



*Economic Impact Analysis for the Motor Vehicle and
Motorsport Industries in NC and the Greater Charlotte
Region*

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Executive Summary

This study evaluates the current and potential future economic impact of the motor vehicle (MV) and motorsports (MS) industries supply chain within the state of North Carolina, the Greater Charlotte Region and the Region's nine constituent Counties.

The economic impact analysis presented in this report is conducted as part of a bigger study named "Characterizing the Automotive and Motorsport Industry Supply Chain in the Greater Charlotte Region of the Carolinas" that is sponsored by Centralina Council of Governments.

The MV/MS industries were characterized through 58 NAICS codes selected and classified as primary, secondary and tertiary based on the way each NAICS code related to the industries. The selected NAICS codes were cross-referenced to 34 discrete IMPLAN software sectors. Using the most current data available (2007), IMPLAN software was utilized to evaluate the current impact of the industries and to build a predictive model evaluating the economic impact of future job growth.

The major findings and recommendations are summarized:

- ❖ The current MV/MS supply chain throughout North Carolina is composed primarily of suppliers, distributors, service providers and transporters.
- ❖ Within the Greater Charlotte Region, the supply chain is mainly characterized by motor vehicle parts manufacturing, motor vehicle parts retail stores, automotive repair and maintenance, transport by truck and transport by air.
- ❖ Cabarrus, Iredell, Lincoln, Mecklenburg, Stanly and Union Counties reported an important MS representation within the "all other transportation equipment manufacturing" and "spectator sports companies" sectors.
- ❖ In the predictive model, the greatest economic impact to North Carolina and the Greater Charlotte Region was found in Original Equipment Manufacturers (OEMs), Suppliers and Transporters.
- ❖ Based on the highest economic impact and least representation growth in the following sectors could provide the greatest economic impact to the Greater Charlotte Region:
 - ❖ Light truck and utility vehicle manufacturing
 - ❖ All other transportation equipment manufacturing



- ❖ Heavy duty truck manufacturing
- ❖ Audio and video equipment manufacturing
- ❖ Electric lamp bulb and part manufacturing
- ❖ Nonferrous metal (except copper and aluminum) roll
- ❖ Copper rolling-drawing-extruding and alloying
- ❖ Recruiting OEMs would have an especially great positive impact on the economy of the Greater Charlotte Region and substantially increase the demand for MV/MS parts and accessories. An OEM with MS focus appeared especially favorable for most of the counties within the Greater Charlotte region.
- ❖ The largest total value-added and employment impact within the Greater Charlotte Region according to the predictive model is from growth within the light truck and utility vehicle manufacturing sector in Iredell County.

Due to limitation in the IMPLAN software and the method that it creates sectors comprised of related NAICS codes, impact results for several sectors were unclear. The wholesale trade business sector, one of the biggest industries in North Carolina, includes many non-MV related NAICS codes and was excluded from the analysis. Further analysis of this sector is recommended to determine the economic contribution of MV/MS related businesses. Comparative analysis of the future potential impacts to other geographic areas is also recommended for the uniqueness of this study's findings must be considered when determining economic development plans.



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I. Introduction

A. Motor Vehicle Industry Trends

In the United States, motor vehicle (MV) and parts manufacturing are one of the largest manufacturing industries and is scattered around the whole country. In 2002, United States led the MV industry around the globe in terms of production units providing 1.2 million jobs. 63% of these jobs were from motor vehicle component manufacturers. 23% were from motor vehicles assemblers, and 13% from firms that produce truck trailers, motor homes, and campers. Motor vehicle and parts manufacturing firms have located in the Midwest region mostly. Michigan led the nation accounting for one quarter of the total number of jobs and more than half of the nation's motor vehicle workforce has resided in the Midwest States (Ohio, Michigan, Indiana, Illinois, and Wisconsin).¹

Other notable states with considerable amount of employment are California, Tennessee, Texas, Kentucky and Missouri. In recent years, the number of MV industry-related jobs in Midwest has decreased considerably. Especially in Michigan, where automotive mass production had started, the percent of loss reached up to 21 percent². The decrease in employment numbers can be linked to increasing rates of globalization, which increases the level of competition and leads to price decrease in labor rates and supply parts. Another major reason of this decline is the increasing number of investments from foreign-owned companies in another central location called East South Central. East South Central includes the states of Alabama, Kentucky, Tennessee and Mississippi, where the auto parts manufacturing wages were lower.

The migration of MV jobs led to drastic losses in Midwest region. Long-term losses of other states than Michigan were also quite significant. Indiana lost 9,000 and Ohio lost almost 7,000 jobs, which equals to 10.8 and 7.1 percent of total employment respectively. On the other side, there were 18,900 additional jobs outside Midwest region. During the period 1992-2006, overall auto parts employment around the U.S has decreased but East South Central managed to stay in positive growth figures.³

The Greater Charlotte region is a major attraction point for the MV and motorsport (MS) industries. NASCAR is attracting considerable amount of people to the area as well as providing new jobs to the region. Incentives provided by state and local government are also attracting new

¹ Collins Benjamin, McDonald Thomas and Mousa Jay A. The rise and decline of auto parts manufacturing in the Midwest [Journal] // Monthly Labor Review. - 2007. - pp. 14-20.

² International Labor organization

³ Monthly Labor Review



manufacturers and suppliers to the region. The region is home to Lowe's Motor Speedway and provides a cluster of motorsport and automotive-related companies. The region's automotive and motorsports industry includes: 1.25 million visitors each year to a number of Lowe's Motor Speedway Races, 82% of Sprint Cup Teams, 72% of Nationwide Series Teams and 55% of Craftsman Truck Series Teams, 73% of North Carolina's motorsport jobs, and more than 400 MV/MS Companies.⁴

B. Economic Impact Analysis

Economic Impact Analysis is the determination of the overall (net) change in an economic environment as a result of the changes in one or several economic activities. Economic Impact Analysis is commonly used in various different sectors and helps to predict future economic outcomes. This type of study has long been conducted to examine the financial returns of particular economic activities.⁵ It provides a more detailed and comprehensive assessment for the changes or specific events in an industry, and elaborately shows their impacts to the economic activity. The assessment contains the direct impacts as well as the secondary ones (indirect and induced impacts).

IMPLAN, which is a product of the Minnesota IMPLAN Group, is an economic analysis software selected for the study presented herein. It constructs a predictive input-output model, and then does the necessary computations to show net changes in the economy. Input models are mathematical representations of a regional economy formulated in terms of transactions between industries, employees, households, and governments.⁵

C. Scope of the study

The objective of this study is three-fold:

- ❖ To investigate the economic impact of the MV/MS industries in North Carolina and in the Greater Charlotte Region

⁴ North Carolina Department of Commerce Profiles of Industry [Online], Automotive, Truck and Heavy Equipment. - 2008. - November 7, 2008.
<http://www.nccommerce.com/en/BusinessServices/LocateYourBusiness/WhyNC/ProfilesOfIndustry/#Resource2>.

⁵ "Economic Impacts of the Aquaculture Industry in Alabama" by Steven, Hodges and Mulkey, 2005



- ❖ To evaluate the economic impact of possible growth opportunities as well as shrinkage of the MV/MS industries in North Carolina and in the Greater Charlotte Region.
- ❖ To identify the gaps and missing links in the MS /MS supply chain in North Carolina and in the Greater Charlotte Region

The results derived from this study should help local government and the economic development boards to understand qualities and characteristics of the MV/MS supply chain of North Carolina and their affect on the local and regional economy. The results will also provide a better understanding for establishing a constant growth in the industry, as well as competing with national and global threats efficiently.

D. Region of Study

For analysis purposes, this report is divided in two major parts. The first part of the study presents a detailed economic impact analysis of the state of North Carolina, while the second part of the economic analysis is limited to the following nine counties: Anson, Cabarrus, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Stanly, and Union (Figure 1). These nine counties are referred as the Greater Charlotte Region throughout the report.

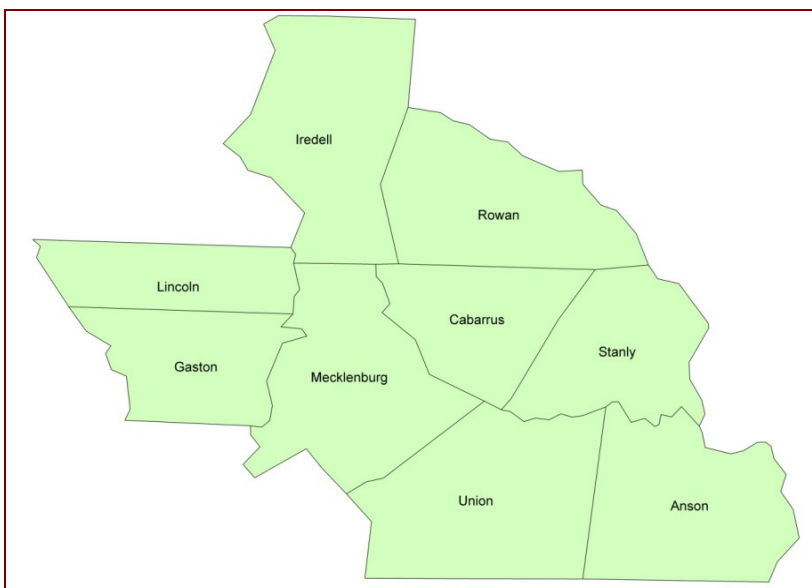


Figure 1: Greater Charlotte Region

E. Industry Characterization using NAICS Codes

The industries analyzed in this report are comprised of two major groups, MV related companies and MS related companies. The supply chain of these industries includes suppliers, OEMs, distributors and wholesalers, retailers, service providers, and transporters. The supply chain flow is described in Figure 2.⁶

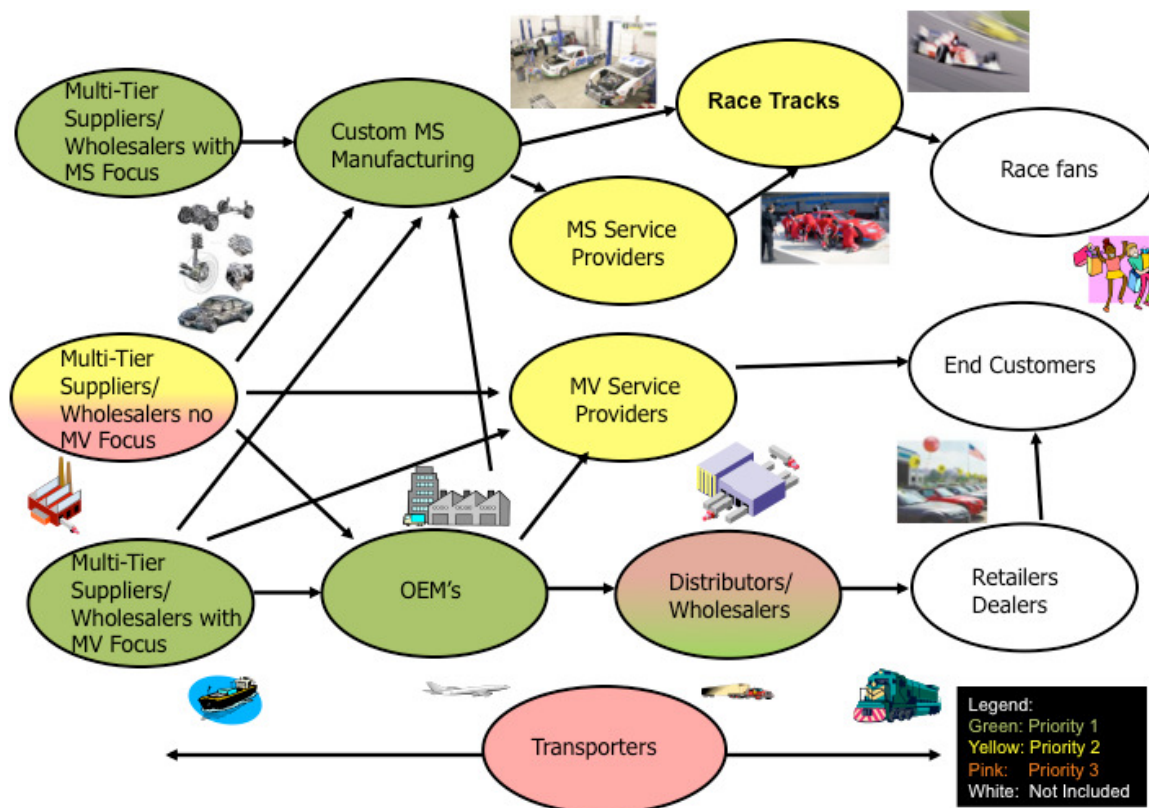


Figure 2: Supply Chain Flow and Players (MV: Motor Vehicle, MS: Motorsport)

Due to the vastness of products in these two industries, a method to categorize the different sectors must be employed. Since 1997, the United States adopted the North American Industry Classification System (NAICS) to facilitate statistics comparison among business across

⁶ “The Characterization and Impact of the Automotive and Motorsport Supply Chain in North Carolina and the Greater Charlotte Region”, by Jason M. Grey, 2008.



North America. NAICS classifies establishments according to the type of activity they are primarily engaged, and it replaces the 1987 Standard Industrial Classification (SIC).⁷

In order to narrow the scope of this project, NAICS was employed to limit the number of companies considered in the study. In addition, to facilitate the analysis, the codes selected were divided into 3 NAICS priority groups: primary, secondary and tertiary, mainly based on the way each NAICS code is related to the MV/MS industries.

Primary NAICS codes comprise original equipment manufacturers, and suppliers and wholesalers with MV focus; Secondary NAICS codes comprise suppliers with no MV focus, and service providers with MV focus including MS service providers; Tertiary NAICS codes comprise transporters and more general suppliers and service providers with no MV focus. Appendix A shows a detailed explanation for each code⁸ and the kind of player it represents (Supplier, Original Equipment Manufacturer, Service Provider, Transporter, Distributor / Wholesaler) on the supply chain.

The following tables list the NAICS codes selected during this investigation. Only the economic impact of MV/MS companies matching these codes in North Carolina are evaluated.

Primary NAICS Code	Description
326211	Tire Manufacturing (except Retreading)
336111	Automobile Manufacturing
336112	Light Truck and Utility Vehicle Manufacturing
336120	Heavy Duty Truck Manufacturing
336211	Motor Vehicle Body Manufacturing
336212	Truck Trailer Manufacturing
336214	Travel Trailer and Camper Manufacturing
336311	Carburetors, Pistons, Piston Rings, and Valves Manufacturing
336312	Gasoline Engine and Engine Parts Manufacturing
336321	Vehicular Lighting Equipment Manufacturing
336322	Other Motor Vehicle Electrical and Electronic Equipment Manufacturing
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
336340	Motor Vehicle Brake System Manufacturing
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing
336360	Motor Vehicle Seating and Interior Trim Manufacturing

⁷ <http://www.census.gov/eos/www/naics/faqs/faqs.html#q1>

⁸ <http://www.naics.com/search.htm>



Primary NAICS Code	Description
336370	Motor Vehicle Metal Stamping
336391	Motor Vehicle Air-Conditioning Manufacturing
336399	All Other Motor Vehicle Parts Manufacturing
336999	All other transportation equipment manufacturing
423110	Automobile and Other Motor Vehicle Merchant Wholesalers
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers
423130	Tire and Tube Merchant Wholesalers
423140	Motor Vehicle Parts (Used) Merchant Wholesalers

Table 1: Primary NAICS Codes

Secondary NAICS Code	Description
325510	Paint and Coating Manufacturing
326220	Rubber and Plastics Hoses and Belting Manufacturing
332510	Hardware Manufacturing
332611	Spring (Heavy Gauge) Manufacturing
333319	Other Commercial and Service Industry Machinery Manufacturing
334310	Audio and Video Equipment Manufacturing
334514	Totalizing Fluid Meter and Counting Device Manufacturing
335110	Electric Lamp Bulb and Part Manufacturing
441310	Automotive Parts and Accessories Stores
711212	Racetracks
711219	Other Spectator Sports
811111	General Automotive Repair
811112	Automotive Exhaust System Repair
811113	Automotive Transmission Repair
811118	Other Automotive Mechanical and Electrical Repair and Maintenance
811121	Automotive Body, Paint, and Interior Repair and Maintenance
811122	Automotive Glass Replacement Shops
811191	Automotive Oil Change and Lubrication Shops
811198	All Other Automotive Repair and Maintenance

Table 2: Secondary NAICS Codes

Tertiary NAICS Code	Description
327215	Glass Product Manufacturing Made of Purchased Glass
331319	Other Aluminum Rolling and Drawing
331422	Copper Wire (except Mechanical) Drawing
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding
334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing



Tertiary NAICS Code	Description
334290	Other Communications Equipment
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
334519	Other Measuring and Controlling Device Manufacturing
335911	Storage Battery Manufacturing
335931	Current-Carrying Wiring Device Manufacturing
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers
481112	Scheduled Freight Air Transportation
483111	Deep Sea Freight Transportation (This code is only used for NC level analysis)
483113	Coastal and Great Lakes Freight Transportation
484220	Specialized Freight (except Used Goods) Trucking, Local
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance

Table 3: Tertiary NAICS Codes

Table 4 shows all the NAICS codes considered for this study and their classification as part of the MV/MS supply chain. As seen from this table, all the supply chain players are represented using the selected NAICS codes. Note that the dealers are not included in this study since the objective was to focus more on the upstream of the MV/MS supply chain.

