70 percent of the output from these firms is exported outside the state, while a large proportion of what remains in Tennessee is likely to be exported when contained in the final automobile.

More recently, September 2003, the Tennessee Department of Economic and Community Development provided an extensive list containing several key pieces of information on the state’s automotive suppliers for the period 1980 to 2003. Table 36 contains an analysis of this information.

<table>
<thead>
<tr>
<th>Year</th>
<th>New</th>
<th>Expansions</th>
<th>Total</th>
<th>Total New Jobs Created in Year</th>
<th>Total Investment in Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>8</td>
<td>14</td>
<td>22</td>
<td>3,735</td>
<td>$783,275,000</td>
</tr>
<tr>
<td>1981</td>
<td>9</td>
<td>27</td>
<td>36</td>
<td>1,995</td>
<td>$168,405,000</td>
</tr>
<tr>
<td>1982</td>
<td>8</td>
<td>22</td>
<td>30</td>
<td>1,826</td>
<td>$203,245,000</td>
</tr>
<tr>
<td>1983</td>
<td>14</td>
<td>33</td>
<td>47</td>
<td>3,098</td>
<td>$236,063,507</td>
</tr>
<tr>
<td>1984</td>
<td>11</td>
<td>50</td>
<td>61</td>
<td>4,075</td>
<td>$221,770,000</td>
</tr>
<tr>
<td>1985</td>
<td>15</td>
<td>37</td>
<td>52</td>
<td>5,762</td>
<td>$1,973,426,000</td>
</tr>
<tr>
<td>1986</td>
<td>22</td>
<td>31</td>
<td>53</td>
<td>2,420</td>
<td>$3,554,325,000</td>
</tr>
<tr>
<td>1987</td>
<td>19</td>
<td>32</td>
<td>51</td>
<td>3,903</td>
<td>$336,553,650</td>
</tr>
<tr>
<td>1988</td>
<td>14</td>
<td>38</td>
<td>52</td>
<td>3,595</td>
<td>$399,921,000</td>
</tr>
<tr>
<td>1989</td>
<td>21</td>
<td>153</td>
<td>174</td>
<td>8,180</td>
<td>$1,415,926,209</td>
</tr>
<tr>
<td>1990</td>
<td>15</td>
<td>157</td>
<td>172</td>
<td>4,045</td>
<td>$472,020,237</td>
</tr>
<tr>
<td>1991</td>
<td>8</td>
<td>106</td>
<td>114</td>
<td>4,266</td>
<td>$283,373,937</td>
</tr>
<tr>
<td>1992</td>
<td>10</td>
<td>214</td>
<td>224</td>
<td>7,926</td>
<td>$699,560,512</td>
</tr>
<tr>
<td>1993</td>
<td>11</td>
<td>207</td>
<td>218</td>
<td>5,922</td>
<td>$760,379,349</td>
</tr>
<tr>
<td>1994</td>
<td>20</td>
<td>250</td>
<td>270</td>
<td>7,765</td>
<td>$1,194,999,221</td>
</tr>
<tr>
<td>1995</td>
<td>18</td>
<td>223</td>
<td>241</td>
<td>4,567</td>
<td>$886,961,698</td>
</tr>
<tr>
<td>1996</td>
<td>26</td>
<td>194</td>
<td>220</td>
<td>6,659</td>
<td>$1,233,191,628</td>
</tr>
<tr>
<td>1997</td>
<td>22</td>
<td>253</td>
<td>275</td>
<td>5,499</td>
<td>$996,348,461</td>
</tr>
<tr>
<td>1998</td>
<td>14</td>
<td>342</td>
<td>356</td>
<td>7,663</td>
<td>$1,214,882,343</td>
</tr>
<tr>
<td>1999</td>
<td>14</td>
<td>274</td>
<td>288</td>
<td>8,050</td>
<td>$1,212,067,407</td>
</tr>
<tr>
<td>2000</td>
<td>8</td>
<td>275</td>
<td>283</td>
<td>7,796</td>
<td>$2,204,041,657</td>
</tr>
<tr>
<td>2001</td>
<td>13</td>
<td>187</td>
<td>200</td>
<td>5,598</td>
<td>$1,781,126,825</td>
</tr>
<tr>
<td>2002</td>
<td>12</td>
<td>187</td>
<td>199</td>
<td>4,442</td>
<td>$1,096,600,864</td>
</tr>
<tr>
<td>2003*</td>
<td>6</td>
<td>35</td>
<td>41</td>
<td>3,908</td>
<td>$563,143,086</td>
</tr>
<tr>
<td>Total</td>
<td>338</td>
<td>3,341</td>
<td>3,679</td>
<td>122,695</td>
<td>$23,891,607,591</td>
</tr>
</tbody>
</table>

Source: Tennessee Department of Economic Development and Community Affairs

* 2003 contains information for only part of the year.
As demonstrated in table 36, automotive supplier operations in Tennessee over an almost 23-year period have been very impressive: 3,679 firms (new and expansions) creating 122,695 new jobs while ploughing in the gargantuan amount of $23.9 billion as investments. In terms of some of the specifics, table 36 indicates that 1998 saw the most number of supplier firms either setting up new operations or expanding their operations in the state (356). This was followed by 288 firms in 1999, and 283 firms in 2000. Interestingly, there were 342 firms expanding in 1998 (the highest number for the review period), while the years with second and third highest number of firm expansions were 275 and 274 in 2000 and 1999, respectively. In terms of new firms, 1996 saw the greatest number of new firms (26) locating in the state, followed by the 22 firms that relocated in both 1986 and 1997.

For the review period, 1989 was the year when Tennessee saw the most new jobs created in the automotive suppliers sector (8,180 new positions), with the 8,050 new positions in 1999, and 7,796 in 2000 ranking second and third, respectively. Finally, in terms of total investment by these supplier firms, 1986 was the year when the highest level flowed in, $3.6 billion. This was followed by the $2.2 billion that was invested in the state in 2000, and the $1.8 billion that was invested in 2001.

In sum, Tennessee’s automotive suppliers have coalesced to create a vibrant automotive cluster in the state, supplying both the assembly plants in the state and numerous other automotive manufacturers outside the state. From the NN Ball & Roller, Inc. producing bearing components in Mountain City, to the Franklin Electrofluid Company manufacturing fluid power systems since 1969 in Memphis, to the Precision Cable producing control cables and wiring harnesses in Portland since 1965, the state of Tennessee continues to attract and retain a wide variety of automotive suppliers. In fact, in April 2003, Governor Bredesden announced the establishment of an $11 million auto parts manufacturing plant that will generate 170 jobs by 2006, in Dickson, about 40 miles southwest of Nashville. This facility will make shock-absorbent pads and interior cushions for Honda, Toyota and Nissan vehicles, with plant construction set to be completed by March 2004. 192
THE AUTOMOBILE INDUSTRY IN TEXAS

Overview

Officials and policymakers in Texas were extremely pleased in early February 2003, when Toyota Motor Corporation, the world’s third largest automaker, announced plans to construct an assembly plant to manufacture full-size pickup trucks. (This plant is expected to be operational by 2006.) Texas had been in heated competition with several other Southern states—Alabama, Arkansas, Mississippi and Tennessee—to secure this manufacturing facility for several months prior to this February 2003 announcement. Until that time, the only automobile manufacturing facility in the state of Texas was the General Motors plant in Arlington, which had opened some five decades previously, in 1951. Hence, Toyota’s decision was considered very promising by state officials during a time when the state, like practically every other in the country, continued to face vexing fiscal problems.

Another important consequence of the addition of the Toyota production plant to the Texas economy will be its impact on the state’s budget. According to a January 2003 news report, motor vehicle sales and rental taxes that helped keep the state budget afloat in the prior fiscal year were down nearly 10 percent during the first three months of fiscal year 2003. In fact, the drop in car sales during this three-month period amounted to about $70 million in state taxes. Hence, the addition of the Toyota pickup truck plant and anticipated economic ripple effects could boost the state’s economic performance.

Texas' Automobile Production Facilities

According to the Texas Governor’s Office of Economic Development & Tourism, the state has two automobile manufacturing plants with the second plant, the Toyota plant, scheduled to be functional by 2006. The other plant, a General Motors facility, produces the Chevrolet Tahoe, Chevrolet Suburban, GMC Yukon and Cadillac Escalade sport-utility vehicles. The proposed Toyota plant will manufacture the Toyota Tundra pickup truck. While the General Motors plant is located in Arlington (Tarrant County), the proposed Toyota plant will be in San Antonio (Bexar County).

Table 37 describes the incentive packages extended by the different levels of government in the state of Texas to the two automobile manufacturing plants in the past decade or so.
As indicated, during the past 14 years or so, the different levels of government in Texas have provided General Motors a total of $395 million in incentives, while the Toyota incentive package totaled $133 million in 2003. While the initial investment made by General Motors back in 1951 was not available, in 1998, the company made a $555 million expansion investment (750,000 square foot addition) at its Arlington location. Production capacity at this plant increased from 32 vehicles per hour to 52 vehicles per hour and 600 new jobs were created. It is also estimated that Toyota’s investment will amount to $800 million when the plant is operational next year.

In terms of the General Motors plant’s specifications, it is reported that the 3 million square foot plant employs 2,418 hourly employees and 199 salaried employees. For calendar year 2001 and 2002, the plant’s production levels included the following number of vehicles.

<table>
<thead>
<tr>
<th>Model</th>
<th>Number</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chevrolet Tahoe</td>
<td>125,794</td>
<td>134,805</td>
<td></td>
</tr>
<tr>
<td>GMC Yukon</td>
<td>40,702</td>
<td>40,563</td>
<td></td>
</tr>
<tr>
<td>Cadillac Escalade</td>
<td>36,657</td>
<td>40,377</td>
<td></td>
</tr>
<tr>
<td>GMC Yukon XL</td>
<td>1,829</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chevrolet Suburban</td>
<td></td>
<td>2,916</td>
<td></td>
</tr>
</tbody>
</table>

Source: www.gm.com

The South's Latest Automobile Assembly Plant: Toyota in Texas

As indicated at the outset, Toyota’s decision to build its sixth assembly plant in North America in San Antonio was greeted with great enthusiasm across Texas. Toyota intends to deploy its newest assembly plant to help it secure at least 10 percent of the U.S. market for full-size pickup trucks, more than twice the company’s current share. The company intends to build its Tundra truck (now built in Princeton, Indiana) in Texas, closer to the market where one of every 10 light truck sales in the United States is in Texas, and for full-sized pickup trucks, the Texas share is one in five. In 2002, sales of the Tundra fell by almost 9 percent to just under 100,000 vehicles, less than 5 percent of the 2.16 million-unit large pickup truck market in the country. Upon completion in 2006, Toyota will build 150,000 Tundras annually at its plant in San Antonio. The San Antonio plant will manufacture several new models including a larger, heavy-duty version of the current model and a four-door “crew-cab” model.

In order to attract the company to locate to Texas, a team of state, county and city officials offered Toyota an incentive package that totaled $133.2 million. According to information provided by the Texas Governor’s Office of Economic Development & Tourism, the following is a summary of state and local (county and city) direct incentives provided to Toyota.
As indicated in table 39, the state share of the total direct incentive package amounts to $42.25 million with the remaining $91 million flowing mostly from county and city funds. In terms of the overall package, analysts point out that the amount offered by Texas was the lowest offered of all the states competing for the project and several non-incentive factors played a larger role in Toyota deciding on the San Antonio location. In addition to the fact that Texas is home to one in five full-size pickup trucks sold in the United States, and that Toyota can now aggressively market the Tundra trucks to Texans as manufactured in Texas, several other reasons played a more dominant role. For instance, the agreement by the state to set aside $15 million to construct an 8-mile rail spur to the Toyota site was, Toyota officials conceded, a critical factor in their location decision, as they sought a site with access to two rail carriers. The state money would pay for most of the eight miles of track needed to connect Burlington Northern’s east-west line near the proposed plant; an additional $5 million needed for the rail project would flow from revenue bonds issued by the newly-created Bexar County Rural Rail Transportation District. Also, the $27.25 million offered by Texas toward job training and recruiting was important.

The plant, which will amount to an investment of $800 million by Toyota, will employ about 2,000 workers with a payroll of nearly $80 million annually and an estimated $4 billion over 25 years. Once employees are trained, their wages will exceed $20 an hour. According to the San Antonio Economic Development Foundation, the economic ripple effects of the plant will extend beyond the city of San Antonio and amount to $1 billion in the next five years and $1.4 billion in the next decade.

The Texas Comptroller of Public Accounts carried out an economic impact study of the plant in October 2002, and this report indicated that Texas would gain more than 16,000 jobs and gain nearly $1 billion in personal income. This report also specified that the proposed new Toyota plant would generate an additional $1.8 billion in new investment in the state while providing more than $36 million in new state tax revenue. While a two-phase impact model was utilized to carry out these estimates (the initial construction phase and the subsequent hiring and production phases), the following set of statistics demonstrates the dynamic revenue and economic impacts expected between 2003 and 2011.

<table>
<thead>
<tr>
<th>Source</th>
<th>Estimated Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>$14,000,000</td>
</tr>
<tr>
<td>City</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Utility</td>
<td>$15,600,000</td>
</tr>
<tr>
<td>State</td>
<td>$27,250,000</td>
</tr>
<tr>
<td>City</td>
<td>$15,000,000</td>
</tr>
<tr>
<td>City</td>
<td>$3,000,000</td>
</tr>
<tr>
<td>City/KellyUSA</td>
<td>$800,000</td>
</tr>
<tr>
<td>Total</td>
<td>$85,650,000</td>
</tr>
<tr>
<td>City/Utility</td>
<td>$3,600,000</td>
</tr>
<tr>
<td>City/Utility</td>
<td>$78,000,000</td>
</tr>
<tr>
<td>City/Utility</td>
<td>$(34,000,000)</td>
</tr>
<tr>
<td>Total</td>
<td>$47,600,000</td>
</tr>
<tr>
<td>Total State and Local Incentives</td>
<td>$133,250,000</td>
</tr>
</tbody>
</table>

Source: Texas Governor’s Office of Economic Development & Tourism

As indicated in table 39, the state share of the total direct incentive package amounts to $42.25 million with the remaining $91 million flowing mostly from county and city funds. In terms of the overall package, analysts point out that the amount offered by Texas was the lowest offered of all the states competing for the project and several non-incentive factors played a larger role in Toyota deciding on the San Antonio location. In addition to the fact that Texas is home to one in five full-size pickup trucks sold in the United States, and that Toyota can now aggressively market the Tundra trucks to Texans as manufactured in Texas, several other reasons played a more dominant role. For instance, the agreement by the state to set aside $15 million to construct an 8-mile rail spur to the Toyota site was, Toyota officials conceded, a critical factor in their location decision, as they sought a site with access to two rail carriers. The state money would pay for most of the eight miles of track needed to connect Burlington Northern’s east-west line near the proposed plant; an additional $5 million needed for the rail project would flow from revenue bonds issued by the newly-created Bexar County Rural Rail Transportation District. Also, the $27.25 million offered by Texas toward job training and recruiting was important.