Suppliers			Service Providers		OEMs	Distributors Wholesalers	Transporters
325510	334515	336360	336311*	811111	336111	423110	481112
326211	334519	336370	336312*	811112	336112	423120*	483111
326220	335110	336391	336322*	811113	336120	423130*	483113
327215	335911	336399*	336330*	811118	336211*	423140*	484220
331319	335931	423120*	336340*	811121	336212*	423730*	484230
331422	336211*	423130*	336350*	811122	336214		
331491	336212*	423140*	336399*	811191	336999		
332510	336311*	423730*	441310*	811198			
332611	336312*	441310*	711212				
333319	336321		711219				
334220	336322*						
334290	336330*						
334310	336340*		* Denotes sectors that fit into multiple supply chain segments (58 discrete sectors identified)				
334514	336350*						

Table 4: NAICS Codes Corresponding to Supply Chain Players



II. Economic Impact Analysis using IMPLAN

The IMPLAN software package is used to build predictive economical models by considering all economic related activities of a region. It performs economic impact analysis and measures the effect on economy as a result of changing conditions. The software makes the calculations through input-output analysis. This analysis follows a methodology, in which industries are seen as interrelated since commodities flow from one to another, and therefore, one industry's output is another industry's input. The software takes into account all economic transactions within an economy and uses multipliers to provide a better description for the impact of changes or events in a region's economy. Multipliers provide three different kinds of effects: direct, indirect and induced. Direct effects reflect the immediate production changes in a particular industry, indirect shows the effects in inter-related industries and induced effects interprets the changes in household spending and income caused by direct and indirect effects . IMPLAN software stores economic statistics specialized by region rather than the national averages and perform the calculations according to these data.

IMPLAN methodology contains several steps and each step follows a process illustrated in **Error! Reference source not found.**

The first step was to identify the industry sectors that fit and have significant impact on the MV/MS supply chain. These sectors were selected carefully through NAICS codes. Following that, 3 different NAICS priority groups were formed: Primary NAICS codes, Secondary NAICS codes and Tertiary NAICS Codes. This formation was based on each NAICS code's degree of relation to the MV/MS industries. (See Section I.I.E).

Second, the 58 NAICS codes selected were cross-referenced to be used in the IMPLAN software and 34 discrete sectors were identified (See Appendix B: NAICS to IMPLAN Bridge).

Third, the current economic impact for the state of NC and 9 different counties (Greater Charlotte Region) was documented using the most recently data (2007) available on the IMPLAN software, and then analyzed.

Fourth, the economic impact of adding new jobs in North Carolina and the Greater Charlotte Region (What-If Analysis) was recorded and analyzed using a predictive economic model built through IMPLAN Software. The model was constructed according to the most recent



data (2007), and the total value impact, employment impact and employee compensation impact values were reported and analyzed for North Carolina and 9 separate counties.

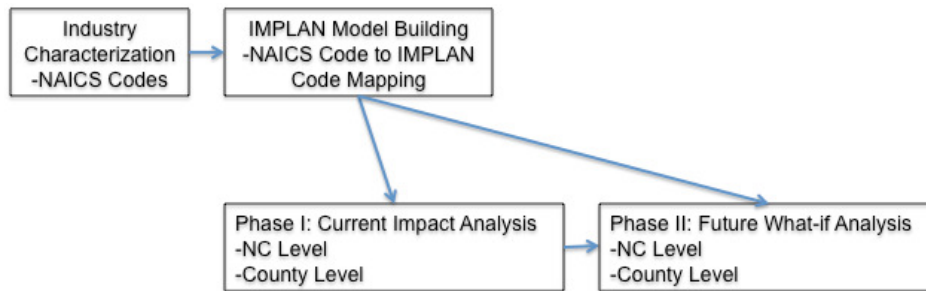


Figure 3: Impact Analysis Methodology

The next 2 sections present the current (2007) economic impact analysis for the MV/MS industries, and the what-if economic analysis of adding new companies related to this industries. Both economic analyses are executed using the IMPLAN software, and they are performed for North Carolina and for each one of the nine counties comprising the Greater Charlotte Region. For all cases, the economic impact is quantified as the sum of direct, indirect and induced values of:

- Value Added Impact : represents the sum of employee compensation, proprietor income, indirect business taxes, and other property type income impacts. This is the difference between the inputs and the outputs.
- Employment Impact: represents the number of workers employed (jobs).
- Employee Compensation Impact: represents the wage and salary payments as well as benefits, including health and life insurance, retirement payments, and any other non-cash compensation. Compensation includes all income to workers paid by employers.



III. Current Economic Impact Analysis

This section presents the current (2007) economic impact for the MV/MS industries in North Carolina and the Greater Charlotte Region.

Before starting the economic analysis, it is important to indicate that the results presented in this and the next section must be interpreted with caution since there are a few industries which results do not represent an accurate number for the MV/MS industries. This discrepancy occurs because of the way the software employed for the impact analysis operates: creating sectors or industries that comprise related NAICS codes. Currently, there are approximately 20,000 six-digit NAICS codes in use, while the IMPLAN software supports only 440 codes. Because of this difference, results for certain IMPLAN industries include several NAICS codes that are not related to the MV/MS industries and, ideally, they should not contribute to the economic impact results reported in this study.

The most critical case in the present analysis corresponds to the wholesale trade businesses (IMPLAN sector 319), one of the biggest sectors in North Carolina. For this particular sector, the results presented in this study take into account a total of 71 NAICS codes, with only 5 of these codes related to the MV/MS industries. Although results for this sector are reported in this study, they will be excluded from the analysis. Table 26, Table 27 and Table 28 in Appendix B bridges the NAICS and IMPLAN codes, and indicates which IMPLAN industries are taking into account NAICS codes that are not related to the MV/MS industries. As elaborated in the Recommendations and Conclusions, further analysis is recommended in order to refine the results presented in this study.

Notable is that IMPLAN software groups all wholesalers businesses into one sector, the NAICS code 423730 (Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers) which was categorized as a tertiary NAICS code previously, was lumped into the IMPLAN sector 319. This IMPLAN sector is considered priority 1 through the report (see Table 26).



A. North Carolina (NC)

Table 5 shows the 2007 economic impact for the primary NAICS codes in NC. The results indicate that the top three sectors in terms of total value-added, employment and employee compensation to NC in 2007 were:

1. Wholesale Trade Businesses*
2. Motor vehicle parts manufacturing
3. Tire manufacturing

The results in Table 5 show that the employment impact reported by the motor vehicle parts manufacturing industry in 2007 reached a total of 17,038 jobs which is quite significant as it represents more than 50% of the total employment value recorded by all the primary NAICS codes in the state of North Carolina (excluding wholesale trade businesses).

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
319	Wholesale trade businesses	21,249.63	195,058	11,996.71
283	Motor vehicle parts manufacturing	1,167.72	17,038	1,082.59
150	Tire manufacturing	677.03	6,218	481.89
278	Heavy duty truck manufacturing	510.75	4,697	411.10
279	Motor vehicle body manufacturing	207.75	3,188	206.00
294	All other transportation equipment manufacturing	48.11	125	12.53
276	Automobile manufacturing	25.41	372	22.82
280	Truck trailer manufacturing	20.60	327	20.13
277	Light truck and utility vehicle manufacturing	17.72	147	9.80
282	Travel trailer and camper manufacturing	10.94	232	10.77
TOTAL		23,935.65	227,402	14,254.34

* 2007 Million Dollars

Table 5: 2007 Economic Impact of the MV/MS Industries in NC - Primary NAICS Codes

Table 29 in Appendix C shows the 2007 economic impact for the secondary NAICS codes in NC. Note that for the secondary NAICS codes the top three industries in terms of total value-added to NC in 2007 were:

* IMPLAN code for the wholesale trade business includes many non-MV related NAICS codes. Unfortunately, this issue cannot be worked around within the IMPLAN software.



1. Retail Stores - Motor vehicle and parts
2. Automotive repair and maintenance – except car wash
3. Spectator sports companies

It is important to mention that the retail stores sector according to IMPLAN classification takes into account NAICS codes corresponding to MV dealers.

Table 30 in Appendix C shows the 2007 economic impact for the tertiary NAICS codes in NC. For this case, the top three industries in terms of total value-added and employment to NC in 2007 were:

1. Transport by truck
2. Transport by air
3. Wiring device manufacturing

The results shown on Table 30 indicate that the transport by truck sector plays an important role on employment generation for the state of NC, recording 68,268 employments in 2007, representing 64% of the total employment recorded by all the tertiary NAICS codes. Again, further analysis is recommended to refine this result, since as shown in Table 28 the transport by truck sector according to IMPLAN classification is taking into account 3 other NAICS codes not related to the MV/MS industries. Also, the transport by air sector takes into account NAICS codes not related to the MV/MS industries, such as scheduled and nonscheduled passenger air transportation.

B. Greater Charlotte Region (GCR)

1. Anson County (AC)

According to IMPLAN database, in 2007 there was no sector located in Anson County related to any of the primary NAICS codes selected for this study, other than the wholesale trade businesses sector (IMPLAN sector 319). During that year, the total value-added impact, employment and employee compensation recorded by this sector was \$37.16 million, 488 and 21.76 million, respectively. As stated earlier, this IMPLAN sector is taking into account many NAICS codes not related to the MV/MS industries, and it was not feasible to determine how



much of this economic contribution can be attributed to industries related to the MV/MS industries.

Table 31 and Table 32 in Appendix C show the 2007 economic impact for the secondary and tertiary NAICS codes in Anson County. Table 31 shows that for the secondary NAICS codes there were only 3 sectors related to the MV/MS industries in 2007, which together gave a total value-added of \$5.15 million dollars to Anson County:

1. Retail Stores - Motor vehicle and parts
2. Automotive repair and maintenance – except car wash
3. Paint and coating manufacturing

Table 32 shows that for the tertiary NAICS codes there were only 2 sectors related to the MV/MS industries located in Anson County: Transport by truck and transport by air. As it is the case for North Carolina, the results shown in Table 32 indicate that the transport by truck sector plays an important role on employment generation for Anson County, since from a total of 258 jobs generated by tertiary NAICS codes in 2007, 242 (97%) correspond to this industry. Again, further analysis is recommended to refine this result, since the transport by truck sector according to IMPLAN classification is taking into account 3 other NAICS codes not related to the MV/MS industries.

2. Cabarrus County (CC)

Table 6 shows the 2007 economic impact for the primary NAICS codes in Cabarrus County. Note that for the primary NAICS codes, there were only 5 sectors related to the MV/MS industries in 2007 located in this county. According to the results, the top three industries (excluding wholesale trade businesses) in terms of total value-added, employment and employee compensation to Cabarrus County in 2007 were:

1. All other transportation equipment manufacturing
2. Motor vehicle parts manufacturing
3. Light truck and utility vehicle manufacturing



Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
319	Wholesale trade businesses	341.71	3,274	197.48
294	All other transportation equipment manufacturing	47.25	159	14.16
283	Motor vehicle parts manufacturing	21.08	281	18.74
277	Light truck and utility vehicle manufacturing	2.29	28	1.21
282	Travel trailer and camper manufacturing	0.08	2	0.08
150	Tire manufacturing	0.00	0	0.00
276	Automobile manufacturing	0.00	0	0.00
278	Heavy duty truck manufacturing	0.00	0	0.00
279	Motor vehicle body manufacturing	0.00	0	0.00
280	Truck trailer manufacturing	0.00	0	0.00

TOTAL **412.40** **3,744** **231.67**

* 2007 Million Dollars

Table 6: 2007 Economic Impact of the MV & MS Industries in CC - Primary NAICS Codes

The top 3 industries in Cabarrus County gave a total value-added of \$70.61 million dollars to this county in 2007. Note that the top sector in terms of total value-added to Cabarrus County is a sector mainly related to motorsports manufacturing (Sector 294 - All other transportation equipment manufacturing). This sector comprises establishments primarily engaged in manufacturing transportation equipment, including race car manufacturing. The significant value-added impact of this sector (67% of the total value-added impact recorded by all the primary NAICS codes in Cabarrus County, excluding wholesale trade businesses) is probably due to the presence of the Lowe’s Motor Speedway⁹ inside Cabarrus County limits. However, also note that even though sector 294 gave the most total value-added to Cabarrus County, sector 283 had the most employment impact, with a total of 281 jobs in 2007.

Table 33 and Table 34 in Appendix C show the 2007 economic impact for the secondary and tertiary NAICS codes in Cabarrus County. Table 33 shows that for the secondary NAICS codes there were 6 sectors related to the MV/MS industries in 2007. The top 3 sectors in terms of total value-added, employment and employee compensation were:

1. Spectator sports companies
2. Retail Stores – Motor vehicle parts

⁹ <http://www.lowesmotorspeedway.com>



3. Automotive repair and maintenance – except car wash

They gave together a total value-added of \$341.349 million dollars to the county. Again, the top sector in terms of total value-added is a sector mainly related to the MS industry. Note, that this sector contributes almost 50% to the total employment value recorded by all the secondary NAICS codes in Cabarrus County.

Table 34 shows that for the tertiary NAICS codes there were only 5 sectors related to the MV/MS industries located in Cabarrus County, being the top 3 sectors in terms of value-added and employee compensation:

1. Transport by truck
2. Wiring device manufacturing
3. Transport by air

The results shown in Table 34 indicate that the transport by truck sector plays an important role on employment generation for Cabarrus County, reaching a total of 847 jobs in 2007.

3. Gaston County (GC)

Table 7 shows the 2007 economic impact for the primary NAICS codes in Gaston County. Note that for the primary NAICS codes there were only 3 sectors related to the MV/MS industries in 2007 located in this county. According to the results, the top two industries (excluding wholesale trade businesses) in terms of total value-added, employment and employee compensation to Gaston County in 2007 were: motor vehicle parts manufacturing and heavy duty truck manufacturing, which gave together to this county a total value-added, employment and employee compensation of \$343.09 million, 3759 and \$285.09 million respectively.



Industry Sector	Industry (IMPLAN Clasification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
319	Wholesale trade businesses	250.28	2,539	142.16
283	Motor vehicle parts manufacturing	194.17	2,477	171.64
278	Heavy duty truck manufacturing	148.92	1,282	113.45
150	Tire manufacturing	0.00	0	0.00
276	Automobile manufacturing	0.00	0	0.00
277	Light truck and utility vehicle manufacturing	0.00	0	0.00
279	Motor vehicle body manufacturing	0.00	0	0.00
280	Truck trailer manufacturing	0.00	0	0.00
282	Travel trailer and camper manufacturing	0.00	0	0.00
294	All other transportation equipment manufacturing	0.00	0	0.00

TOTAL **593.37** **6,298** **427.25**

* 2007 Million Dollars

Table 7: 2007 Economic Impact of MV & MS Industries in GC - Primary NAICS Codes

Table 35 and Table 36 in Appendix C show the 2007 economic impact for the secondary and tertiary NAICS codes in Gaston County. Table 35 shows that for the secondary NAICS codes there were 6 sectors related to the MV/MS industries located in Gaston County in 2007. The top 3 sectors in terms of total value-added, employment and employee compensation were:

1. Retail Stores – Motor vehicle parts
2. Automotive repair and maintenance – except car wash
3. Hardware manufacturing

They gave together a total value-added of \$156.20 million dollars to the county, of which 80% corresponds to the retail stores- motor vehicle parts sector.