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As presented in figure 25 and table 40, the potential economic impact of the San Antonio Toyota plant remains tremendous with these positive effects percolating across the state. Citing some of these key estimates ably illustrate the net effect of the project. For instance, in 2011, it is estimated that the plant would generate $67.6 million in additional funds to the state’s general revenue fund. (It should be noted that these general revenue fund gains exclude the effect, if any, from state expenditures for possible inducements and incentives.) Similarly, in 2007, it is forecasted that there would be a net increase of $961.9 million in the state’s personal income, the highest level forecasted in the nine-year period 2003 through 2011. In terms of investment in Texas as a result of the Toyota plant, it is estimated that in 2007, the state...
would see a net increase of $1.8 billion; once again, this year, 2007, was the highest for the nine years forecasted. Finally, on the employment front, in 2007, it is forecasted that as a result of the Toyota plant, Texas would see a net increase of 16,400 jobs. All these trends suggest the very positive economic developments forecasted by the Texas comptroller with the addition of the Toyota plant to the Texas economy.

**Automotive Parts Suppliers in Texas**

According to the Governor’s Office of Economic Development & Tourism, the top 20 automotive suppliers, ranked by employment numbers as of October 23, 2003, are presented in table 41.

### Top 20 Automotive Suppliers in Texas

<table>
<thead>
<tr>
<th>Company Name</th>
<th>City</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Motors (Truck Group)</td>
<td>Arlington</td>
<td>Truck assembly</td>
</tr>
<tr>
<td>Peterbilt Motors</td>
<td>Denton</td>
<td>Heavy-duty trucks</td>
</tr>
<tr>
<td>Yazaki El Paso</td>
<td>El Paso</td>
<td>Automotive injection molding</td>
</tr>
<tr>
<td>Sanden International, Inc.</td>
<td>Wylie</td>
<td>Automotive air conditioning compressors</td>
</tr>
<tr>
<td>Systems L. P.</td>
<td>Sealy</td>
<td>Trucks</td>
</tr>
<tr>
<td>Pollak</td>
<td>El Paso</td>
<td>Semi-truck instrument panels</td>
</tr>
<tr>
<td>S C S/Frigette</td>
<td>Fort Worth</td>
<td>Speed controls and remote security systems</td>
</tr>
<tr>
<td>Lear Corporation</td>
<td>Arlington</td>
<td>Automotive seating</td>
</tr>
<tr>
<td>Hilite International</td>
<td>Carrollton</td>
<td>Automotive fans, pulleys and machined products</td>
</tr>
<tr>
<td>Autotronic Controls Corporation</td>
<td>El Paso</td>
<td>Automotive electronic parts</td>
</tr>
<tr>
<td>A E R Mfg., Inc.</td>
<td>Carrollton</td>
<td>Rebuilt automotive parts</td>
</tr>
<tr>
<td>Stemco, Inc.</td>
<td>Longview</td>
<td>Truck wheel sealing systems</td>
</tr>
<tr>
<td>Four Seasons (Division of Standard Motor Products, Inc.)</td>
<td>Lewisville</td>
<td>Automobile parts</td>
</tr>
<tr>
<td>Lebus Mfg. Co.</td>
<td>Mcallen</td>
<td>Materials handling and lifting, forged fittings, wire rope and chain</td>
</tr>
<tr>
<td>T R W Automotive Products</td>
<td>Mcallen</td>
<td>Rebuilt automotive parts</td>
</tr>
<tr>
<td>International Muffler Co., Inc.</td>
<td>Schulenburg</td>
<td>Exhaust mufflers and tubing</td>
</tr>
<tr>
<td>Ennis Automotive, Inc.</td>
<td>Ennis</td>
<td>Electrical automotive parts</td>
</tr>
<tr>
<td>Atco Products, Inc.</td>
<td>Ferris</td>
<td>Assemblies and crimping components</td>
</tr>
<tr>
<td>Sure Start, Inc.</td>
<td>Cooper</td>
<td>Rebuilt alternators, generators and starters</td>
</tr>
<tr>
<td>R K I, Inc.</td>
<td>Houston</td>
<td>Motor vehicle bodies</td>
</tr>
</tbody>
</table>

Source: 2003 Texas Manufacturing Register

In addition to using the suppliers in Texas, there have been reports that Toyota might utilize the well-developed automotive supplier base just across the border in Mexico.\(^{188}\) With the introduction of the North American Free Trade Agreement in 1994, Mexico has become an automotive supplier powerhouse churning out such components as engines, brakes, truck beds and wire harnesses.
The Automobile Industry in Virginia

Overview

Virginia’s association with automobile assembly plants goes back seven decades when the Ford Motor Corporation established a facility in the city of Norfolk in 1925. This Ford manufacturing plant continues to be one of the most efficient in the industry, producing F-Series pickup trucks, including the F-150, the highest selling vehicle in North America. In addition to another manufacturing facility, Volvo Trucks North America in Dublin, Virginia, the state is also host to a number of parts and components manufacturers.

Automobile Parts Suppliers in Virginia

According to March 2003 information provided by the Virginia Economic Development Partnership (VEDP), while the state has not conducted an economic impact study of the automobile industry in Virginia, there are more than 25,000 Virginians employed in the auto making and parts industry, a number representing approximately 7 percent of the state’s manufacturing workforce. The parts sector accounts for 78 percent of the state’s automotive industry employment while assembly operations total about 4,000 employees. The tire manufacturing sector has the next largest share of automotive employment, with about 3,900 employees, with the motor vehicle seating and trim sector totaling about 3,000 employees. Some of the other prominent supplier operations in Virginia include brake systems, power trains and truck trailers.

The bulk of Virginia’s automotive parts suppliers were established in the last 25 years or so even though there are several that were set up much earlier. For instance, Car-Matic Systems, a Virginia Beach company manufacturing automobile, truck and bus transmission systems, was established as far back as 1919. Then, Narricot Industries, Inc., a Boykins, Virginia, company that produces seatbelt webbing, was established in 1947. A sampling of the other automotive suppliers in Virginia include Darco Southern Inc. (located in Independence and producing gaskets and gasket materials); Teleflex Automotive Group (located in Lebanon and manufacturing cruise control and accelerator cables); Toray Plastics, Inc, (located in Front Royal and producing polyolefin foam for automobiles); and, a recent announcement, Visteon (located in Chesapeake and manufacturing plastic fuel tanks).

Virginia’s Automobile Production Facilities

Ford Motor Corporation

This Ford facility in southeastern Virginia currently produces F-Series pickup trucks, including the F-150 model, the highest selling vehicle in North America. The plant was established in the city of Norfolk in 1925, and has survived a world war, numerous economic downturns (including the 1929 depression), and strong domestic and foreign competition. It has emerged to earn a reputation as one of the industry’s highest-rated and most efficient facilities. While VEDP has no records from the early decades of this plant, in more recent decades, the facility assembled a variety of automobiles and light trucks before production shifted solely to pickup trucks. Information related to announced expansion projects in the last two decades follows.
This Volvo facility in Dublin, in southwest Virginia’s Pulaski County, currently produces Class 8 heavy-duty trucks. The project was first announced in 1973, by White Motor Corporation of Cleveland, Ohio, and vehicles were produced at the plant in 1975. The initial project investment totaled $31.6 million, which included $15.4 million in machinery and equipment and $16.2 million in land and building costs. The initial employment estimate amounted to between 550 and 600 employees. Even though there is no record on project incentives that might have been provided to the company at inception, it was common for projects initiated during that era to use state industrial training funds, i.e., currently referred to as Workforce Services Training Funds. (Virginia had no other major discretionary incentive programs at that time.)

In 1981, Volvo bought White Motor Corporation and operated the facility as Volvo-White Corporation. In 1986, General Motors acquired a 17 percent stake in Volvo-White and by 1988, General Motors turned its heavy truck production over to Volvo-GM Heavy Truck Corporation. By 1994, Volvo Heavy Trucks North America was an independent operation of Volvo AB.

Information related to recent expansion announcements, in the last 15 years, is noted here.

### Table 42: Ford Motor’s Expansion, Investment and State Incentives 1984-2002

<table>
<thead>
<tr>
<th>Year</th>
<th>Additional Employment</th>
<th>Ford’s Investment</th>
<th>Virginia’s Incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>0</td>
<td>$46 million</td>
<td>Not available</td>
</tr>
<tr>
<td>1985</td>
<td>100</td>
<td>None</td>
<td>Not available</td>
</tr>
<tr>
<td>1991</td>
<td>0</td>
<td>$165 million</td>
<td>Not available</td>
</tr>
<tr>
<td>1993</td>
<td>0</td>
<td>$77 million</td>
<td>Not available</td>
</tr>
<tr>
<td>1994</td>
<td>400</td>
<td>$326.8 million</td>
<td>Workforce Services Training Funds - $129,750</td>
</tr>
</tbody>
</table>
| 2001 | 200                   | $375 million      | » Governor’s Opportunity Fund - $500,000  
» Virginia Investment Partnership Grant - $3,000,000  
» Major Business Facility Job Tax Credit - $150,000  
» Workforce Services Training Funds - $200,000  |
| 2002 | 250                   | $25 million       | Workforce Services Training Funds, $250,000 |

Source: Virginia Economic Development Partnership

* Most of the incentives for this project were structured on a performance basis and tied to job creation and investments. Given the deterioration of market conditions for heavy trucks following the 1999 announcement, most of these incentive payments have not yet been paid pending the company realizing its performance targets. In the case of the tax incentives, the company’s actual tax benefits are largely driven by statutory requirements. Under Virginia law, private taxpayer information cannot be divulged.

### Table 43: Volvo Expansion, Investment and State Incentives 1987-1999

<table>
<thead>
<tr>
<th>Year</th>
<th>Additional Employment</th>
<th>Volvo’s Investment</th>
<th>Virginia’s Incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>350</td>
<td>0</td>
<td>Not available</td>
</tr>
<tr>
<td>1994</td>
<td>175</td>
<td>$200 million</td>
<td>Not available</td>
</tr>
<tr>
<td>1997</td>
<td>800</td>
<td>0</td>
<td>Not available</td>
</tr>
</tbody>
</table>
| 1999 | 1,277                 | $148 million       | » Governor’s Opportunity Fund - $3 million  
» Workforce Services Funds - $2.5 million*  
» Virginia Investment Partnership Grant - up to $25 million*  
» Special Allocation to Pulaski County for Infrastructure - $3 million  
» Center of Excellence Training Center - $5 million*  
» Rail Industrial Access Program - $150,000  
» Industrial Access Road Program - $450,000  
» Various Tax Incentives (Enterprise Zone, Major Business Facility Job Tax Credit, Recycling Tax Credit) - Not Available* |

Source: Virginia Economic Development Partnership

* Most of the incentives for this project were structured on a performance basis and tied to job creation and investments. Given the deterioration of market conditions for heavy trucks following the 1999 announcement, most of these incentive payments have not yet been paid pending the company realizing its performance targets. In the case of the tax incentives, the company’s actual tax benefits are largely driven by statutory requirements. Under Virginia law, private taxpayer information cannot be divulged.
THE AUTOMOBILE INDUSTRY IN WEST VIRGINIA

Overview

In responding to this report’s survey questionnaire, the West Virginia Development Office (WVDO) forwarded a series of statistics on 47 automotive supplier operations in the state.\(^\text{189}\) (This information extended for the 13-year period 1990 to 2002.) Even though West Virginia does not have an automobile assembly plant within its borders, the state has a thriving automobile parts industry which plays a prominent role in its economic orientation. In this connection, two major players spring to the forefront: General Motors and Toyota. The state also promotes its proximity to a number of automobile manufacturing plants located in the eastern half of North America, as far north as Ontario, Canada, and upstate New York, as far west as Illinois and Indiana, and as far south as South Carolina and Alabama. Hence, the focus of the West Virginia section of the report will be the state’s automobile parts industry.

Manufacturing and Supplying Parts To the Automobile Industry

As indicated at the outset, West Virginia’s largest automotive suppliers—in terms of investment—are General Motors and Toyota. According to the West Virginia Development Office, General Motors has a parts manufacturing facility in Martinsburg (in Berkeley County) which, in May 1991, underwent an expansion that generated an additional 60 jobs; these jobs were in addition to the 940 jobs already at the facility at that time. In December 1999, this General Motors parts facility underwent another $26 million expansion; the total number of positions at the plants at this point was 1,000. (According to the West Virginia Development Office, in October 2003, the employment level at this plant was 552).\(^\text{190}\)

The major automotive parts manufacturer in the state is Toyota Motor Corporation, and for the period reported (1990 to 2002), Toyota had three expansion projects (two in 1998, in January and September and in January 2001) along with the original investment in May 1996. These four distinct Toyota investments have amounted to almost $1 billion in West Virginia; $400 million as the original investment, $300 million in January 1998, $200 million in September 1998, and then another $50 million in January 2001, for a total of $950 million. The Buffalo (Putnam County) plant originally employed about 300 people and manufactured automobile engines.\(^\text{191}\) In January 1998, during its first expansion, Toyota doubled the engine-production work force and then in September of that year, the company added an automatic transmission manufacturing facility and employed an additional 200 individuals. Finally, in January 2001, Toyota announced that it would build a new production line to the facility and add an additional 200 employees to make engines and transmissions for the Lexus RX 300 sport-utility vehicles (SUV) and the Toyota Matrix, a new subcompact sedan-SUV hybrid. The Buffalo, West Virginia engine factory has the honor of being the first in the United States to make engines or transmissions for the company’s luxury line of vehicles, the Lexus. This latest expansion boosted the total number of employees at the plant to about 1,000 persons.

State Facts

<table>
<thead>
<tr>
<th>Description</th>
<th>Number or Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Total Workforce</td>
<td>3.8</td>
</tr>
<tr>
<td>Direct Employment</td>
<td>5,900</td>
</tr>
<tr>
<td>Auto-Related Employment</td>
<td>8,800</td>
</tr>
<tr>
<td>Auto-Dependent Employment</td>
<td>26,800</td>
</tr>
<tr>
<td>Wages</td>
<td>$780 Million</td>
</tr>
<tr>
<td>New Vehicle Dealerships</td>
<td>188</td>
</tr>
<tr>
<td>Dealership Annual Sales</td>
<td>$3.5 Billion</td>
</tr>
<tr>
<td>New Registrations</td>
<td>92,181</td>
</tr>
<tr>
<td>Registered Vehicles</td>
<td>1,441,735</td>
</tr>
<tr>
<td>Publicly-Owned Vehicles</td>
<td>48,578</td>
</tr>
<tr>
<td>Licensed Drivers</td>
<td>1,347,000</td>
</tr>
<tr>
<td>Total Miles Driven</td>
<td>19.2 Billion</td>
</tr>
</tbody>
</table>