Table 36 shows that for the tertiary NAICS codes there were only 2 sectors related to the MV/MS industries located in Gaston County, namely: transport by truck and transport by air, which gave together a total value-added, employment and employee compensation of \$32.58 million, 720 and \$14.46 million respectively. The results shown in Table 36 indicate that the transport by truck sector plays an important role on employment generation for Gaston County reaching a total of 714, 99% of the total number of employments generated for the tertiary NAICS codes.



4. Iredell County (IC)

Table 8 shows the 2007 economic impact for the primary NAICS codes in Iredell County. According to the results, the top three industries (excluding wholesale trade businesses) in terms of total value-added, employment and employee compensation to Iredell County in 2007 were:

1. All other transportation equipment manufacturing
2. Motor vehicle parts manufacturing
3. Tire manufacturing

They gave together to this county a total value-added, employment and employee compensation of \$126.18 million, 837 and \$67.15 million respectively.

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
319	Wholesale trade businesses	374.53	4,077	215.02
294	All other transportation equipment manufacturing	75.74	202	22.70
283	Motor vehicle parts manufacturing	48.23	610	42.86
150	Tire manufacturing	2.20	25	1.59
282	Travel trailer and camper manufacturing	0.02	1	0.02
276	Automobile manufacturing	0.00	0	0.00
277	Light truck and utility vehicle manufacturing	0.00	0	0.00
278	Heavy duty truck manufacturing	0.00	0	0.00
279	Motor vehicle body manufacturing	0.00	0	0.00
280	Truck trailer manufacturing	0.00	0	0.00

TOTAL

500.73

4,915

282.19

* 2007 Million Dollars

Table 8: 2007 Economic Impact of MV & MS Industries in IC - Primary NAICS Codes

Note that, even though all other transportation equipment manufacturing, a mainly MS related sector, gives a higher value-added impact to Iredell County than motor vehicle parts manufacturing, this last sector triples the employment impact that the all other transportation equipment manufacturing sector adds to the county.

Table 37 and

Table 38 in Appendix C show the 2007 economic impact for the secondary and tertiary NAICS codes in Iredell County.



Table 37 shows that for the secondary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation to Iredell County were:

1. Spectator sports companies
2. Retail Stores – Motor vehicle parts
3. Automotive repair and maintenance – except car wash

They gave together a total value-added of \$311.85 million to the county. Note that more than 50% of the total value-added given by all secondary NAICS codes corresponds to the spectator sports companies sector, which is a MS service provider.

Table 38 shows that for the tertiary NAICS codes there were only 4 sectors related to the MV/MS industries located in Iredell County. The top three industries in terms of total value-added, employment and employee compensation in 2007 were:

1. Transport by truck
2. Glass product manufacturing made of purchased glass
3. Transport by air

Note that the contribution of the transport by truck sector is quite significant as it represents more than 95% of the total value-added, the employment and the employee compensation values recorded by all the tertiary NAICS codes in Iredell County.

5. Lincoln County (LC)

Table 9 shows the 2007 economic impact for the primary NAICS codes in Lincoln County. Note that for the primary NAICS codes there were only 3 sectors related to the MV/MS industries in 2007 located in this county. According to the results, the top two industries (excluding wholesale trade businesses) in terms of total value-added, employment and employee compensation to Lincoln County in 2007 were: motor vehicle parts manufacturing and all other transportation equipment manufacturing, which gave together to this county a total value-added, employment and employee compensation of \$3.73 million, 84 and \$2.76 million respectively.



Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
319	Wholesale trade businesses	80.08	768	44.85
283	Motor vehicle parts manufacturing	2.87	78	2.50
294	All other transportation equipment manufacturing	0.86	6	0.26
150	Tire manufacturing	0.00	0	0.00
276	Automobile manufacturing	0.00	0	0.00
277	Light truck and utility vehicle manufacturing	0.00	0	0.00
278	Heavy duty truck manufacturing	0.00	0	0.00
279	Motor vehicle body manufacturing	0.00	0	0.00
280	Truck trailer manufacturing	0.00	0	0.00
282	Travel trailer and camper manufacturing	0.00	0	0.00

TOTAL **83.82** **852** **47.61**

* 2007 Million Dollars

Table 9: 2007 Economic Impact of MV & MS Industries in LC - Primary NAICS Codes

Table 39 and

Table 40 in Appendix C show the 2007 economic impact for the secondary and tertiary NAICS codes in Lincoln County. Table 39 shows that for the secondary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation to Lincoln County were:

1. Retail Stores – Motor vehicle parts
2. Hardware manufacturing
3. Automotive repair and maintenance – except car wash

They gave together a total value-added of \$45.70 million to the county. Note also that almost 45% of the employment generated by all secondary NAICS codes corresponds to the retail stores – motor vehicle parts.

Table 40 shows that for the tertiary NAICS codes there were only 2 sectors related to the MV/MS industries in 2007 located in Lincoln County, namely: transport by truck and transport by air. These two sectors gave together a total value-added, employment and employee compensation of \$19.03 million, 386 and 11.35 million respectively. Note that the contribution of the transport by truck sector is quite significant as it represents almost 100% of the total value-



added, employment and employee compensation values recorded by all the tertiary NAICS codes in Lincoln County.

6. Mecklenburg County (MC)

Table 10 shows the 2007 economic impact for the primary NAICS codes in Mecklenburg County. Note that for the primary NAICS codes there were only 4 sectors related to the MV/MS industries in 2007 located in this county. According to the results, the top three industries (excluding wholesale trade businesses) in terms of total value-added, employment and employee compensation to Mecklenburg County in 2007 were:

1. Tire manufacturing
2. Motor vehicle parts manufacturing
3. Motor vehicle body manufacturing

They gave together to this county a total value-added, employment and employee compensation of \$108.02 million, 987 and \$75.66 million respectively. Note that the economic impact reported by the tire manufacturing sector in 2007 for Mecklenburg County is quite significant as it represents about 70% of the total value-added, employment and employee compensation values recorded by all the primary NAICS codes (excluding wholesale trade businesses).

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
319	Wholesale trade businesses	5,471.56	44,143	3,030.31
150	Tire manufacturing	79.17	674	53.95
283	Motor vehicle parts manufacturing	20.65	183	14.62
279	Motor vehicle body manufacturing	8.20	130	7.10
276	Automobile manufacturing	0.00	0	0.00
277	Light truck and utility vehicle manufacturing	0.00	0	0.00
278	Heavy duty truck manufacturing	0.00	0	0.00
280	Truck trailer manufacturing	0.00	0	0.00
282	Travel trailer and camper manufacturing	0.00	0	0.00
294	All other transportation equipment manufacturing	0.00	0	0.00

TOTAL

5,579.58

45,130

3,105.98

* 2007 Million Dollars



Table 10: 2007 Economic Impact of MV MS Industries in MC - Primary NAICS Codes

Table 41 and Table 42 in Appendix C show the 2007 economic impact for the secondary and tertiary NAICS codes in Mecklenburg County. Table 41 shows that for the secondary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation to Mecklenburg County were:

1. Retail Stores – Motor vehicle parts
2. Spectator sports company
3. Automotive repair and maintenance-except car wash

Table 42 shows that for the tertiary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation to Mecklenburg County were:

1. Transport by truck
2. Transport by air
3. Aluminum product manufacturing from purchased aluminum

It is important to mention that the transport by air sector takes into account NAICS codes not related to the MV/MS industries, such as scheduled and nonscheduled passenger air transportation, when it should only be considering establishments primarily engaged in providing air transportation of cargo without transporting passengers (NAICS Code 481112). Therefore, the economic impact reported for this sector in Mecklenburg County could be highly influenced for the existence of the Charlotte Douglas International Airport inside the County limits.

7. Rowan County (RC)

Table 11 shows the 2007 economic impact for the primary NAICS codes in Rowan County. According to the results, the top three industries (excluding wholesale trade businesses) in terms of total value-added, employment and employee compensation to Rowan County in 2007 were:

1. Heavy duty truck manufacturing
2. Motor vehicle parts manufacturing
3. Tire manufacturing

Note that this is the only county in the Greater Charlotte Region where the wholesale trade businesses is not the top sector in terms of total value-added. In this case, the heavy truck



manufacturing sector is pretty significant as it gave to Rowan County in 2007 a total value-added, employment and employee compensation that represents 86%, 78% and 88% of the total value-added, employment and employee compensation values recorded by all the primary NAICS codes (excluding wholesale trade businesses).

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
278	Heavy duty truck manufacturing	262.97	2442	201.20
319	Wholesale trade businesses	182.97	2141	104.22
283	Motor vehicle parts manufacturing	18.92	415	16.75
150	Tire manufacturing	14.02	169	9.72
294	All other transportation equipment manufacturing	4.71	28	0.84
279	Motor vehicle body manufacturing	3.11	57	2.95
276	Automobile manufacturing	0.97	17	0.83
277	Light truck and utility vehicle manufacturing	0.00	0	0.00
280	Truck trailer manufacturing	0.00	0	0.00
282	Travel trailer and camper manufacturing	0.00	0	0.00

TOTAL

487.66

5269

336.50

* 2007 Million Dollars

Table 11: 2007 Economic Impact of MV/MS Industries in RC - Primary NAICS Codes

Table 43 and Table 44 in Appendix C show the 2007 economic impact for the secondary and tertiary NAICS codes in Rowan County. Table 43 shows that for the secondary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation to Rowan County were:

1. Retail Stores – Motor vehicle parts
2. Automotive repair and maintenance – except car wash
3. Rubber and plastics hoses and belting manufacturing

They gave together a total value-added of \$74.11 million to the county. Table 43 shows that the economic impact reported by the retail stores – motor vehicle parts sector in 2007 is quite significant as it represents more than 50% of the total value-added, employment and employee compensation values recorded by all the secondary NAICS codes in Rowan County. However, since this sector according to IMPLAN classification takes into account NAICS codes



corresponding to MV dealers, it would be recommended to know how much of this contribution is because of the car dealers located in the region.

Table 44 shows that for the tertiary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation to Rowan County were:

1. Transport by truck
2. Aluminum product manufacturing from purchased aluminum
3. Wiring device manufacturing

They gave together a total value-added of \$126.02 million to the county. Note that the contribution of the transport by truck sector is quite significant as it represents between 74 and 80% of the total value-added, employment and employee compensation values recorded by all the tertiary NAICS codes in Rowan County.

8. Stanly County (SC)

Table 12 shows the 2007 economic impact for the primary NAICS codes in Stanly County. Note that for the primary NAICS codes there were only 4 sectors related to the MV/MS industries in 2007 located in this county. According to the results, the top three industries (excluding wholesale trade businesses) in terms of total value-added, employment and employee compensation to Stanly County in 2007 were:

1. Tire manufacturing
2. Motor vehicle parts manufacturing
3. All other transportation equipment manufacturing

They gave together to this county a total value-added, employment and employee compensation of \$48.87 million, 548 and \$33.20 million respectively.



Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
319	Wholesale trade businesses	50.98	648	29.20
150	Tire manufacturing	34.82	411	24.23
283	Motor vehicle parts manufacturing	9.46	120	7.87
294	All other transportation equipment manufacturing	4.59	17	1.10
276	Automobile manufacturing	0.00	0	0.00
277	Light truck and utility vehicle manufacturing	0.00	0	0.00
278	Heavy duty truck manufacturing	0.00	0	0.00
279	Motor vehicle body manufacturing	0.00	0	0.00
280	Truck trailer manufacturing	0.00	0	0.00
282	Travel trailer and camper manufacturing	0.00	0	0.00

TOTAL **99.85** **1,196** **62.40**

* 2007 Million Dollars

Table 12: 2007 Economic Impact of MV/MS Industries in SC - Primary NAICS Codes

Note the significant impact of the tire manufacturing sector in Stanly County as it represents between 72 and 75% of the total value-added, employment and employee compensation values recorded by all the primary NAICS codes in this county (excluding wholesale trade businesses).

Table 45 and Table 46 in Appendix C show the 2007 economic impact for the secondary and tertiary NAICS codes in Stanly County. Table 45 shows that for the secondary NAICS codes there were only 2 sectors related to the MV/MS industries located in Stanly County, namely: retail stores – motor vehicle parts and automotive repair and maintenance – except car wash, which gave together a total value-added, employment and employee compensation of \$33.93 million, 736 and \$21.23 million respectively. Most of this economic impact is due to the retail stores contribution.

Table 46 shows that for the tertiary NAICS codes there were only 2 sectors related to the MV/MS industries in 2007 located in Stanly County, namely:

1. Transport by truck
2. Wiring device manufacturing

They gave together a total value-added, employment and employee compensation of \$22.02 million, 388 and 11.47 million respectively.



9. Union County (UC)

Table 13 shows the 2007 economic impact for the primary NAICS codes in Union County. According to the results, the top three industries (excluding wholesale trade businesses) in terms of total value-added, employment and employee compensation to Union County in 2007 were:

1. Motor vehicle parts manufacturing
2. Motor vehicle body manufacturing
3. All other transportation equipment manufacturing

They gave together to this county a total value-added, employment and employee compensation of \$9.13 million, 146 and \$8.07 million respectively. Note that most of this economic impact is due to the motor vehicle parts and motor vehicle body manufacturing sectors contribution.

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
319	Wholesale trade businesses	374.94	3,316	219.26
283	Motor vehicle parts manufacturing	4.43	73	3.92
279	Motor vehicle body manufacturing	4.24	71	4.01
294	All other transportation equipment manufacturing	0.46	2	0.14
280	Truck trailer manufacturing	0.12	2	0.11
150	Tire manufacturing	0.00	0	0.00
276	Automobile manufacturing	0.00	0	0.00
277	Light truck and utility vehicle manufacturing	0.00	0	0.00
278	Heavy duty truck manufacturing	0.00	0	0.00
282	Travel trailer and camper manufacturing	0.00	0	0.00

TOTAL

384.18

3,464

227.43

* 2007 Million Dollars

Table 13: 2007 Economic Impact of MV/MS Industries in UC - Primary NAICS Codes

Table 47 and Table 48 in Appendix C show the 2007 economic impact for the secondary and tertiary NAICS codes in Union County. Table 47 shows that for the secondary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation to Union County were:

1. Retail Stores – Motor vehicle parts



2. Automotive repair and maintenance – except car wash
3. Hardware manufacturing

They gave together a total value-added of \$121.38 million to the county.

Table 48 shows that for the tertiary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation to Union County were:

1. Nonferrous metal (except copper and aluminum) roll
2. Transport by truck
3. Copper rolling-drawing-extruding and alloying

They gave together a total value-added, employment and employee compensation of \$165.49 million, 1440 and 90.99 million respectively. Note that the economic contribution of the nonferrous metal (except copper and aluminum) roll sector is quite significant as it represents 67% of the total value-added recorded by all the tertiary NAICS codes in Union County.

IV. Future What-If Analysis

This section presents a what-if economic analysis of adding (or losing) companies related to the MV/MS industries in North Carolina and the Greater Charlotte Region. Traditionally, the impact of expansion is the focus of a what-if analysis; it also can measure the effect of employment losses, i.e. shrinkage. Within the MV/MS industries, given current economic conditions, major OEM consolidations and the ripple effect throughout the supply chain, shrinkage may be realized more imminently than expansion. When reviewing the following study findings, it is appropriate to understand that shrinkage would have the same amount of effect on the economy in a negative manner instead of the positive manner stated for a hypothetical expansion.