Source: 2002 Ward’s Motor Vehicle Facts & Figures
A number of trends may be gleaned from the information provided by the West Virginia Development Office on the state’s automotive suppliers. In terms of the different operations within the state, the distribution of when most of them were established follows:

1990  two companies including PTI in Point Pleasant (Mason County) manufacture injected molded components;
1991  two companies including South Charleston Stamping & Manufacturing in South Charleston (Kanawha County) produce stamped auto parts;
1994  two companies including NGK Spark Plug Manufacturing in Sissonville (Kanawha County) manufacture spark plugs;
1995  two companies including American National Rubber in Ceredo (Wayne County) produce rubber products and gaskets for the automobile industry;
1996  seven companies including Diamond Electric Company in Eleanor (Putnam County) manufacture ignition coils;
1997  three companies including Lippert Components in Berkeley Springs (Morgan County) produce metal RV components;
1998  seven companies, including the aforementioned Toyota facility, manufacture V-6 engines for the Camry, Avalon, Sienna and Solara, along with automatic transmission engines for the company;
1999  seven companies including D & E Industries in Huntington (Cabell County) produce tractor trailer brake cams and axle housings;
2000  three companies including Crossville Rubber Products in Clay (Clay County) blends rubber compounds to produce semi-truck cab compartment mats;
2001  four companies including NGK Spark Plug Mfg. in Sissonville (Kanawha County) produce oxygen sensors for automobiles; and
2002  five companies including Great Lakes Truckland, Inc. in Cross Lanes (Kanawha County) convert medium-duty trucks

Another trend that may be extracted from a review of these 47 operations is the fact that while 32 underwent an expansion during the review period, the remaining 15 were brand new operations. In terms of the incentive packages offered by the state to these individual operations, eight of them either did not receive any incentives (seven) or there was no information available on possible incentives provided (one). Of the remaining 39 different operations, 10 were offered incentives in the form of finance and training, while the remaining 29 all were provided a combination of tax exempt bonds, tax credits and assistance in securing a suitable site, labor force training assistance, equipment purchases, warehouse and building construction.

Furthermore, these 47 different operations generated at least 3,242 new jobs over the review period, ranging from the 400 new hires at NGK Spark Plug Manufacturing after it was established in 1994 in Sissonville, to the 300 new hires after the expansion at the Putnam County Toyota plant. Finally, in terms of the total investment of these 47 different operations, the WVDO reports that for the review period it amounted to $1.2 billion; in return, the West Virginia Economic Development Agency (WVEDA) provided $10.2 million in loans to these 47 operations.
The automobile industry in the United States is deeply ingrained in the nation’s psyche and America’s multi-strand relationship with the automobile is known across the globe. Most people living overseas are well aware that “Americans love their cars.” From this almost surreal relationship evoking such American qualities as individualism, independence, adventure and innovation, the economic contribution of the automobile industry is unparalleled. There are very few other industries in the country that can claim the kind of economic complexity, broad connections and impact that the automobile industry can for almost a hundred years now. From employing a formidable percentage of the nation’s workforce–numbering many millions in direct, indirect and dependent employees–at thousands of assembly plants and auto parts production facilities and tens of thousands of dealerships, the industry generates tens of billions in wages and hundreds of billions in annual sales. The millions of vehicles produced every year furnish the hundreds of millions of licensed drivers across the country with a mode of conveyance, often among the most important considerations in the livelihood of Americans in contemporary society.

While these national economic figures and their ripple effects are truly massive, the automobile industry’s contribution to the economic magnitude of the SLC states also is significant. According to the latest information available from the federal government, the motor vehicle industry’s contributions to the gross state product (GSP) of the Southern states is a vital player in the region’s economic performance. For instance, in 2001, the industry amounted to $10.3 billion in Kentucky, $5.5 billion in Missouri and $5.4 billion in Tennessee. These amounts constituted 8.5 percent of GSP in Kentucky, and 3 percent of GSP in both Missouri and Tennessee, respectively. It is extremely plausible that in the time period since the calculation of these 2001 figures, the contribution of the industry to overall GSP has increased even further. Some of the specifics on the role of the automobile industry are worth reiterating to drive home the point that the industry has assisted the states in the region to emerge as among the fastest growing in the country.
The Mercedes plant in Vance, Alabama, established in 1993, produced more than 100,000 M-Class sport-utility vehicles in 2002 and employed close to 2,000 employees. Since Mercedes has initiated a $600 million expansion in the state, by 2004, the number of employees will expand to about 4,000 and production will increase to 160,000 vehicles per year.192

The BMW plant in Spartanburg, South Carolina, announced in 1992, manufactures the Z3 and Z4 roadsters and the X5 Sports Activity Vehicle. This plant involves a total investment of $1.9 billion and employs 4,300 workers. The plant’s total economic output is more than $4.1 billion (based on 2001 operations), in addition to supporting 16,991 jobs and producing $691 million in wages.193 State officials were ecstatic in September 2002 when BMW, to commemorate the plant’s 10th anniversary in South Carolina, announced a $400 million expansion with an additional 400 jobs in the pipeline.194

While the state of Kentucky is the fourth largest car producing state in the United States, one of the nation’s top selling cars, the Toyota Camry, is manufactured at the company’s Georgetown, Kentucky plant.195 Another indication of the importance of the industry to the state economy involves the fact that there were 87,794 Kentuckians employed by 461 motor-vehicle related facilities in July 2003.196

In Mississippi, Nissan’s announcement in November 2000 of plans to build a manufacturing facility in Madison County near Canton was greeted with great enthusiasm.197 The state provided Nissan with $363 million in direct incentives to build a $1.4 billion assembly plant. According to the Mississippi Development Authority, production at the plant, commenced in May 2003, slightly ahead of schedule, will result in 400,000 vehicles being produced annually. In addition, in a little more than two years, 18 companies had established operations as suppliers to the Nissan plant. Some of the other positive flows from the Nissan plant include an estimated 31,683 total jobs (direct, indirect and induced) by 2010; $903 million in total personal income (once again, direct, indirect and induced) being generated, also by 2010; and, $393 million in Madison County taxes and $287 million in state taxes being generated by 2010.

The South’s latest automobile manufacturing plant was announced in February 2003 when Toyota, the world’s third largest automaker, decided to set up an assembly plant in San Antonio, Texas. The plant, an $800 million operation employing 2,000 workers, will be used to build 150,000 Tundra full-size pickup trucks by 2006. While the combined state, county and city incentive package amounted to $133 million, the economic ripple effect is expected to reach $1.4 billion within the next decade. In addition to the $80 million annual payroll, thousands of spin-off jobs are anticipated given the need for parts and other supplies.198

As developed and expanded in the report, the element of globalization remains very strong in the automobile industry and the ever-increasing roster of foreign automakers establishing assembly plants in the country, especially in the South, remains one of the most striking features in the industry over the past few decades. Several reasons are proffered for the growing number of automakers that are either locating or relocating their assembly operations in Southern states. For instance, automakers can create ground-up manufacturing
facilities, incorporating the latest technologies, more easily in the South than reconfiguring the older assembly plants in the Midwest and Northeast. Assembly plants in the South, like the Nissan plant in Smyrna, Tennessee, have achieved impressive efficiency and productivity gains and automakers are eager to take advantage of these gains. Southern states have offered automakers attractive incentive packages including such compelling features as tax breaks, state funding for programs to train workers, an abundant labor pool at a relatively lower cost, low rates of unionization and the ability to train a workforce that has not worked in the auto industry previously. Another important consideration in the location of auto plants in the South involves the highly efficient intermodal transportation networks in the region, spanning highways, airports and, most importantly, ports, including a number of the nation’s busiest ports. The cluster effect, created by the presence of numerous automobile assembly plants and thousands of auto parts suppliers in close proximity to each other, is another major advantage available to those automobile industry players locating to the South. Finally, the benefits flowing from such general features as the weather, climate, cost of living, either lower or no personal income taxes, free or inexpensive property costs to build assembly plants, and quality of life are some of the other positive attributes considered by corporations locating the in South.

In further exploring this drive to move South, analysts maintain that this shift away from portions of the nation home to generations of assembly line workers in the Midwest and Northeast, is one of the most dramatic changes in the U.S. factory network since the industrial revolution. As noted, the “relocation of automotive manufacturing is threatening the economic future of East Coast and Midwestern states and creating a whirlwind of investment from Mississippi to South Carolina,” a trend referred by some as the “manufacturing revolution.” According to these reports, North America’s East Coast is being hit the hardest with a number of automobile factories in the region closing down since the 1980s. For instance, General Motors’ facilities in Tarrytown, New York; Clark, New Jersey; and Framingham, Massachusetts, have been shuttered and the company’s plants in Saint Therese, Quebec; Linden, New Jersey and Baltimore, Maryland, will be closed shortly. While Ford has closed its facility in Edison, New Jersey, both Chrysler and GM’s assembly operations in Newark and Wilmington, Delaware, hang on tenuously. This report extensively describes the range of automakers from Europe and Asia (and the Big Three here in America) that have both established and/or expanded their operations in the South. From Saturn and Nissan in Tennessee, to Toyota in Kentucky, to BMW in South Carolina, to Mercedes and Hyundai in Alabama, to Nissan in Mississippi, to Toyota in Texas, just a sampling of the assembly plants, the drive of these automakers has been to establish and/or relocate their operations in the SLC states. As demonstrated in table 43, the regional share of North American vehicle production and forecasts between 1987 and 2006 amplifies the growing dominance of the Southern region in overall production levels.
As indicated, most of the new capacity will thrive in the Southeastern region of the country, an area that includes Alabama, Kentucky, Mississippi and Tennessee. Specifically, this area will increase its overall percentage from 5.3 percent in the 1987-91 period to 15.3 percent by 2006. Another factor that will fuel this growth in the Southern region is the U.S. Census Bureau statistics indicating that the demographic group currently 5 to 24 years of age, often called Generation Y, will move to the South, mainly to Texas and Florida; this age cohort also is expected to migrate west to the Rockies and beyond. Hence, automakers seeking to develop long-term product loyalty are expected to focus their operations on catering to this age cohort. A good example here is the decision by Toyota Motor Corporation to locate its latest assembly plant in San Antonio, Texas, closer to the market where one of seven pickup trucks in the United States is sold.

On the topic of the increasing globalization of the automobile industry, in addition to foreign automakers increasingly establishing plants in the United States, mostly in the South, there is another important trend: a booming international trade in automobile and automotive parts. Even though there was a significant increase in imports in both passenger vehicles, light trucks and automotive parts between 1996 and 2002, the growing relevance of international trade in the industry is undisputable. Despite a negative trade balance in these items in 1996, the situation worsened by 2002, when the U.S. trade deficit soared to unprecedented heights. (It should be noted that this trend in the automobile sector is symptomatic of a much broader trend with the overall U.S. trade deficit plunging towards deficits for some years now.) Specifically, between 1996 and 2002, the U.S. trade balance in passenger vehicles, light trucks and automotive parts deteriorated from $63.1 billion to $123.6 billion, or by almost 96 percent.

As a direct result of the sluggish U.S. economy, still recovering from the lingering effects of the 2001 recession, the automobile industry continues to be buffeted on many fronts. After five consecutive years of increasing car and light trucks sales between 1996 and 2000, the number of vehicles sold in 2001 fell to 17.1 million and then to 16.9 million in 2002. These slumping sales numbers are reflected in the tightening profit margins of the Big Three U.S. automakers who face additional sales pressure from the growing roster of foreign automakers. As elaborated in the report, these foreign automakers both manufacture vehicles in the United States as well as import them for

<table>
<thead>
<tr>
<th>Region</th>
<th>Five Year Production Averages (Percent)</th>
<th>Straight-Time Capacity (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>14.2</td>
<td>15.6</td>
</tr>
<tr>
<td>Mexico</td>
<td>4.1</td>
<td>7.5</td>
</tr>
<tr>
<td>New England</td>
<td>0.7</td>
<td>0</td>
</tr>
<tr>
<td>Middle Atlantic</td>
<td>3.2</td>
<td>2.4</td>
</tr>
<tr>
<td>South Atlantic</td>
<td>8.9</td>
<td>8.1</td>
</tr>
<tr>
<td>East North Central</td>
<td>45.2</td>
<td>41.0</td>
</tr>
<tr>
<td>East South Central</td>
<td>5.3</td>
<td>9.0</td>
</tr>
<tr>
<td>West North Central</td>
<td>11.4</td>
<td>9.1</td>
</tr>
<tr>
<td>West South Central</td>
<td>4.3</td>
<td>3.9</td>
</tr>
<tr>
<td>Mountain</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pacific</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Actual Volume</td>
<td>12,861,975</td>
<td>14,678,117</td>
</tr>
</tbody>
</table>

Source: Ward’s Auto World, August 2002
sale in the country. However, it should be noted that the foreign automakers generally have been better at weathering the economic storms than the Big Three and have recorded impressive earnings levels. Hence, it is apparent that the industry in general will continue to face serious obstacles and challenges in rising to overcome the rough economic waters; the Big Three in particular will confront an even greater challenge as they tussle with the competition from automakers and the sluggish economy.

But for the South, even with the sluggish economy, the surge of the automotive industry brings the promise of economic opportunity. The sphere of influence of the industry is undeniable, and the benefits derived, whether directly or indirectly, substantial. In a region of the country once viewed as the bastion of the low-skill, low-wage positions, the thriving automobile industry has catapulted a number of locations into magnets for high-tech, higher wage positions. The presence of a Mercedes facility in Alabama and a BMW facility in South Carolina has eased in a sea change in both the perception and structure of these Southern state economies.

In closing, the automobile industry remains one of the most important elements in this vast, complicated American economic system, and recent trends indicate that an increasing proportion of this production is occurring in the South. In addition to contributing significantly to the states’ gross product, these auto plants provide employment to tens of thousands, generate billions in diverse forms of revenue, and create a myriad other benefits. Globalization’s influence is more than evident in this industry, as more and more companies combine their assets and skills to better harness their resources in order to compete effectively and efficiently.
## APPENDIX A: ALABAMA STATUTES RELATING TO ECONOMIC INCENTIVES