A. North Carolina (NC)

Table 14 shows the economic impact results of adding 1000 jobs to the MV/MS industries in 2010 for the primary NAICS codes in the state of North Carolina. It is observed that for the primary NAICS codes the 3 top industries in terms of total value-added, employment and employee compensation to NC are:

1. Light truck and utility vehicle manufacturing



2. All other transportation equipment manufacturing
3. Heavy duty truck manufacturing

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
277	Light truck and utility vehicle manufacturing	511,700,673	6,165	314,495,006
294	All other transportation equipment manufacturing	488,523,519	2,904	166,658,061
278	Heavy duty truck manufacturing	311,768,777	3,649	203,907,743
150	Tire manufacturing	191,794,048	2,145	121,767,894
276	Automobile manufacturing	180,384,084	2,502	127,919,669
319	Wholesale trade businesses	151,785,642	1,691	83,891,956
283	Motor vehicle parts manufacturing	142,383,857	2,051	104,601,022
280	Truck trailer manufacturing	107,400,883	1,632	82,859,991
279	Motor vehicle body manufacturing	102,798,967	1,529	82,183,111
282	Travel trailer and camper manufacturing	93,555,849	1,617	69,406,445
TOTAL		2,282,096,299	25,883	1,357,690,898

* 2007 Dollars

Table 14: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in NC - Primary NAICS Codes

Note that all these 3 sectors are OEMs, and together give NC a total value-added of \$1,311,992,969, which is quite significant as it represents more than 50% of the total value-added given by all the primary NAICS codes in the state of North Carolina. Additionally, Table 14 shows that adding 1,000 jobs to the light truck and utility vehicle manufacturing industry in 2010 create an additional 5,165 jobs in other related sectors (this number comprises indirect and induced employments generation).

Table 49 in Appendix D shows the economic impact results of adding 1000 jobs in 2010 to the MV/MS industries in NC for the secondary NAICS codes. Results indicate that the top 3 industries in terms of total value-added to NC for the secondary NAICS codes are:

1. Paint and coating manufacturing
2. Audio and video equipment manufacturing
3. Electric lamp bulb and part manufacturing

Note that the previous 3 industries are mainly suppliers and give together a total value added of \$730,442,659 to NC.



Table 50 in Appendix D shows the economic impact results of adding 1000 jobs in 2010 to the MV/MS industries in NC for the tertiary NAICS codes. Results indicate that for the tertiary codes the 3 top industries in terms of total value-added to NC are:

1. Transport by water
2. Nonferrous metal (except copper and aluminum) roll
3. Copper rolling-drawing-extruding and alloying

Note that these 3 industries together give a total value-added of more than \$1,000,000,000 to the state of North Carolina, which represent about 40% of the total value-added given by all the tertiary NAICS codes together.

B. Greater Charlotte Region (GCR)

1. Anson County (AC)

Table 15 shows that when 100 jobs are added to the MV/MS industries in 2010, the top 3 industries related to primary NAICS codes in terms of total value-added, employment and employee compensation to Anson County are:

1. All other transportation equipment manufacturing
2. Light truck and utility vehicle manufacturing
3. Heavy duty truck manufacturing



Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
294	All other transportation equipment manufacturing	41,496,086	199	12,450,381
277	Light truck and utility vehicle manufacturing	22,704,578	264	12,711,925
278	Heavy duty truck manufacturing	17,522,081	209	12,159,653
150	Tire manufacturing	15,250,412	168	10,007,824
283	Motor vehicle parts manufacturing	10,698,023	164	8,478,023
276	Automobile manufacturing	10,621,722	158	7,982,640
319	Wholesale trade businesses	8,791,567	124	5,013,953
279	Motor vehicle body manufacturing	8,540,040	134	7,396,322
280	Truck trailer manufacturing	8,272,446	133	6,882,956
282	Travel trailer and camper manufacturing	6,961,104	135	5,690,391

TOTAL **150,858,059** **1,689** **88,774,068**

* 2007 Dollars

Table 15: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in AC - Primary NAICS Codes

Note that all these 3 sectors are mainly OEM’s, and together give Anson County a total value-added of \$81,722,745, which is quite significant as it represents more than 50% of the total value-added given by all the primary NAICS codes in this county. Recruiting an OEM with MS focus such as the all other transportation equipment manufacturing sector seems to be especially opportune for Anson County, due to high economic impact of this sector and the location close to the Lowe’s Motor Speedway, an important supporter of MS activities in the United States.⁹

Table 51 and Table 52 in Appendix D show the results of adding 100 jobs to the MV/MS industries in 2010 for the secondary and tertiary NAICS codes. Table 51 shows that for secondary NAICS codes, the top 3 industries in terms of total value-added, employment and employee compensation to Anson County are:

1. Paint and coating manufacturing
2. Audio and video equipment manufacturing
3. Electric lamp bulb and part manufacturing

These industries are mainly suppliers and give together a total value added of \$46,552,138.



Table 52 shows that for tertiary NAICS codes, the top 3 industries in terms of total value-added, employment and employee compensation to Anson County are:

1. Nonferrous metal (except copper and aluminum) roll
2. Copper rolling-drawing-extruding and alloying
3. Broadcast and wireless communications equipment manufacturing

These 3 industries give together a total value-added of \$78,642,418 to Anson County.

2. Cabarrus County (CC)

Table 16 shows that when 100 jobs are added to the MV/MS industries in 2010, the top 3 industries related to primary NAICS codes in terms of total value-added to Cabarrus County are:

1. Light truck and utility vehicle manufacturing
2. All other transportation equipment manufacturing
3. Heavy duty truck manufacturing

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
277	Light truck and utility vehicle manufacturing	46,353,393	635	30,076,333
294	All other transportation equipment manufacturing	34,989,076	226	12,414,479
278	Heavy duty truck manufacturing	24,984,323	308	17,375,451
276	Automobile manufacturing	16,687,560	242	12,296,700
150	Tire manufacturing	16,418,691	188	10,717,412
319	Wholesale trade businesses	13,038,070	149	7,284,845
283	Motor vehicle parts manufacturing	12,813,104	187	9,588,639
280	Truck trailer manufacturing	9,340,047	150	7,522,780
279	Motor vehicle body manufacturing	9,218,506	144	7,701,052
282	Travel trailer and camper manufacturing	6,530,058	139	4,913,323

TOTAL **190,372,828** **2,367** **119,891,014**

* 2007 Dollars

Table 16: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in CC - Primary NAICS Codes

Note that all these 3 sectors are mainly OEM's, and together give Cabarrus County a total value added of \$106,326,792, which is quite significant as it represents more than 50% of the total value-added given by all the primary NAICS codes in this county. As it was the case for



Anson County, recruiting an OEM with MS focus such as the all other transportation equipment manufacturing sector seems to be especially opportune for Cabarrus County, due to high economic impact of this sector and the privileged location the new recruiting industries would count with, being located in the county that serves as home of the Lowe's Motor Speedway.⁹

Table 53 and Table 54 in Appendix D show the results of adding 100 jobs to the MV/MS industries in 2010 for the secondary and tertiary NAICS codes. Table 53 shows that for secondary NAICS codes, the top 3 sectors in terms of total value-added are:

1. Paint and coating manufacturing
2. Audio and video equipment manufacturing
3. Electric lamp bulb and part manufacturing

These 3 sectors are mainly suppliers and give together a total value-added of \$55,310,096 to Cabarrus County.

Table 54 shows that for tertiary NAICS codes, the top 3 sectors in terms of total value-added are:

1. Copper rolling-drawing-extruding and alloying
2. Nonferrous metal (except copper and aluminum) roll
3. Broadcast and wireless communications equipment manufacturing

These 3 sectors give together a total value-added of \$89,178,005 to Cabarrus County.

3. Gaston County (GC)

Table 17 shows that when 100 jobs are added to the MV/MS industries in 2010, the top 3 industries related to primary NAICS codes in terms of total value-added to Gaston County are:

1. Light truck and utility vehicle manufacturing
2. All other transportation equipment manufacturing
3. Heavy duty truck manufacturing



Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
277	Light truck and utility vehicle manufacturing	53,421,782	695	34,684,135
294	All other transportation equipment manufacturing	45,410,992	263	14,836,380
278	Heavy duty truck manufacturing	27,598,443	340	18,688,058
276	Automobile manufacturing	18,505,425	269	13,616,090
150	Tire manufacturing	16,952,592	193	10,887,420
283	Motor vehicle parts manufacturing	13,626,794	195	10,090,547
319	Wholesale trade businesses	12,500,846	152	6,910,276
280	Truck trailer manufacturing	9,357,369	151	7,546,485
279	Motor vehicle body manufacturing	9,064,986	141	7,533,384
282	Travel trailer and camper manufacturing	7,814,461	149	6,155,691

TOTAL **214,253,690** **2,549** **130,948,466**

* 2007 Dollars

Table 17: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in GC - Primary NAICS Codes

Note that all these 3 sectors are mainly OEM’s, and together give Gaston County a total value added of \$126,431,217, which is quite significant as it represents more than 50% of the total value-added given by all the primary NAICS codes in this county.

As it is the case for neighbor counties, the economic impact of the MS related sector all other transportation equipment manufacturing to Gaston County is very significant.

Table 55 and Table 56 in Appendix D show the results of adding 100 jobs to the MV/MS industries in 2010 for the secondary and tertiary NAICS codes. Table 55 shows that for the secondary NAICS codes, the top 3 sectors in terms of total value-added and employee compensation are:

1. Paint and coating manufacturing
2. Audio and video equipment manufacturing
3. Electric lamp bulb and part manufacturing

These 3 sectors are mainly suppliers and give together a total value-added of \$ 57,752,673 to Gaston County.

Table 56 shows that for tertiary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation are:



1. Nonferrous metal (except copper and aluminum) roll
2. Copper rolling-drawing-extruding and alloying
3. Broadcast and wireless communications equipment manufacturing

These 3 sectors give together a total value-added of \$ 84,580,656 to Gaston County.

4. Iredell County (IC)

Table 18 shows that when 100 jobs are added to the MV/MS industries in 2010, the top 3 industries related to primary NAICS codes in terms of total value-added, and employee compensation to Iredell County are:

1. Light truck and utility vehicle manufacturing
2. All other transportation equipment manufacturing
3. Heavy duty truck manufacturing

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
277	Light truck and utility vehicle manufacturing	58,349,644	741	38,187,708
294	All other transportation equipment manufacturing	45,215,384	260	16,707,858
278	Heavy duty truck manufacturing	33,189,159	406	22,597,390
276	Automobile manufacturing	19,579,779	279	14,430,068
150	Tire manufacturing	14,558,040	189	9,646,105
283	Motor vehicle parts manufacturing	14,522,944	202	10,945,423
319	Wholesale trade businesses	11,640,775	144	6,604,862
280	Truck trailer manufacturing	10,052,306	157	8,106,839
279	Motor vehicle body manufacturing	9,796,670	150	8,184,296
282	Travel trailer and camper manufacturing	4,182,215	126	3,056,070

TOTAL **221,086,916** **2,655** **138,466,619**

* 2007 Dollars

Table 18: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in IC - Primary NAICS Codes

Note that all these 3 sectors are mainly OEM's, and together give Iredell County a total value added of \$136,754,187, which is quite important as it represents almost 50% of the total value-added given by all the primary NAICS codes in this county. Note also that more than 25%



of the total number of jobs generated by primary NAICS codes corresponds to the light truck and utility vehicle manufacturing sector (741 from a total of 2,655).

Again, as it is the case for neighbor counties, the economic impact of the MS related sector all other transportation equipment manufacturing to Iredell County is very significant.

Table 57 and Table 58 in Appendix D show the results of adding 100 jobs to the MV/MS industries in 2010 for the secondary and tertiary NAICS codes. Table 57 shows that for secondary NAICS codes, the top 3 sectors in terms of total value-added, employee and employee compensation are:

1. Audio and video equipment manufacturing
2. Paint and coating manufacturing
3. Electric lamp bulb and part manufacturing

These 3 sectors are mainly suppliers and give together a total value-added of \$57,925,080 to Iredell County.

Table 58 shows that for tertiary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation are:

1. Nonferrous metal (except copper and aluminum) roll
2. Copper rolling-drawing-extruding and alloying
3. Broadcast and wireless communications equipment manufacturing

These 3 sectors give together a total value-added of \$87,667,921 to Iredell County.

5. Lincoln County (LC)

Table 19 shows that when 100 jobs are added to the MV/MS industries in 2010, the top 3 industries related to primary NAICS codes in terms of total value-added to Lincoln County are:

1. Light truck and utility vehicle manufacturing
2. Heavy duty truck manufacturing
3. All other transportation equipment manufacturing



Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
277	Light truck and utility vehicle manufacturing	26,768,195	334	15,467,164
278	Heavy duty truck manufacturing	20,921,438	260	14,366,075
294	All other transportation equipment manufacturing	18,328,785	164	6,664,173
150	Tire manufacturing	15,151,703	165	10,022,035
276	Automobile manufacturing	13,448,896	211	9,926,875
319	Wholesale trade businesses	12,158,529	134	6,650,018
279	Motor vehicle body manufacturing	8,423,223	130	7,322,278
280	Truck trailer manufacturing	8,346,162	133	6,971,693
283	Motor vehicle parts manufacturing	7,120,762	154	5,142,930
282	Travel trailer and camper manufacturing	7,054,516	136	5,783,001

TOTAL **137,722,209** **1,820** **88,316,242**

* 2007 Dollars

Table 19: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in LC - Primary NAICS Codes

Note that all these 3 sectors are mainly OEM’s, and together give Lincoln County a total value added of \$ 66,018,418, which is quite important as it represents almost 50% of the total value-added given by all the primary NAICS codes in this county.

Table 59 and

Table 60 in Appendix D show the results of adding 100 jobs to the MV/MS industries in 2010 for the secondary and tertiary NAICS codes. Table 59 shows that for secondary NAICS codes, the top 3 sectors in terms of total value-added, employee and employee compensation are:

1. Paint and coating manufacturing
2. Audio and video equipment manufacturing
3. Electric lamp bulb and part manufacturing

These 3 sectors are mainly suppliers and give together a total value-added of \$ 46,259,967 to Lincoln County.

Table 60 shows that for tertiary NAICS codes, the top 3 sectors in terms of total value-added and employment are:

1. Nonferrous metal (except copper and aluminum) roll
2. Copper rolling-drawing-extruding and alloying



3. Broadcast and wireless communications equipment manufacturing

These 3 sectors give together a total value-added and employment to Lincoln County of \$76,193,065 and 659 respectively, amounts representing more than 30% of the total value-added and employment given by all tertiary NAICS codes to this county.

6. Mecklenburg County (MC)

Table 20 shows that when 100 jobs are added to the MV/MS industries in 2010, the top 3 industries related to primary NAICS codes in terms of total value-added, employment and employee compensation to Mecklenburg County are:

1. All other transportation equipment manufacturing
2. Light truck and utility vehicle manufacturing
3. Heavy duty truck manufacturing

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
294	All other transportation equipment manufacturing	47,135,971	240	15,694,677
277	Light truck and utility vehicle manufacturing	42,413,001	424	25,002,637
278	Heavy duty truck manufacturing	26,123,870	268	17,349,193
150	Tire manufacturing	19,209,392	186	12,003,459
283	Motor vehicle parts manufacturing	18,970,102	194	12,222,879
319	Wholesale trade businesses	16,219,441	154	8,878,949
276	Automobile manufacturing	15,955,849	198	11,334,893
280	Truck trailer manufacturing	9,836,769	141	7,822,797
279	Motor vehicle body manufacturing	9,403,950	135	7,006,635
282	Travel trailer and camper manufacturing	8,412,023	140	6,487,400

TOTAL **213,680,368** **2,081** **123,803,519**

* 2007 Dollars

Table 20: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in MC - Primary NAICS Codes

Note that all these 3 sectors are mainly OEM’s, and together give Mecklenburg County a total value added of \$115,672,842, which is quite important as it represents more than 50% of the total value-added given by all the primary NAICS codes in this county. Also note that, even though the all other transportation equipment manufacturing sector gives a higher value-added



impact to Mecklenburg County than light truck and utility vehicle manufacturing, this last sector almost doubles the employment and employee compensation impact that the all other transportation equipment manufacturing adds to the county.

Table 61 and Table 62 in Appendix D show the results of adding 100 jobs to the MV/MS industries in 2010 for the secondary and tertiary NAICS codes. Table 61 shows that for secondary NAICS codes, the top 3 sectors in terms of total value-added and employee compensation are:

1. Paint and coating manufacturing
2. Audio and video equipment manufacturing
3. Other commercial and service industry machinery manufacturing

These 3 sectors are mainly suppliers and give together a total value-added of \$68,729,371 to Mecklenburg County.

Table 62 shows that for tertiary NAICS codes, the top 3 sectors in terms of total value-added and employment are:

1. Nonferrous metal (except copper and aluminum) roll
2. Broadcast and wireless communications equipment manufacturing
3. Copper rolling-drawing-extruding and alloying

These 3 sectors give together a total value-added and employment to Mecklenburg County of \$224,786,942 and 1,095 respectively. Note that the contribution of the nonferrous metal (except copper and aluminum) roll sector is quite important as it represents 36% of the total value-added recorded by all the tertiary NAICS codes in Mecklenburg County.