<table>
<thead>
<tr>
<th>Statute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise Zone Sections 41-23-20 through 41-23-32, Code of Alabama 1975</td>
<td>A tax credit exemption to help encourage economic growth in areas considered to have depressed economies. There are two types of tax incentives in Alabama Enterprise Zones; a tax credit which allows for a tax credit up to $2,500 per new permanent employee to be applied against the income tax liability and/or the business privilege tax liability of the entity qualifying for the enterprise zone credit. The second incentive allows for exemptions against certain taxes from enterprise zone operations. An exemption can be applied to the income, sales and use, as well as the business privilege tax liability.</td>
</tr>
<tr>
<td>Industrial Development Grants Alabama Act 97-645</td>
<td>Grant funds provided to a Grantee for use in the preparation of a project site may be utilized for (1) preparation of a means of access to the site; (2) provision for adequate drainage of the site to prevent the accumulation of excess natural waters thereon; (3) boundary and topographical surveying, clearing and grubbing, and excavating; (4) the reasonable rehabilitation of buildings and other structures; and (5) other work relative to site preparation deemed necessary or appropriate.</td>
</tr>
<tr>
<td>Alabama Act 99-591</td>
<td>Allows the State Industrial Development Authority (SIDA) to amend the Industrial Development Grant amounts based on availability of funds.</td>
</tr>
<tr>
<td>Property &amp; Sales Tax Abatements Tax Incentive Reform Act of 1992 (Chapter 9B, Title 40 Code of Alabama 1975)</td>
<td>Gives cities, counties, and public industrial authorities the ability to abate the following: non-educational state, county and city property taxes; state sales and use taxes; non-educational county and city sales and use taxes; and mortgage and recording taxes. To receive an abatement for any or all of these taxes, a business must meet certain qualifications and follow certain procedures, as determined by law and regulation.</td>
</tr>
<tr>
<td>Business Privilege Tax Act 99-665, 2nd Special Session, Act 2000-705 p. 1442</td>
<td>A tax on the net worth in Alabama of corporations, limited liability entities and disregarded entities. The tax accrues as of January 1 of every taxable year and is due March 15. In the case of a taxpayer organized during the year, qualifying during the year, or doing business in Alabama for the first time, the tax accrues as of the date of organization, qualification, or beginning to do business and is due 30 days thereafter. This tax replaces the former franchise tax that was declared unconstitutional in March 1999.</td>
</tr>
<tr>
<td>Deduction for Pollution Control Equipment Section 40-14A-24(b)(2) Code of Alabama 1975</td>
<td>A corporation, limited liability entity or disregarded entity can deduct from their Alabama net worth the net amount invested in all devices, facilities, or structures, and all identifiable components or materials acquired or constructed primarily for the control, reduction, or elimination of air, ground or water pollution or radiological hazards.</td>
</tr>
<tr>
<td>Federal Tax Deductible Corporate Income Tax Amendment 212 of the Constitution of Alabama 1901</td>
<td>Allows the corporate taxpayer to deduct from its gross apportioned and allocated income the apportioned amount of federal income tax paid. Alabama is one of only two states that allows a full deduction of all federal income taxes apportioned to Alabama. The rate of corporate income taxation is 6.5%.</td>
</tr>
<tr>
<td>Net Operating Loss Carryforward Section 40-18-35.1, Code of Alabama 1975</td>
<td>Corporate income tax law provides for a 15-year carryforward of net operating losses. In computing net income, a corporation is allowed a deduction for the sum of the net operating losses which are carried forward. Each net operating loss may be carried forward and deducted only during the 15 consecutive year period immediately following the year in which it arose.</td>
</tr>
<tr>
<td>Pollution Control Equipment Exemption Sections 40-9-1(20)</td>
<td>All equipment, facilities, or materials constructed or acquired primarily for the control, reduction, or elimination of air or water pollution are statutorily exempt from property taxation.</td>
</tr>
<tr>
<td>Statute</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>40-23-4(a)(16), 40-23-62(18), Code of Alabama 1975</td>
<td>Equipment or materials purchased primarily for the control, reduction, or elimination of air or water pollution is exempt from sales and use tax.</td>
</tr>
<tr>
<td>No Inventory Tax Section 40-9-1(23) Section 40-9-1(13) Code of Alabama 1975</td>
<td>Alabama does not levy property tax on inventory. There are also exemptions for raw materials inventory and finished goods inventory.</td>
</tr>
<tr>
<td>Industrial Access Road &amp; Bridge Program Act 85-549 Section 23-6-9</td>
<td>Provides financial assistance to communities for industrial access to new and expanding industries. The program allows for the construction of roads, bridges, etc. on public right-of-ways in conjunction with industrial projects. The company interested in benefiting from Industrial Access Road funding contacts a local governmental agency. The local governmental agency (the project sponsor) will be the entity to request Access Road funding.</td>
</tr>
<tr>
<td>Exemption for Raw Materials Sections 40-23-1 (a) (9)b</td>
<td>Raw materials used by manufacturers or compounders as an ingredient or component part of their manufacturing or compounded product are specifically exempt from sales and use taxation.</td>
</tr>
<tr>
<td>Exemption for Quality Control Testing and Donations to Charitable Entities Section 40-23-1 (e) Code of Alabama 1975</td>
<td>The withdrawal, use, or consumption of a manufactured product by the manufacturer thereof, for use in quality control testing or to be donated to certain charitable entities, shall not be subject to the state sales tax.</td>
</tr>
<tr>
<td>Utility Gross Receipts Tax Exclusions Sections 4000-21-83, 40-21-103 Code of Alabama 1975</td>
<td>Within the area of utility gross receipts taxes, Alabama law allows exclusions from the utility gross receipts tax and the utility service use tax for utility services used in certain types of manufacturing and compounding processes.</td>
</tr>
<tr>
<td>Capital Investment Tax Credit Section 40-18-190 et seq. Code of Alabama 1975</td>
<td>Tax credit applied against the income tax liability generated by income from a project approved by the Alabama Department of Revenue (ADOR). The capital credit is available each year for 20 years. The capital credit is calculated at 5% of the total capital costs of the qualifying project and the credit begins in the year the qualifying project is “placed in service.” Credit cannot exceed 100% of capital investment of project. No carry forward, carry back or retroactivity of tax credits.</td>
</tr>
<tr>
<td>Industrial Revenue Bonds (IRB) Act No. 80-586 Section 2-3A-8</td>
<td>Financing instruments issued by designated local industrial development boards or other issuers authorized by state law. Since 1949, IRBs have been a preferred method of financing used by industries locating to and expanding in Alabama. Often, financial institutions and other intermediaries participate by providing letters of credit backing the bonds. The company seeking the bonds must be considered creditworthy by the financial institution.</td>
</tr>
<tr>
<td>Alabama Industrial Development Training Established by the Legislature in June 1971 as a line item in the state education budget</td>
<td>Established to build a healthy state economy by recruiting and training a skilled workforce to attract new industries to the state and to expand existing industries. Job-specific pre-employment and on-the-job training are provided. The program provides a full range of customized technical training programs that are free to the employers and to the trainees.</td>
</tr>
<tr>
<td>21st Century Fund Section 41-10-638</td>
<td>The tobacco revenues received by the state from the national settlement agreement will be deposited into the 21st Century Fund. Once in the fund, the tobacco revenues are first pledged to pay debt service on bonds issued for economic development in the state.</td>
</tr>
</tbody>
</table>
ENDNOTES

1 Alliance of Automobile Manufacturers, Economic Information, www.autoalliance.org.


4 The 16-member states in The Council of State Governments’ Southern Legislative Conference comprise Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.


6 “The Economic Impact of BMW on South Carolina,” Darla Moore School of Business, University of South Carolina, May 2002.

7 “BMW has Plans to Enlarge Plant,” The North Carolina News and Observer, September 27, 2002.


12 Fulton, George A., et al, Contribution of the Automotive Industry to the U.S. Economy in 1998...


14 Contribution of the Automotive Industry to the U.S. Economy in 1998...

15 Ibid.


19 “Auto Parts Plant to be Built in Tenn.,” The Tennessean, April 9, 2003.


Haag, James, J. Email correspondence with Sujit CanagaRetna, March 18, 2003.

Haag, James, J. “Automobile Manufacturing . . . .


Automakers Drive U.S. Economy on Many Different Levels, New Study Shows,” Alliance of Automobile Manufacturers, Media Release, September 24, 2003. Information related to the expansive reach of the automobile industry is extracted from this source.