7. Rowan County (RC)

Table 21 shows that when 100 jobs are added to the MV/MS industries in 2010, the top 3 industries related to primary NAICS codes in terms of total value-added to Rowan County are:

1. Light truck and utility vehicle manufacturing
2. All other transportation equipment manufacturing
3. Heavy duty truck manufacturing



Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
277	Light truck and utility vehicle manufacturing	29,708,487	377	17,984,140
294	All other transportation equipment manufacturing	19,784,995	168	5,385,310
278	Heavy duty truck manufacturing	19,210,280	237	13,228,612
150	Tire manufacturing	12,825,411	173	8,370,617
276	Automobile manufacturing	11,354,804	189	8,226,093
319	Wholesale trade businesses	10,494,293	137	5,985,904
280	Truck trailer manufacturing	8,832,545	142	7,357,286
283	Motor vehicle parts manufacturing	8,541,821	164	6,417,793
279	Motor vehicle body manufacturing	7,556,206	131	6,191,758
282	Travel trailer and camper manufacturing	7,509,490	144	6,105,972

TOTAL **135,818,332** **1,863** **85,253,485**

* 2007 Dollars

Table 21: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in RC - Primary NAICS Codes

Note that all these 3 sectors are mainly OEM’s, and together give Rowan County a total value added of \$ 68,703,762. It is interesting to note that even though the all other transportation equipment manufacturing sector, a MS related industry, gives the second highest value-added to Rowan County, this sector is also the one with the lowest employee compensation impact. This result might be due to low pay workers in this sector.

Table 63 and Table 64 in Appendix D show the results of adding 100 jobs to the MV/MS industries in 2010 for the secondary and tertiary NAICS codes. Table 63 shows that for secondary NAICS codes, the top 3 sectors in terms of total value-added and employee compensation are:

1. Paint and coating manufacturing
2. Audio and video equipment manufacturing
3. Electric lamp bulb and parts manufacturing

These 3 sectors are mainly suppliers and give together a total value-added of \$49,028,512 to Rowan County.

Table 64 shows that for tertiary NAICS codes, the top 3 sectors in terms of total value-added, employment and employee compensation impact are:

1. Nonferrous metal (except copper and aluminum) roll



2. Copper rolling-drawing-extruding and alloying
3. Broadcast and wireless communications equipment manufacturing

These 3 sectors give together a total value-added to Rowan County of \$80,524,852.

8. Stanly County (SC)

Table 22 shows that when 100 jobs are added to the MV/MS industries in 2010, the top 3 industries related to primary NAICS codes in terms of total value-added to Stanly County are:

1. Light truck and utility vehicle manufacturing
2. All other transportation equipment manufacturing
3. Heavy duty truck manufacturing

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
277	Light truck and utility vehicle manufacturing	32,931,405	429	20,256,111
294	All other transportation equipment manufacturing	30,566,644	202	9,305,964
278	Heavy duty truck manufacturing	22,028,175	285	15,510,797
276	Automobile manufacturing	15,398,268	235	11,485,580
283	Motor vehicle parts manufacturing	12,558,824	184	9,175,121
150	Tire manufacturing	12,421,474	171	8,011,979
319	Wholesale trade businesses	9,287,248	131	5,227,066
280	Truck trailer manufacturing	8,914,299	148	7,355,554
279	Motor vehicle body manufacturing	8,817,766	142	7,589,582
282	Travel trailer and camper manufacturing	7,249,850	144	5,894,974
TOTAL		160,173,953	2,071	99,812,728

* 2007 Dollars

Table 22: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in SC - Primary NAICS Codes

Note that all these 3 sectors are mainly OEM's, and together give Stanly County a total value added of \$85,526,224, which is quite significant as it represents more than 50% of the total value-added given by all the primary NAICS codes in this county. As it is the case for the neighbor county, Cabarrus, recruiting an OEM with MS focus such as the all other transportation equipment manufacturing sector seems to be especially appropriate for Stanly County.



Table 65 and Table 66 in Appendix D show the results of adding 100 jobs to the MV/MS industries in 2010 for the secondary and tertiary NAICS codes. Table 65 shows that for secondary NAICS codes, the top 3 sectors in terms of total value-added are:

1. Paint and coating manufacturing
2. Audio and video equipment manufacturing
3. Electric lamp bulb and part manufacturing

These 3 sectors are mainly suppliers and give together a total value-added of \$ 46,301,393 to Stanly County.

Table 66 shows that for tertiary NAICS codes, the top 3 sectors in terms of total value-added are:

1. Nonferrous metal (except copper and aluminum) roll
2. Copper rolling-drawing-extruding and alloying
3. Broadcast and wireless communications equipment manufacturing

These 3 sectors give together a total value-added of \$77,146,826 to Stanly County.

9. Union County (UC)

Table 23 shows that that when 100 jobs are added to the MV/MS industries in 2010, the top 3 industries related to primary NAICS codes in terms of total value-added to Union County are:

1. Light truck and utility vehicle manufacturing
2. All other transportation equipment manufacturing
3. Heavy duty truck manufacturing



Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
277	Light truck and utility vehicle manufacturing	32,645,471	371	19,752,331
294	All other transportation equipment manufacturing	29,702,094	184	10,474,930
278	Heavy duty truck manufacturing	21,781,574	247	15,124,099
150	Tire manufacturing	15,657,093	167	10,327,212
276	Automobile manufacturing	14,135,804	199	10,603,820
319	Wholesale trade businesses	13,515,592	140	7,757,759
283	Motor vehicle parts manufacturing	10,424,612	162	7,843,711
279	Motor vehicle body manufacturing	8,073,514	129	6,647,163
282	Travel trailer and camper manufacturing	7,592,756	139	6,120,350
280	Truck trailer manufacturing	7,481,616	131	5,899,166

TOTAL **161,010,126** **1,868** **100,550,541**

* 2007 Dollars

Table 23: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in UC - Primary NAICS Codes

Note that all these 3 sectors are mainly OEM’s, and together give Union County a total value added of \$84,129,139, which is quite significant as it represents more than 50% of the total value-added given by all the primary NAICS codes in this county.

Table 67 and Table 68 in Appendix D show the results of adding 100 jobs to the MV/MS industries in 2010 for the secondary and tertiary NAICS codes. Table 67 shows that for secondary NAICS codes, the top 3 sectors in terms of total value-added and employment compensation are:

1. Paint and coating manufacturing
2. Audio and video equipment manufacturing
3. Electric lamp bulb and part manufacturing

These 3 sectors are mainly suppliers and give together a total value-added and employee compensation of \$52,588,311 and \$33,449,439 to Union County. Table 68 shows that for tertiary NAICS codes, the top 3 sectors in terms of total value-added and employee compensation are:

1. Copper rolling-drawing-extruding and alloying
2. Nonferrous metal (except copper and aluminum) roll
3. Broadcast and wireless communications equipment manufacturing



These 3 sectors give together a total value-added and employee compensation of \$77,609,429 and \$46,334,688 to Union County. Note that the total value-added by each one of the top three sectors is very similar, and together represents 40% of the total value-added by all the tertiary NAICS codes to Union County.

V. Gaps and Missing Pieces in the Greater Charlotte Region

Based on the company database analysis, the NAICS codes that have no representation in the region are shown below (Table 24). The MV industry sectors corresponding to these codes indicate the potential gaps in our region.

NAICS Code	NAICS Priority	Description
336112	Primary	Light Truck and Utility Vehicle Manufacturing
336120*	Primary	Heavy Duty Truck Manufacturing
336213	Primary	Motor Home Manufacturing
336312*	Primary	Gasoline Engine and Engine Parts Manufacturing
336321*	Primary	Vehicular Lighting Equipment Manufacturing
336330*	Primary	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
336391*	Primary	Motor Vehicle Air-Conditioning Manufacturing
325510	Secondary	Paint and Coating Manufacturing
326220	Secondary	Rubber and Plastics Hoses and Belting Manufacturing
332510	Secondary	Hardware Manufacturing
332611	Secondary	Spring (Heavy Gauge) Manufacturing
333319	Secondary	Other Commercial and Service Industry Machinery Manufacturing
334310	Secondary	Audio and Video Equipment Manufacturing
334514*	Secondary	Totalizing Fluid Meter and Counting Device Manufacturing
335110	Secondary	Electric Lamp Bulb and Part Manufacturing
811112*	Secondary	Automotive Exhaust System Repair
811122	Secondary	Automotive Glass Replacement Shops
811191*	Secondary	Automotive Oil Change and Lubrication Shops
811198*	Secondary	All Other Automotive Repair and Maintenance
331319	Tertiary	Other Aluminum Rolling and Drawing
331422*	Tertiary	Copper Wire (except Mechanical) Drawing
331491	Tertiary	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding
334519	Tertiary	Other Measuring and Controlling Device Manufacturing
335911	Tertiary	Storage Battery Manufacturing



NAICS Code	NAICS Priority	Description
481112*	Tertiary	Scheduled Freight Air Transportation
483111*	Tertiary	Deep Sea Freight Transportation
483113*	Tertiary	Coastal and Great Lakes Freight Transportation
484220*	Tertiary	Specialized Freight (except Used Goods) Trucking, Local
484230	Tertiary	Specialized Freight (except Used Goods) Trucking, Long-Distance

Table 24: NAICS Codes that do not have representation in the Greater Charlotte Region

Important Note: A further sensitivity analysis was performed on the identified gaps using the ReferenceUSA database, which is an Internet-based reference service from the Library Division of info USA containing information on more than 14 million U.S. Businesses.¹⁰ Unlike the Lexis-Nexis, this database has multiple secondary NAICS codes associated with companies (besides their primary NAICS association) indicated as NAICS-1, NAICS-2, NAICS-3, and NAICS-4. This database indicated that some of the codes listed Table 24 (marked with a “**”) may have some associated companies in the Greater Charlotte Region that are indirectly involved in the MV industry. Additionally, motor home manufacturing (IMPLAN sector 281 and NAICS 336213) was excluded from the impact analysis because IMPLAN software did not include the sector for NC or any of the counties analyzed. Based on these findings we recommend using the above table not as a firm conclusion but rather as a starting point for a more in depth gap analysis for recruiting companies into the region.

Note that among the missing NAICS codes in the Greater Charlotte Region, there are some that rank highest in terms of total value-added, employment and employee compensation (see Table 25 for a ranking for the Mecklenburg County). Some of these sectors are listed below:

- Light truck and utility vehicle manufacturing
- Heavy duty truck manufacturing
- Paint and Coating Manufacturing
- Audio and video equipment manufacturing
- Nonferrous metal (except copper and aluminum) roll
- Copper rolling-drawing-extruding and alloying
- Aluminum product manufacturing

¹⁰ <http://www.referenceusa.com/>



Recruiting companies related to any of these sectors foresee the highest potential economic impact to the Greater Charlotte Region.

NAICS Priority	NAICS Codes	IMPLAN Code	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)
Primary	336112	277	Light truck and utility vehicle manufacturing	42,413,001	424
Primary	336120	278	Heavy duty truck manufacturing	26,123,870	268
Primary	336312, 336321, 336330, 336391	283	Motor vehicle parts manufacturing	18,970,102	194
Secondary	325510	136	Paint and coating manufacturing	28,498,444	253
Secondary	334310	240	Audio and video equipment manufacturing	23,696,414	283
Secondary	333319	213	Other commercial and service industry machinery manufacturing	16,534,513	175
Secondary	335110	259	Electric lamp bulb and part manufacturing	15,966,059	167
Secondary	332510	193	Hardware manufacturing	15,698,631	176
Secondary	326220	151	Rubber and plastics hoses and belting manufacturing	12,582,902	157
Secondary	332611	194	Spring and wire product manufacturing	12,069,310	152
Secondary	334514	252	Totalizing fluid meters and counting devices manufacturing	10,942,355	177
Secondary	441210, 441320	320	Retail Stores - Motor vehicle and parts	9,352,465	124
Secondary	811112, 811122, 811191, 811198	414	Automotive repair and maintenance- except car wash	7,335,902	131
Tertiary	331491	178	Nonferrous metal (except copper and aluminum) roll	132,714,166	470
Tertiary	331422	177	Copper rolling- drawing- extruding and alloying	39,622,625	294
Tertiary	331319	174	Aluminum product manufacturing from purchased aluminum	28,304,206	208
Tertiary	335911	270	Storage battery manufacturing	14,227,141	181
Tertiary	334519	256	Watch- clock- and other measuring and controlling	12,523,182	172
Tertiary	484220, 484230	335	Transport by truck	10,077,132	146
* 2007 Dollars			Total	477,652,420	4,150

Table 25: Economic impact of adding businesses with 100 employees in the missing industry sectors in Mecklenburg County

VI. Recommendations and Conclusions

Results obtained using the IMPLAN software determined that in 2007 (most recent data available) North Carolina MV/MS industries were composed primarily of suppliers, distributors, service providers and transporters as characterized by the following:

Primary NAICS codes:



- ❖ Wholesale trade businesses
- ❖ Motor vehicle parts manufacturing
- ❖ Tire manufacturing

Secondary NAICS codes:

- ❖ Retail Stores - Motor vehicle and parts
- ❖ Automotive repair and maintenance – except car wash
- ❖ Spectator sports companies

Tertiary NAICS codes:

- ❖ Transport by truck
- ❖ Transport by air
- ❖ Wiring device

Regarding the MV/MS industries within the Greater Charlotte Region, the supply chain is mainly characterized by motor vehicle parts manufacturing, motor vehicle parts retail stores, automotive repair and maintenance, transport by truck and transport by air including the following:

Primary NAICS codes:

- ❖ Motor vehicle parts manufacturing

Secondary NAICS codes:

- ❖ Retail Stores – Motor vehicle parts
- ❖ Automotive repair and maintenance – except car wash

Tertiary NAICS codes:

- ❖ Transport by truck
- ❖ Transport by air

Some of the counties within the Greater Charlotte Region also reported to have important representations within the following sectors: All other transportation equipment manufacturing and spectator sports companies (mostly MS industries), tire and hardware manufacturing.

Through the IMPLAN economic model created, it was predicted the impact of recruiting new companies to North Carolina and to the Greater Charlotte Region. The results obtained predicted that the largest economic impact to North Carolina would be given by Original



Equipment Manufacturers (OEMs), Suppliers and Transporters as categorized in the following sectors:

Primary NAICS codes:

- ❖ Light truck and utility vehicle manufacturing
- ❖ All other transportation equipment manufacturing
- ❖ Heavy duty truck manufacturing

Secondary NAICS codes:

- ❖ Paint and coating manufacturing
- ❖ Audio and video equipment manufacturing
- ❖ Electric lamp bulb and part manufacturing

Tertiary NAICS codes:

- ❖ Transport by water
- ❖ Nonferrous metal (except copper and aluminum)
- ❖ Copper rolling-drawing-extruding and alloying

Regarding the Greater Charlotte Region, the results obtained through the IMPLAN software predicted that the largest economic impact to the counties within this region would be given by the same sectors as in the state of North Carolina, with the exception that, instead of the transport by water sector, the broadcast and wireless communications equipment manufacturing sector would have a great economic potential among the tertiary NAICS codes.

A gap analysis in the MV/MS supply chain in the Greater Charlotte Region indicated that some industry sectors such as the following have high potential of total value-added, employment and employee compensation:

- ❖ Light truck and utility vehicle manufacturing
- ❖ All other transportation equipment manufacturing
- ❖ Heavy duty truck manufacturing
- ❖ Audio and video equipment manufacturing
- ❖ Electric lamp bulb and part manufacturing
- ❖ Nonferrous metal (except copper and aluminum) roll
- ❖ Copper rolling-drawing-extruding and alloying



It is foreseen that if companies related to some or all of these above named sectors are recruited, the largest economic impact to the Greater Charlotte Region could be achieved.

It is believed that recruiting OEMs such as light truck and utility vehicle manufacturing, all other transportation equipment manufacturing, and heavy duty truck manufacturing would have a specially great positive impact on the economy of the Greater Charlotte Region, since results of the impact analysis showed that these 3 sectors have the most significant contribution to all the counties within the region, as the total value-added given by them represented about 50% of the total value-added given by all the primary NAICS codes together. Additionally, creating industries in these 3 sectors would increase substantially the demand for automotive parts and accessories, which would have a positive effect on sales for MV/MS suppliers in the area.