Friedman, Thomas. The Lexus and the Olive Tree, 1999.


Information related to the early years of the auto industry and its international flavor are extracted from “The Contribution of the International Auto Sector to the U.S. Economy,” University of Michigan, Transportation Research Institute, March 1998.


Ibid.


“The Port of Baltimore’s Cargo,” Maryland Ports Administration, www.mpa.state.md.us.


“The Economic Impact of BMW on South Carolina”...

Information received from Byron Miller, Information Officer, South Carolina State Ports Authority on April 14, 2003.


68“Driving Downhill,” . . .

69Ibid.

70“Ibid.”

71Ibid.

72“Ibid.”


75Ibid.

76“Ibid.”

77“Ibid.”

78Ibid.


80“Ibid.”

81Ibid. Statistics cited in this paragraph are obtained from this source.


83“Ibid.”

84Ibid.


87The lead-up to Hyundai’s decision to build its first North American plant in Alabama resulted in intense competition among several states. As mentioned, Ohio, Kentucky, Michigan and Mississippi aggressively pursued this project. (See

For instance, Ohio’s efforts cost the state’s taxpayers about $21,000, including air fare, hotel charges, restaurant charges, small plane and helicopter trip charges over potential sites, miscellaneous gifts.

In contrast, Mississippi’s failed efforts cost the state about $386,241, of which $212,035 was paid to an engineering company that determined the suitability of certain sites for road, utility, water and sewer improvements. In addition, Mississippi Governor Musgrove and Ronnie Scruggs, liaison between then U.S. Senate Majority Leader Trent Lott’s office and the governor’s office, traveled to Seoul, South Korea, in February 2002, to meet with Hyundai’s president and personally pitch the state to company officials.

Kentucky’s chances to land the project were probably negatively affected by the potential protracted legal battle between Hardin County (the county where Kentucky hoped to locate the Hyundai plant) resident Leon Howlett and state officials. Kentucky had sought to build its Hyundai plant in Glendale, located in Hardin County. Even though the Howlett family agreed to sell their 111 acre farm for six times its appraised value just hours before Hyundai’s decision to settle in Alabama, the family had previously indicated—citing the U.S. Constitution’s “eminent domain” provisions—that it would not sell its land. The family had indicated their lack of interest in selling the property repeatedly to Hyundai officials. (See “E-mail to Hyundai Said Family Would Fight for Land,” *The Louisville [Kentucky] Courier-Journal*, April 5, 2002).

Then, several months later, the state of Michigan, in an unprecedented action, tried to block Hyundai’s latest assembly project by raising questions on whether the proposed plant in Alabama met the federal Environmental Protection Agency’s (EPA) requirements governing air pollution control. In its filing, Michigan’s Department of Environmental Quality claimed that the state is losing jobs and money because Alabama is not enforcing EPA standards as stringently as it does. Then Alabama Governor Siegelman noted, “I detect just a wee bit of jealousy from the folks in Michigan. They’re beginning to feel the pinch from Alabama’s success in the automotive industry.” (See “Detroit Takes on Alabama,” [www.al.com](http://www.al.com), September 22, 2002).

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95 *Response to Southern Legislative Conference Questionnaire, February 25, 2003*, Jim Pickens, Director, Arkansas Department of Economic Development.

96 Governor Mike Huckabee, Legislative Agenda, [www.accessarkansas.org/governor/](http://www.accessarkansas.org/governor/).

97 Ibid.
“Arkansas Could Have Harder Sell than Others in South,” www.al.com, September 25, 2002. Unless specified, the information contained in the ensuing paragraphs are based on information in this article.

Ibid.


The Georgia Department of Industry, Trade and Tourism, the state’s economic development agency, did not respond to the survey questionnaire forwarded by the Southern Legislative Conference. Hence, the information contained in the Georgia section was extracted from the agency’s Web site (www.georgia.org) and from a number of newspaper articles on the topic.


Times, October 18, 2002; “It’s Georgia, Not S.C.,” The State [Columbia, South Carolina], October 18, 2002; “Jasper County Expects Spillover Benefits,” The State [Columbia, South Carolina], October 18, 2002; “Georgia Outbid S.C.,” The State, October 18, 2002.


Data from www.gm.com.


Information related to Maryland’s automobile and related industries, unless otherwise specified, is based on information provided by the department in response to the SLC questionnaire. The response, dated April 2, 2003, included a letter from Secretary Melissaratos and accompanying documents including “Automotive Industry: Maryland Business at Work,” Department of Business and Economic Development; “Top Ten Maryland Employers in Automotive Sector,” Department of Business and Economic Development.


Information related to Missouri’s automobile industry, unless otherwise specified, is secured from “Response to the Southern Legislative Conference Survey, March 14, 2003,” “Importance of Automotive Industry in Missouri” and “Economic Impact of the Ford Motor Company - Hazelwood Plant Closure in Missouri.” All these reports were provided by the Missouri Department of Economic Development, Economic Research and Information Center.


Unless otherwise specified, information related to the Mississippi automobile industry and the Nissan plant is based on “Vision Mississippi: Share Vision for the Future,” A CD-Rom prepared by the Mississippi Development Authority for the New York Automotive Show in April 2003 and submitted to the Southern Legislative Conference as the state’s official response to the questionnaire designed to collect information for this report. This CD-Rom, amongst other topics, includes sections on contractor, supplier and employment information; timeline; photo gallery, press room; and Mississippi Advantage.


“Lott Urges Preparedness . . .,” Ibid.

Information related to the economic impact of the project is obtained from “The Economic Impact of Nissan in Mississippi,” Mississippi Development Authority; “Experts say Economic Impact will be Astronomical,” The Mississippi Clarion-Ledger, March 1, 2003; and, “Nissan Impact on Miss. will be Gigantic,” The Mississippi Clarion-Ledger, May 26, 2003.

The Economic Impact of Nissan . . .” Ibid.

Nissan Impact on Miss. . .” Ibid.

Unless otherwise specified, information related to North Carolina’s automobile industry was secured from the state’s Department of Commerce, Division.


148 Ibid.


150 Ibid. Information in this paragraph on these latest trends are secured from this article.


158 Information related to Oklahoma’s automobile industry, unless otherwise specified, is based on “Response to Southern Legislative Conference Questionnaire, March 28, 2003,” Oklahoma Department of Commerce, Office of Business Development.


164“Carmaker Powers. . .

165Ibid.


177www saturn.com

178“The Location Decision of Automotive Suppliers in Tennessee and the Southeast,” Center for Business and Economic Research, the University of Tennessee, June 1999.


181Unless otherwise specified, information related to the automobile industry in Texas is based on information provided in “Response to the Southern Legislative Conference Survey, March 14, 2003,” Governor’s Office of Economic Development & Tourism.


183Information related to the Toyota plant is obtained from “Toyota Wants Doubled Share of Pickup Sales,” The Memphis Commercial Appeal, February 12, 2003;


189 Information related to the Virginia automobile industry, unless otherwise specified, is based on “Response to the Southern Legislative Conference Survey, March 13, 2003,” Virginia Economic Development Partnership, Division of Research.

190 Unless otherwise specified, information related to West Virginia’s automobile parts sector is based on a spreadsheet provided by Lynn Thompson with the West Virginia Development Office on March 21, 2003.


194 “The Economic Impact of BMW on South Carolina,” Darla Moore School of Business, University of South Carolina, May 2002.


200 “Southern Hospitality,” *Ward’s Auto World*, August 1, 2002. Information on the increasing attractiveness of the South to these automakers in this section is extracted from this article.

201 “Go West, South,” *Ward’s Auto World*, June 1, 2003.