Among all sectors analyzed, the light truck and utility vehicle manufacturing sector recorded the largest total value-added (almost 60 million) in Iredell County. This sector also recorded the largest employment impact, since by adding 100 jobs to this sector in the same county, an additional 641 jobs in other related sectors (comprising indirect and induced employments generation) would be created.

Recruiting an OEM with MS focus (e.g. corresponding to the all other transportation equipment manufacturing sector) seems to be especially opportune for most of the counties within the Greater Charlotte region, due to high economic impact of this sector and the proximity to the Lowe's Motor Speedway, an important supporter of MS activities in the United States.

We would like finalize the recommendations with a disclaimer about the limitations of the IMPLAN analysis: Since IMPLAN software aggregates multiple NAICS codes under specific IMPLAN industry codes, economic impact results for several industry sectors will need to be treated with caution. For example, the wholesale trade business sector, one of the biggest industries in North Carolina, includes many non-MV related NAICS codes, and was excluded from the analysis. Other important sectors considering non-MV related codes are the transport by truck and transport by air sectors. Further analysis of these sectors is recommended to determine the exact economic contribution of MV/MS related businesses.



APPENDICES

A. NAICS Codes selected for the Study

1. Primary NAICS Codes

326211 Tire Manufacturing (except Retreading)

(Supplier)

This U.S. industry comprises establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber, including motor vehicle tires.

336111 Automobile Manufacturing

(OEM)

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete automobiles (i.e., body and chassis or unibody) or (2) manufacturing automobile chassis only.

336112 Light Truck and Utility Vehicle Manufacturing

(OEM)

This U.S. industry comprises establishments primarily engaged in (1) manufacturing complete light trucks and utility vehicles (i.e., body and chassis) or (2) manufacturing light truck and utility vehicle chassis only. Vehicles made include light duty vans, pick-up trucks, minivans, and sport utility vehicles.

336120 Heavy Duty Truck Manufacturing

(OEM)

This industry comprises establishments primarily engaged in (1) manufacturing heavy duty truck chassis and assembling complete heavy duty trucks, buses, heavy duty motor homes, and other special purpose heavy duty motor vehicles for highway use or (2) manufacturing heavy duty truck chassis only.

336211 Motor Vehicle Body Manufacturing

(Supplier and OEM)



This U.S. industry comprises establishments primarily engaged in manufacturing truck and bus bodies and cabs and automobile bodies. The products made may be sold separately or may be assembled on purchased chassis and sold as complete vehicles.

336212 Truck Trailer Manufacturing

(Supplier and OEM)

This U.S. industry comprises establishments primarily engaged in manufacturing truck trailers, truck trailer chassis, cargo container chassis, detachable trailer bodies, and detachable trailer chassis for sale separately.

336213 Motor Home Manufacturing

(OEM)

This U.S. industry comprises establishments primarily engaged in (1) manufacturing motor homes on purchased chassis and/or (2) manufacturing conversion vans on an assembly line basis. Motor homes are units where the motor and the living quarters are integrated in the same unit.

336214 Travel Trailer and Camper Manufacturing

(OEM)

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) manufacturing travel trailers and campers designed to attach to motor vehicles; (2) manufacturing pickup coaches (i.e., campers) and caps (i.e., covers) for mounting on pickup trucks; and (3) manufacturing automobile, utility and light-truck trailers. Travel trailers do not have their own motor but are designed to be towed by a motor unit, such as an automobile or a light truck.

336311 Carburetors, Pistons, Piston Rings, and Valves Manufacturing

(Supplier and Service Provider)

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding carburetors, pistons, piston rings, and engine intake and exhaust valves.

336312 Gasoline Engine and Engine Parts Manufacturing

(Supplier and Service Provider)



This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding gasoline motor vehicle engines and gasoline motor vehicle engine parts, excluding carburetors, pistons, piston rings, and valves.

336321 Vehicular Lighting Equipment Manufacturing

(Supplier)

This U.S. industry comprises establishments primarily engaged in manufacturing vehicular lighting fixtures.

336322 Other Motor Vehicle Electrical and Electronic Equipment Manufacturing

(Supplier and Service Provider)

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding electrical and electronic equipment for motor vehicles and internal combustion engines.

336330 Motor Vehicle Steering and Suspension Components (except Spring)

Manufacturing

(Supplier and Service Provider)

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle steering mechanisms and suspension components (except springs).

336340 Motor Vehicle Brake System Manufacturing

(Supplier and Service Provider)

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle brake systems and related components.

336350 Motor Vehicle Transmission and Power Train Parts Manufacturing

(Supplier and Service Provider)

This industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle transmission and power train parts.

336360 Motor Vehicle Seating and Interior Trim Manufacturing

(Supplier)

This industry comprises establishments primarily engaged in manufacturing motor vehicle seating, seats, seat frames, seat belts, and interior trimmings.

336370 Motor Vehicle Metal Stamping



(Supplier)

This industry comprises establishments primarily engaged in manufacturing motor vehicle stampings, such as fenders, tops, body parts, trim, and molding.

336391 Motor Vehicle Air-Conditioning Manufacturing

(Supplier)

This U.S. industry comprises establishments primarily engaged in manufacturing air-conditioning systems and compressors for motor vehicles, such as automobiles, trucks, buses, aircraft, farm machinery, construction machinery, and other related vehicles.

336399 All Other Motor Vehicle Parts Manufacturing

(Supplier and Service Provider)

This U.S. industry comprises establishments primarily engaged in manufacturing and/or rebuilding motor vehicle parts and accessories (except motor vehicle gasoline engines and engine parts, motor vehicle electrical and electronic equipment, motor vehicle steering and suspension components, motor vehicle brake systems, motor vehicle transmission and power train parts, motor vehicle seating and interior trim, motor vehicle stampings, and motor vehicle air-conditioning systems and compressors).

336999 All Other Transportation Equipment Manufacturing

(OEM)

This U.S. industry comprises establishments primarily engaged in manufacturing transportation equipment, including race car manufacturing.

423110 Automobile and Other Motor Vehicle Merchant Wholesalers

(Wholesalers)

This industry comprises establishments primarily engaged in the merchant wholesale distribution of new and used passenger automobiles, trucks, trailers, and other motor vehicles, such as motorcycles, motor homes, and snowmobiles.

423120 Motor Vehicle Supplies and New Parts Merchant Wholesalers

(Supplier)

This industry comprises establishments primarily engaged in the merchant wholesale distribution of motor vehicle supplies, accessories, tools, and equipment; and new motor vehicle parts (except new tires and tubes).



423130 Tire and Tube Merchant Wholesalers

(Supplier)

This industry comprises establishments primarily engaged in the merchant wholesale distribution of new and/or used tires and tubes for passenger and commercial vehicles.

423140 Motor Vehicle Parts (Used) Merchant Wholesalers

(Supplier to Automotive Industry Service Providers)

This industry comprises establishments primarily engaged in the merchant wholesale distribution of used motor vehicle parts (except used tires and tubes) and establishments primarily engaged in dismantling motor vehicles for the purpose of selling the parts.

441310 Automotive Parts and Accessories Stores

(Supplier, Service Provider)

This industry comprises one or more of the following: (1) establishments known as automotive supply stores primarily engaged in retailing new, used, and/or rebuilt automotive parts and accessories; (2) automotive supply stores that are primarily engaged in both retailing automotive parts and accessories and repairing automobiles; and (3) establishments primarily engaged in retailing and installing automotive accessories.

2. Secondary NAICS Codes

325510 Paint and Coating Manufacturing

(Supplier)

This industry includes establishments engaged in motor vehicle paints manufacturing.

326220 Rubber and Plastics Hoses and Belting Manufacturing

(Supplier)

This industry includes establishments manufacturing motor vehicle belts, hoses, rubber or plastics.

332510 Hardware Manufacturing

(Supplier)

This industry includes establishments engaged in manufacturing motor vehicle hardware and metal.

332611 Spring (Heavy Gauge) Manufacturing



(Supplier)

This U.S. industry includes establishments engaged in manufacturing automobile suspension springs and heavy gauge metal.

333319 Other Commercial and Service Industry Machinery Manufacturing

(Supplier to Automotive Industry Service Providers)

This U.S. industry comprises establishments primarily engaged in manufacturing commercial and service industry equipment, including alignment equipment, balancing equipment and brake service equipment for the motor vehicle industry.

334310 Audio and Video Equipment Manufacturing

(Supplier)

This industry includes establishments engaged in manufacturing electronic audio and video equipment for motor vehicle.

334514 Totalizing Fluid Meter and Counting Device Manufacturing

(Supplier)

This U.S. industry comprises establishments primarily engaged in manufacturing totalizing (i.e., registering) fluid meters and counting devices, including motor vehicle gauges equipment.

335110 Electric Lamp Bulb and Part Manufacturing

(Supplier)

This industry includes establishments engaged in manufacturing automotive light bulbs.

711212 Racetracks

(Service Provider)

This U.S. industry comprises establishments primarily engaged in operating racetracks. These establishments may also present and /or promote the events, such as auto, dog, and horse races, held in these facilities.

711219 Other Spectator Sports

(Service Provider)

This U.S. industry comprises (1) independent athletes, such as professional or semiprofessional golfers, boxers, and race car drivers, primarily engaged in participating in live sporting or racing events before a paying audience; (2) owners of racing participants, such as



cars, dogs, and horses, primarily engaged in entering them in racing events or other spectator events; and (3) establishments, such as sports trainers, primarily engaged in providing specialized services required to support participants in sports events or competitions.

81111 General Automotive Repair

(Service Provider)

This U.S. industry comprises establishments primarily engaged in providing (1) a wide range of mechanical and electrical repair and maintenance services for automotive vehicles, such as passenger cars, trucks, and vans, and all trailers or (2) engine repair and replacement.

81112 Automotive Exhaust System Repair

(Service Provider)

This U.S. industry comprises establishments primarily engaged in replacing or repairing exhaust systems of automotive vehicles, such as passenger cars, trucks, and vans.

81113 Automotive Transmission Repair

(Service Provider)

This U.S. industry comprises establishments primarily engaged in replacing or repairing transmissions of automotive vehicles, such as passenger cars, trucks, and vans.

81118 Other Automotive Mechanical and Electrical Repair and Maintenance

(Service Provider)

This U.S. industry comprises establishments primarily engaged in providing specialized mechanical or electrical repair and maintenance services (except engine repair and replacement, exhaust systems repair, and transmission repair) for automotive vehicles, such as passenger cars, trucks, and vans, and all trailers.

81121 Automotive Body, Paint, and Interior Repair and Maintenance

(Service Provider)

This U.S. industry comprises establishments primarily engaged in repairing or customizing automotive vehicles, such as passenger cars, trucks, and vans, and all trailer bodies and interiors; and/or painting automotive vehicles and trailer bodies.

81122 Automotive Glass Replacement Shops

(Service Provider)



This U.S. industry comprises establishments primarily engaged in replacing, repairing, and/or tinting automotive vehicle, such as passenger car, truck, and van, glass.

811191 Automotive Oil Change and Lubrication Shops

(Service Provider)

This U.S. industry comprises establishments primarily engaged in changing motor oil and lubricating the chassis of automotive vehicles, such as passenger cars, trucks, and vans.

811198 All Other Automotive Repair and Maintenance

(Service Provider)

This U.S. industry comprises establishments primarily engaged in providing automotive repair and maintenance services (except mechanical and electrical repair and maintenance; body, paint, interior, and glass repair; motor oil change and lubrication; and car washing) for automotive vehicles, such as passenger cars, trucks, and vans, and all trailers.

3. Tertiary NAICS Codes

327215 Glass Product Manufacturing Made of Purchased Glass

(Supplier)

This U.S. industry comprises establishments primarily engaged in coating, laminating, tempering, or shaping purchased glass.

331319 Other Aluminum Rolling and Drawing

(Supplier)

This U.S. Industry comprises establishments primarily engaged in (1) rolling, drawing, or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) from purchased aluminum and/or (2) recovering aluminum from scrap and rolling, drawing or extruding shapes (except flat rolled sheet, plate, foil, and welded tube; extruded rod, bar, pipe, and tube blooms; and drawn or extruded tube) in integrated mills.

331422 Copper Wire (except Mechanical) Drawing

(Supplier)



This U.S. industry comprises establishments primarily engaged in drawing or drawing and insulating communication and energy wire and cable from purchased copper or in integrated secondary smelting and wire drawing plants.

331491 Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding

(Supplier)

This U.S. industry comprises establishments primarily engaged in (1) rolling, drawing, or extruding shapes (e.g., bar, plate, sheet, strip, tube) from purchased nonferrous metals) and/or (2) recovering nonferrous metals from scrap and rolling, drawing, and/or extruding shapes (e.g., bar, plate, sheet, strip, tube) in integrated mills.

334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing

(Supplier)

This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.

334290 Other Communications Equipment Manufacturing

(Supplier)

This industry comprises establishments primarily engaged in manufacturing communications equipment (except telephone apparatus, and radio and television broadcast, and wireless communications equipment).

334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals

(Supplier)

This U.S. industry comprises establishments primarily engaged in manufacturing instruments for measuring and testing the characteristics of electricity and electrical signals. Examples of products made by these establishments are circuit and continuity testers, voltmeters, ohm meters, wattmeters, multimeters, and semiconductor test equipment.



334519 Other Measuring and Controlling Device Manufacturing

(Supplier)

This U.S. industry comprises establishments primarily engaged in manufacturing measuring and controlling devices (except search, detection, navigation, guidance, aeronautical, and nautical instruments and systems; automatic environmental controls for residential, commercial, and appliance use; instruments for measurement, display, and control of industrial process variables; totalizing fluid meters and counting devices; instruments for measuring and testing electricity and electrical signals; analytical laboratory instruments; watches, clocks, and parts; irradiation equipment; and electromedical and electrotherapeutic apparatus).

335911 Storage Battery Manufacturing

(Supplier)

This U.S. industry comprises establishments primarily engaged in manufacturing storage batteries.

335931 Current-Carrying Wiring Device Manufacturing

(Supplier)

This U.S. industry comprises establishments primarily engaged in manufacturing current-carrying wiring devices.

481112 Scheduled Freight Air Transportation

(Transporter)

This U.S. industry comprises establishments primarily engaged in providing air transportation of cargo without transporting passengers over regular routes and on regular schedules. Establishments in this industry operate flights even if partially loaded. Establishments primarily engaged in providing scheduled air transportation of mail on a contract basis are included in this industry.

423730 Warm Air Heating and Air-Conditioning Equipment and Supplies

Merchant Wholesalers

(Supplier, Wholesalers)

This industry comprises establishments primarily engaged in the merchant wholesale distribution of warm air heating and air-conditioning equipment and supplies, including air heating and air-conditioning equipment for automotive industry.



483111 Deep Sea Freight Transportation

(Transporter)

This U.S. industry comprises establishments primarily engaged in providing deep sea transportation of cargo to or from foreign ports.

483113 Coastal and Great Lakes Freight Transportation

(Transporter)

This U.S. industry comprises establishments primarily engaged in providing water transportation of cargo in coastal waters, on the Great Lakes System, or deep seas between ports of the United States, Puerto Rico, and United States island possessions or protectorates. Marine transportation establishments using the facilities of the St. Lawrence Seaway Authority Commission are considered to be using the Great Lakes Water Transportation System. Establishments primarily engaged in providing coastal and/or Great Lakes barge transportation services are included in this industry.

484220 Specialized Freight (except Used Goods) Trucking, Local

(Transporter)

This industry comprises establishments primarily engaged in providing local, specialized trucking, including automobile carrier trucking. Local trucking establishments provide trucking within a metropolitan area that may cross state lines. Generally the trips are same-day return.

484230 Specialized Freight (except Used Goods) Trucking, Long-Distance

(Transporter)

This industry comprises establishments primarily engaged in providing long-distance specialized trucking, including automobile carrier trucking. These establishments provide trucking between metropolitan areas that may cross North American country borders.



B. NAICS to IMPLAN Bridge

1. Primary NAICS Codes

IMPLAN Code	IMPLAN Description	MV - MS related NAICS Code	Other NAICS Codes	Other NAICS Description
276	Automobile manufacturing	336111		
277	Light truck and utility vehicle manufacturing	336112		
294	All other transportation equipment manufacturing	336999		
278	Heavy duty truck manufacturing	336120		
150	Tire manufacturing	326211	326212	Tire Retreading
319	Wholesale trade businesses	423110	42XXXX (66 NAICS codes)	
		423120		
		423130		
		423140		
		423730		
		336311		
		336312		
		336321		
		336322		
		336330		
283	Motor vehicle parts manufacturing	336340		
		336350		
		336360		
		336370		
		336391		
		336399		
		336212		
280	Truck trailer manufacturing	336212		
279	Motor vehicle body manufacturing	336211		
282	Travel trailer and camper manufacturing	336214		

Table 26: Primary NAICS Codes to IMPLAN Bridge

Note: Motor home manufacturing (IMPLAN sector 281 and NAICS 336213) was excluded from the impact analysis because IMPLAN software did not include the sector for NC or any of the counties analyzed. This conclusion is consistent with other reporting within the broader study and Census reporting. Some IMPLAN codes such as 319 include non-MV related NAICS code sectors. The results should be interpreted taking these into account.



2. Secondary NAICS Codes

IMPLAN Code	IMPLAN Description	MV - MS related NAICS Code	Other NAICS Codes	Other NAICS Description
136	Paint and coating manufacturing	325510		
193	Hardware manufacturing	332510		
213	Other commercial and service industry machinery manufacturing	333319		
240	Audio and video equipment manufacturing	334310		
259	Electric lamp bulb and part manufacturing	335110		
252	Totalizing fluid meters and counting devices manufacturing	334514		
151	Rubber and plastics hoses and belting manufacturing	326220		
194	Spring and wire product manufacturing	332611	332612, 332618	Spring (Light Gauge) Manufacturing, Other Fabricated Wire Product Manufacturing
320	Retail Stores - Motor vehicle and parts	441310	441110, 441120, 441210, 441221, 441222, 441229, 441320	New Car Dealers, Used Car Dealers, Recreational and other Vehicle Dealers, Motorcycle, Boat, and Other Motor Vehicle Dealers, Tire Dealers
		811111		
		811112		
		811113		
414	Automotive repair and maintenance, except car washes	811118		
		811121		
		811122		
		811191		
		811198		
403	Spectator Sports	711212	711211	Sports Teams and Clubs
		711219		

Table 27: Secondary NAICS Codes to IMPLAN Bridge

Note: While MV related dealers were not the focus of this study, IMPLAN code 320 includes these sectors along with the retail stores that are considered in this study.

3. Tertiary NAICS Codes

IMPLAN Code	IMPLAN Description	MV - MS related NAICS Code	Other NAICS Codes	Other NAICS Description
334	Transport by water	483111 483113	483112, 483114, 483211, 483212	Deep Sea Passenger Transportation, Coastal and Great Lakes Passenger Transportation, Inland Water Freight and Passenger Transportation
178	Nonferrous metal (except copper and aluminum) rolling, drawing, extruding and alloying	331491	331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)
177	Copper rolling, drawing, extruding and alloying	331422	331421, 331423	Copper Rolling, Drawing, and Extruding, Secondary Smelting, Refining, and Alloying of Copper
238	Broadcast and wireless communications equipment	334220		
253	Electricity and signal testing instruments	334515		
239	Other communications equipment manufacturing	334290		
174	Aluminum product manufacturing from purchased aluminum	331319	331315, 331316	Aluminum Sheet, Plate, and Foil Manufacturing, Aluminum Extruded Product Manufacturing
273	Wiring device manufacturing	335931	335932	Noncurrent-Carrying Wiring Device Manufacturing
270	Storage battery manufacturing	335911		
159	Glass product manufacturing made of purchased glass	327215		
256	Watch, clock, and other measuring and controlling device manufacturing	334519	334518	Watch, Clock, and Part Manufacturing
332	Transport by air	481112	481111, 481211, 481212, 481219	Scheduled Passenger Air Transportation, Nonscheduled Air Transportation, Nonscheduled Chartered Freight Air Transportation, Other Nonscheduled Air Transportation
335	Transport by truck	484220 484230	484110, 484122, 484210	General Freight Trucking, General Freight Trucking, Long-Distance, Less Than Truckload, Used Household and Office Goods Moving

Table 28: Tertiary NAICS Codes to IMPLAN Bridge

Note: Transport by water is used only at the NC level analysis. It is excluded for the economic analysis for the Greater Charlotte Region. Some IMPLAN codes such as 332 and 335 include non-MV related NAICS code sectors. The results should be interpreted taking these into account.



C. Current Impact Analysis Details for Secondary and Tertiary NAICS Codes

1. North Carolina (NC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
320	Retail Stores - Motor vehicle and parts	4,666.86	73,823	2,876.31
414	Automotive repair and maintenance- except car wash	1,535.99	42,597	850.33
403	Spectator sports companies	884.29	23,124	679.96
193	Hardware manufacturing	209.90	2,677	115.86
136	Paint and coating manufacturing	181.29	1,421	104.69
213	Other commercial and service industry machinery ma	125.79	1,481	87.21
151	Rubber and plastics hoses and belting manufacturin	92.38	1,303	62.48
194	Spring and wire product manufacturing	82.61	1,128	52.75
240	Audio and video equipment manufacturing	28.25	378	23.89
259	Electric lamp bulb and part manufacturing	17.64	179	12.66
252	Totalizing fluid meters and counting devices manuf	11.26	174	10.70
TOTAL		7,836.28	148,285	4,876.83

* 2007 Million Dollars

Table 29: 2007 Economic Impact of the MV/MS Industries in NC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
335	Transport by truck	3,993.42	68,268	2,500.33
332	Transport by air	946.77	12,319	678.46
273	Wiring device manufacturing	474.65	5,081	302.95
238	Broadcast and wireless communications equipment ma	459.74	3,528	434.39
177	Copper rolling- drawing- extruding and alloying	220.05	1,410	85.07
178	Nonferrous metal (except copper and aluminum) roll	163.98	794	82.54
253	Electricity and signal testing instruments manufac	131.56	1,260	110.52
334	Transport by water	130.84	660	59.21
159	Glass product manufacturing made of purchased glas	83.52	1,335	51.97
256	Watch- clock- and other measuring and controlling	73.75	1,262	69.96
174	Aluminum product manufacturing from purchased alum	68.01	573	34.47
270	Storage battery manufacturing	39.81	524	34.55
239	Other communications equipment manufacturing	32.83	584	29.65
TOTAL		6,818.93	97,598	4,474.07

* 2007 Million Dollars

Table 30: 2007 Economic Impact of the MV/MS Industries in NC - Tertiary NAICS Codes



2. Greater Charlotte Region (GCR)

1) Anson County (AC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
320	Retail Stores - Motor vehicle and parts	3.00	64	1.79
414	Automotive repair and maintenance- except car wash	1.50	74	0.77
136	Paint and coating manufacturing	0.00	0	0.00
151	Rubber and plastics hoses and belting manufacturin	0.00	0	0.00
193	Hardware manufacturing	0.00	0	0.00
194	Spring and wire product manufacturing	0.00	0	0.00
213	Other commercial and service industry machinery ma	0.00	0	0.00
240	Audio and video equipment manufacturing	0.00	0	0.00
252	Totalizing fluid meters and counting devices manuf	0.00	0	0.00
259	Electric lamp bulb and part manufacturing	0.00	0	0.00
403	Spectator sports companies	0.00	0	0.00
TOTAL		4.50	138	2.56

* 2007 Million Dollars

Table 31: 2007 Economic Impact of the MV/MS Industries in AC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of)	Employee Compensation
335	Transport by truck	18.46	242	12.94
332	Transport by air	0.65	16	0.00
159	Glass product manufacturing made of purchased glas	0.00	0	0.00
174	Aluminum product manufacturing from purchased alum	0.00	0	0.00
177	Copper rolling- drawing- extruding and alloying	0.00	0	0.00
178	Nonferrous metal (except copper and aluminum) roll	0.00	0	0.00
238	Broadcast and wireless communications equipment ma	0.00	0	0.00
239	Other communications equipment manufacturing	0.00	0	0.00
253	Electricity and signal testing instruments manufac	0.00	0	0.00
256	Watch- clock- and other measuring and controlling	0.00	0	0.00
270	Storage battery manufacturing	0.00	0	0.00
273	Wiring device manufacturing	0.00	0	0.00
TOTAL		19.11	258	12.94

* 2007 Million Dollars

Table 32: 2007 Economic Impact of the MV/MS Industries in AC - Tertiary NAICS Codes



2) Cabarrus County (CC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
403	Spectator sports companies	170.89	3,901	137.30
320	Retail Stores - Motor vehicle and parts	136.44	2,131	68.84
414	Automotive repair and maintenance- except car wash	34.03	1,016	16.99
193	Hardware manufacturing	8.80	123	4.94
194	Spring and wire product manufacturing	0.70	11	0.45
136	Paint and coating manufacturing	0.00	0	0.00
151	Rubber and plastics hoses and belting manufacturin	0.00	0	0.00
213	Other commercial and service industry machinery ma	0.00	0	0.00
240	Audio and video equipment manufacturing	0.00	0	0.00
252	Totalizing fluid meters and counting devices manuf	0.00	0	0.00
259	Electric lamp bulb and part manufacturing	0.00	0	0.00
TOTAL		350.85	7,182	228.53

* 2007 Million Dollars

Table 33: 2007 Economic Impact of the MV/MS Industries in CC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
335	Transport by truck	59.78	847	43.81
273	Wiring device manufacturing	57.37	593	36.63
332	Transport by air	21.17	250	15.49
177	Copper rolling- drawing- extruding and alloying	14.62	72	5.90
256	Watch- clock- and other measuring and controlling	0.03	1	0.03
159	Glass product manufacturing made of purchased glas	0.00	0	0.00
174	Aluminum product manufacturing from purchased alum	0.00	0	0.00
178	Nonferrous metal (except copper and aluminum) roll	0.00	0	0.00
238	Broadcast and wireless communications equipment ma	0.00	0	0.00
239	Other communications equipment manufacturing	0.00	0	0.00
253	Electricity and signal testing instruments manufac	0.00	0	0.00
270	Storage battery manufacturing	0.00	0	0.00
TOTAL		152.97	1,763	101.86

* 2007 Million Dollars

Table 34: 2007 Economic Impact of the MV/MS Industries in CC - Tertiary NAICS Codes



3) Gaston County (GC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
320	Retail Stores - Motor vehicle and parts	125.04	2,158	73.46
414	Automotive repair and maintenance- except car wash	27.37	883	13.55
193	Hardware manufacturing	3.80	44	1.91
194	Spring and wire product manufacturing	2.11	27	1.22
403	Spectator sports companies	2.04	189	0.94
136	Paint and coating manufacturing	0.61	4	0.27
151	Rubber and plastics hoses and belting manufacturin	0.00	0	0.00
213	Other commercial and service industry machinery ma	0.00	0	0.00
240	Audio and video equipment manufacturing	0.00	0	0.00
252	Totalizing fluid meters and counting devices manuf	0.00	0	0.00
259	Electric lamp bulb and part manufacturing	0.00	0	0.00
TOTAL		160.96	3,305	91.34

* 2007 Million Dollars

Table 35: 2007 Economic Impact of the MV/MS Industries in GC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
335	Transport by truck	32.30	714	14.41
332	Transport by air	0.27	6	0.05
159	Glass product manufacturing made of purchased glas	0.00	0	0.00
174	Aluminum product manufacturing from purchased alum	0.00	0	0.00
177	Copper rolling- drawing- extruding and alloying	0.00	0	0.00
178	Nonferrous metal (except copper and aluminum) roll	0.00	0	0.00
238	Broadcast and wireless communications equipment ma	0.00	0	0.00
239	Other communications equipment manufacturing	0.00	0	0.00
253	Electricity and signal testing instruments manufac	0.00	0	0.00
256	Watch- clock- and other measuring and controlling	0.00	0	0.00
270	Storage battery manufacturing	0.00	0	0.00
273	Wiring device manufacturing	0.00	0	0.00
TOTAL		32.58	720	14.46

* 2007 Million Dollars

Table 36: 2007 Economic Impact of the MV/MS Industries in GC - Tertiary NAICS Codes



4) Iredell County (IC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
403	Spectator sports companies	182.93	4,278	145.93
320	Retail Stores - Motor vehicle and parts	101.44	1,577	69.57
414	Automotive repair and maintenance- except car wash	27.48	770	15.44
193	Hardware manufacturing	16.36	216	9.19
136	Paint and coating manufacturing	10.07	101	6.08
194	Spring and wire product manufacturing	9.96	144	6.49
213	Other commercial and service industry machinery ma	2.02	27	1.49
151	Rubber and plastics hoses and belting manufacturin	0.00	0	0.00
240	Audio and video equipment manufacturing	0.00	0	0.00
252	Totalizing fluid meters and counting devices manuf	0.00	0	0.00
259	Electric lamp bulb and part manufacturing	0.00	0	0.00

TOTAL **350.25** **7,113** **254.19**

* 2007 Million Dollars

Table 37: 2007 Economic Impact of the MV/MS Industries in IC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
335	Transport by truck	97.43	1,894	64.95
159	Glass product manufacturing made of purchased glas	2.07	62	1.42
332	Transport by air	0.84	12	0.44
256	Watch- clock- and other measuring and controlling	0.20	9	0.19
174	Aluminum product manufacturing from purchased alum	0.00	0	0.00
177	Copper rolling- drawing- extruding and alloying	0.00	0	0.00
178	Nonferrous metal (except copper and aluminum) roll	0.00	0	0.00
238	Broadcast and wireless communications equipment ma	0.00	0	0.00
239	Other communications equipment manufacturing	0.00	0	0.00
253	Electricity and signal testing instruments manufac	0.00	0	0.00
270	Storage battery manufacturing	0.00	0	0.00
273	Wiring device manufacturing	0.00	0	0.00

TOTAL **100.53** **1,977** **67.00**

* 2007 Million Dollars

Table 38: 2007 Economic Impact of the MV/MS Industries in IC - Tertiary NAICS Codes



5) Lincoln County (LC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
320	Retail Stores - Motor vehicle and parts	20.85	431	14.55
193	Hardware manufacturing	16.61	215	9.32
414	Automotive repair and maintenance- except car wash	8.25	273	4.43
403	Spectator sports companies	1.42	28	1.15
136	Paint and coating manufacturing	0.00	0	0.00
151	Rubber and plastics hoses and belting manufacturin	0.00	0	0.00
194	Spring and wire product manufacturing	0.00	0	0.00
213	Other commercial and service industry machinery ma	0.00	0	0.00
240	Audio and video equipment manufacturing	0.00	0	0.00
252	Totalizing fluid meters and counting devices manuf	0.00	0	0.00
259	Electric lamp bulb and part manufacturing	0.00	0	0.00

TOTAL **47.13** **947** **29.45**

* 2007 Million Dollars

Table 39: 2007 Economic Impact of the MV/MS Industries in LC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
335	Transport by truck	18.95	384	11.35
332	Transport by air	0.08	2	0.00
159	Glass product manufacturing made of purchased glas	0.00	0	0.00
174	Aluminum product manufacturing from purchased alum	0.00	0	0.00
177	Copper rolling- drawing- extruding and alloying	0.00	0	0.00
178	Nonferrous metal (except copper and aluminum) roll	0.00	0	0.00
238	Broadcast and wireless communications equipment ma	0.00	0	0.00
239	Other communications equipment manufacturing	0.00	0	0.00
253	Electricity and signal testing instruments manufac	0.00	0	0.00
256	Watch- clock- and other measuring and controlling	0.00	0	0.00
270	Storage battery manufacturing	0.00	0	0.00
273	Wiring device manufacturing	0.00	0	0.00

TOTAL **19.03** **386** **11.35**

* 2007 Million Dollars

Table 40: 2007 Economic Impact of the MV/MS Industries in LC - Tertiary NAICS Codes



6) Mecklenburg County (MC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
320	Retail Stores - Motor vehicle and parts	648.97	8,698	409.18
403	Spectator sports companies	340.74	6,917	260.81
414	Automotive repair and maintenance- except car wash	195.31	3,917	124.38
213	Other commercial and service industry machinery ma	48.50	477	32.91
136	Paint and coating manufacturing	24.56	175	10.63
194	Spring and wire product manufacturing	22.89	297	14.16
151	Rubber and plastics hoses and belting manufacturin	8.40	108	5.64
193	Hardware manufacturing	3.14	34	1.68
240	Audio and video equipment manufacturing	2.36	32	1.99
252	Totalizing fluid meters and counting devices manuf	0.07	2	0.06
259	Electric lamp bulb and part manufacturing	0.00	0	0.00
TOTAL		1,294.93	20,657	861.43

* 2007 Million Dollars

Table 41: 2007 Economic Impact of the MV/MS Industries in MC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
335	Transport by truck	849.15	12,172	575.49
332	Transport by air	488.81	5,606	357.52
174	Aluminum product manufacturing from purchased alum	15.69	79	7.61
177	Copper rolling- drawing- extruding and alloying	9.97	47	3.91
178	Nonferrous metal (except copper and aluminum) roll	2.42	2	0.32
238	Broadcast and wireless communications equipment ma	1.87	6	1.77
253	Electricity and signal testing instruments manufac	1.25	25	1.05
273	Wiring device manufacturing	0.49	6	0.30
239	Other communications equipment manufacturing	0.48	5	0.43
159	Glass product manufacturing made of purchased glas	0.04	1	0.02
256	Watch- clock- and other measuring and controlling	0.00	0	0.00
270	Storage battery manufacturing	0.00	0	0.00
TOTAL		1,370.15	17,949	948.40

* 2007 Million Dollars

Table 42: 2007 Economic Impact of the MV/MS Industries in MC - Tertiary NAICS Codes



7) Rowan County (RC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
320	Retail Stores - Motor vehicle and parts	49.68	893	33.63
414	Automotive repair and maintenance- except car wash	17.66	472	10.57
151	Rubber and plastics hoses and belting manufacturin	6.78	112	4.56
259	Electric lamp bulb and part manufacturing	5.61	57	4.02
193	Hardware manufacturing	3.80	54	2.06
403	Spectator sports companies	3.60	89	2.88
194	Spring and wire product manufacturing	2.97	47	1.86
252	Totalizing fluid meters and counting devices manuf	0.74	33	0.70
136	Paint and coating manufacturing	0.26	3	0.15
213	Other commercial and service industry machinery ma	0.00	0	0.00
240	Audio and video equipment manufacturing	0.00	0	0.00
TOTAL		91.09	1,760	60.43

* 2007 Million Dollars

Table 43: 2007 Economic Impact of the MV/MS Industries in RC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
335	Transport by truck	94.25	1,286	67.89
174	Aluminum product manufacturing from purchased alum	22.13	217	10.67
273	Wiring device manufacturing	9.64	98	6.15
332	Transport by air	1.77	17	1.27
159	Glass product manufacturing made of purchased glas	0.00	0	0.00
177	Copper rolling- drawing- extruding and alloying	0.00	0	0.00
178	Nonferrous metal (except copper and aluminum) roll	0.00	0	0.00
238	Broadcast and wireless communications equipment ma	0.00	0	0.00
239	Other communications equipment manufacturing	0.00	0	0.00
253	Electricity and signal testing instruments manufac	0.00	0	0.00
256	Watch- clock- and other measuring and controlling	0.00	0	0.00
270	Storage battery manufacturing	0.00	0	0.00
TOTAL		127.78	1,618	85.98

* 2007 Million Dollars

Table 44: 2007 Economic Impact of the MV/MS Industries in RC - Tertiary NAICS Codes



8) Stanly County (SC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
320	Retail Stores - Motor vehicle and parts	26.60	491	17.54
414	Automotive repair and maintenance- except car wash	7.33	245	3.69
136	Paint and coating manufacturing	0.00	0	0.00
151	Rubber and plastics hoses and belting manufacturin	0.00	0	0.00
193	Hardware manufacturing	0.00	0	0.00
194	Spring and wire product manufacturing	0.00	0	0.00
213	Other commercial and service industry machinery ma	0.00	0	0.00
240	Audio and video equipment manufacturing	0.00	0	0.00
252	Totalizing fluid meters and counting devices manuf	0.00	0	0.00
259	Electric lamp bulb and part manufacturing	0.00	0	0.00
403	Spectator sports companies	0.00	0	0.00

TOTAL **33.93** **736** **21.23**

* 2007 Million Dollars

Table 45: 2007 Economic Impact of the MV/MS Industries in SC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
335	Transport by truck	13.16	260	5.90
273	Wiring device manufacturing	8.86	128	5.57
159	Glass product manufacturing made of purchased glas	0.00	0	0.00
174	Aluminum product manufacturing from purchased alum	0.00	0	0.00
177	Copper rolling- drawing- extruding and alloying	0.00	0	0.00
178	Nonferrous metal (except copper and aluminum) roll	0.00	0	0.00
238	Broadcast and wireless communications equipment ma	0.00	0	0.00
239	Other communications equipment manufacturing	0.00	0	0.00
253	Electricity and signal testing instruments manufac	0.00	0	0.00
256	Watch- clock- and other measuring and controlling	0.00	0	0.00
270	Storage battery manufacturing	0.00	0	0.00
332	Transport by air	0.00	0	0.00

TOTAL **22.02** **388** **11.47**

* 2007 Million Dollars

Table 46: 2007 Economic Impact of the MV/MS Industries in SC - Tertiary NAICS Codes



9) Union County (UC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
320	Retail Stores - Motor vehicle and parts	59.16	977	40.68
414	Automotive repair and maintenance- except car wash	33.34	820	19.12
193	Hardware manufacturing	28.88	334	16.22
403	Spectator sports companies	0.93	54	0.54
136	Paint and coating manufacturing	0.00	0	0.00
151	Rubber and plastics hoses and belting manufacturin	0.00	0	0.00
194	Spring and wire product manufacturing	0.00	0	0.00
213	Other commercial and service industry machinery ma	0.00	0	0.00
240	Audio and video equipment manufacturing	0.00	0	0.00
252	Totalizing fluid meters and counting devices manuf	0.00	0	0.00
259	Electric lamp bulb and part manufacturing	0.00	0	0.00
TOTAL		122.31	2,185	76.55

* 2007 Million Dollars

Table 47: 2007 Economic Impact of the MV/MS Industries in UC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
178	Nonferrous metal (except copper and aluminum) roll	112.58	613	59.53
335	Transport by truck	42.91	761	27.41
177	Copper rolling- drawing- extruding and alloying	10.00	66	4.04
332	Transport by air	3.79	39	2.62
159	Glass product manufacturing made of purchased glas	0.00	0	0.00
174	Aluminum product manufacturing from purchased alum	0.00	0	0.00
238	Broadcast and wireless communications equipment ma	0.00	0	0.00
239	Other communications equipment manufacturing	0.00	0	0.00
253	Electricity and signal testing instruments manufac	0.00	0	0.00
256	Watch- clock- and other measuring and controlling	0.00	0	0.00
270	Storage battery manufacturing	0.00	0	0.00
273	Wiring device manufacturing	0.00	0	0.00
TOTAL		169.27	1,479	93.61

* 2007 Million Dollars

Table 48: 2007 Economic Impact of the MV/MS Industries in UC - Tertiary NAICS Codes



D. What-If Analysis Details for Secondary and Tertiary NAICS Codes

1. North Carolina (NC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
136	Paint and coating manufacturing	281,013,515	2,967	25,185,598
240	Audio and video equipment manufacturing	264,142,328	3,482	177,343,635
259	Electric lamp bulb and part manufacturing	185,286,816	2,144	116,985,460
252	Totalizing fluid meters and counting devices manuf	168,053,010	2,335	122,270,114
213	Other commercial and service industry machinery ma	157,827,050	2,000	98,195,999
193	Hardware manufacturing	146,275,399	1,963	79,537,734
151	Rubber and plastics hoses and belting manufacturin	126,413,411	1,782	77,766,443
194	Spring and wire product manufacturing	121,155,851	1,680	71,584,943
320	Retail Stores - Motor vehicle and parts	84,682,925	1,311	48,122,676
414	Automotive repair and maintenance- except car wash	59,777,285	1,354	32,052,467
403	Spectator sports companies	59,731,490	1,373	40,665,581
TOTAL		1,654,359,080	22,391	889,710,650

* 2007 Dollars

Table 49: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in NC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
334	Transport by water	465,311,143	4,800	235,350,324
178	Nonferrous metal (except copper and aluminum) roll	347,622,824	2,853	178,057,415
177	Copper rolling- drawing- extruding and alloying	339,581,311	3,360	156,744,329
238	Broadcast and wireless communications equipment ma	326,282,577	3,518	250,242,161
253	Electricity and signal testing instruments manufac	225,923,521	2,669	154,354,773
239	Other communications equipment manufacturing	216,664,606	3,136	149,228,066
174	Aluminum product manufacturing from purchased alum	209,923,379	2,288	110,612,706
273	Wiring device manufacturing	178,943,795	2,144	107,184,265
270	Storage battery manufacturing	151,086,389	2,087	108,093,681
159	Glass product manufacturing made of purchased glas	141,919,635	1,990	80,746,142
256	Watch- clock- and other measuring and controlling	139,736,610	2,078	99,795,806
332	Transport by air	134,773,170	1,971	84,504,757
335	Transport by truck	93,819,697	1,574	56,611,469
TOTAL		2,971,588,657	34,467	1,771,525,894

* 2007 Dollars

Table 50: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in NC - Tertiary NAICS Codes



2. Greater Charlotte Region (GCR)

1) Anson County (AC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
136	Paint and coating manufacturing	18,352,547	190	10,403,513
240	Audio and video equipment manufacturing	14,649,069	214	10,438,249
259	Electric lamp bulb and part manufacturing	13,550,522	159	8,883,301
213	Other commercial and service industry machinery ma	11,783,119	155	7,589,253
193	Hardware manufacturing	11,423,692	159	6,207,139
194	Spring and wire product manufacturing	10,246,307	147	6,204,464
151	Rubber and plastics hoses and belting manufacturin	10,129,413	150	6,416,478
252	Totalizing fluid meters and counting devices manuf	9,131,450	147	7,369,800
320	Retail Stores - Motor vehicle and parts	5,123,453	106	2,922,749
403	Spectator sports companies	4,842,895	116	3,327,329
414	Automotive repair and maintenance- except car wash	2,831,977	114	1,446,101
TOTAL		112,064,444	1,654	71,208,376

* 2007 Dollars

Table 51: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in AC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
178	Nonferrous metal (except copper and aluminum) roll	28,692,837	213	14,410,493
177	Copper rolling- drawing- extruding and alloying	26,668,083	258	11,549,253
238	Broadcast and wireless communications equipment ma	23,281,498	239	19,296,032
174	Aluminum product manufacturing from purchased alum	16,787,697	182	8,632,637
253	Electricity and signal testing instruments manufac	15,254,031	181	11,280,219
273	Wiring device manufacturing	13,855,404	168	8,393,187
239	Other communications equipment manufacturing	11,740,973	203	8,880,457
270	Storage battery manufacturing	11,532,584	164	8,754,044
159	Glass product manufacturing made of purchased glas	10,161,089	162	5,943,131
335	Transport by truck	9,315,732	139	61,893,742
256	Watch- clock- and other measuring and controlling	8,283,932	144	6,647,426
332	Transport by air	6,262,154	143	1,312,745
TOTAL		181,836,014	2,195	166,993,366

* 2007 Dollars

Table 52: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in AC - Tertiary NAICS Codes



2) Cabarrus County (CC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
136	Paint and coating manufacturing	21,682,535	230	12,426,772
240	Audio and video equipment manufacturing	18,697,593	263	12,947,101
259	Electric lamp bulb and part manufacturing	14,929,968	178	9,747,866
213	Other commercial and service industry machinery ma	12,950,362	171	8,195,099
193	Hardware manufacturing	11,492,907	172	6,330,611
252	Totalizing fluid meters and counting devices manuf	10,898,591	172	8,327,437
151	Rubber and plastics hoses and belting manufacturin	10,647,171	158	6,688,349
194	Spring and wire product manufacturing	9,458,544	148	5,736,746
320	Retail Stores - Motor vehicle and parts	7,703,584	123	3,749,514
403	Spectator sports companies	6,221,006	135	4,481,170
414	Automotive repair and maintenance- except car wash	5,057,090	129	2,516,200
TOTAL		129,739,351	1,880	81,146,865

* 2007 Dollars

Table 53: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in CC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
177	Copper rolling- drawing- extruding and alloying	33,102,853	280	14,813,360
178	Nonferrous metal (except copper and aluminum) roll	29,954,965	236	15,200,731
238	Broadcast and wireless communications equipment ma	26,120,187	279	20,843,880
174	Aluminum product manufacturing from purchased alum	17,145,846	191	8,928,798
253	Electricity and signal testing instruments manufac	16,853,360	205	11,946,828
273	Wiring device manufacturing	15,401,703	186	9,319,083
239	Other communications equipment manufacturing	14,477,695	237	10,446,308
332	Transport by air	12,807,751	189	8,156,793
270	Storage battery manufacturing	12,725,204	189	9,364,655
159	Glass product manufacturing made of purchased glas	10,789,925	169	6,338,853
335	Transport by truck	9,293,676	145	6,279,260
256	Watch- clock- and other measuring and controlling	5,708,207	141	4,173,746
TOTAL		204,381,372	2,449	125,812,295

* 2007 Dollars

Table 54: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in CC - Tertiary NAICS Codes



3) Gaston County (GC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
136	Paint and coating manufacturing	23,931,881	240	11,348,917
240	Audio and video equipment manufacturing	18,703,920	274	12,496,347
259	Electric lamp bulb and part manufacturing	15,116,872	179	9,633,163
193	Hardware manufacturing	13,478,749	180	6,787,618
213	Other commercial and service industry machinery ma	13,044,115	175	8,220,540
252	Totalizing fluid meters and counting devices manuf	11,328,728	178	8,431,964
194	Spring and wire product manufacturing	11,242,956	158	6,181,592
151	Rubber and plastics hoses and belting manufacturin	10,916,253	161	6,746,510
320	Retail Stores - Motor vehicle and parts	7,144,299	123	3,928,421
414	Automotive repair and maintenance- except car wash	4,870,796	130	2,447,791
403	Spectator sports companies	1,966,497	120	953,219
TOTAL		131,745,066	1,917	77,176,082

Table 55: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in GC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
178	Nonferrous metal (except copper and aluminum) roll	30,432,872	245	15,260,930
177	Copper rolling- drawing- extruding and alloying	28,396,009	286	12,334,902
238	Broadcast and wireless communications equipment ma	25,751,775	281	20,544,086
174	Aluminum product manufacturing from purchased alum	18,002,337	203	9,227,927
253	Electricity and signal testing instruments manufac	17,268,671	211	11,966,124
273	Wiring device manufacturing	15,187,563	189	9,071,205
239	Other communications equipment manufacturing	14,529,933	238	10,097,951
270	Storage battery manufacturing	13,134,600	191	9,648,028
159	Glass product manufacturing made of purchased glas	11,168,082	170	6,177,796
256	Watch- clock- and other measuring and controlling	10,192,143	169	7,502,710
332	Transport by air	8,659,141	178	3,084,832
335	Transport by truck	6,793,553	143	3,384,401
TOTAL		199,516,679	2,504	118,300,892

* 2007 Dollars

Table 56: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in GC - Tertiary NAICS Codes



4) Iredell County (IC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
240	Audio and video equipment manufacturing	21,490,101	306	14,989,512
136	Paint and coating manufacturing	20,198,903	247	12,276,020
259	Electric lamp bulb and part manufacturing	16,236,076	196	10,620,821
193	Hardware manufacturing	12,959,492	184	7,274,688
213	Other commercial and service industry machinery ma	12,667,763	178	8,433,845
252	Totalizing fluid meters and counting devices manuf	12,454,198	187	9,622,145
151	Rubber and plastics hoses and belting manufacturin	11,225,546	165	7,155,984
194	Spring and wire product manufacturing	10,631,786	159	6,541,678
320	Retail Stores - Motor vehicle and parts	7,743,930	122	4,920,158
403	Spectator sports companies	5,915,312	130	4,311,901
414	Automotive repair and maintenance- except car wash	5,416,185	130	3,028,648
TOTAL		136,939,292	2,005	89,175,400

* 2007 Dollars

Table 57: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in IC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
178	Nonferrous metal (except copper and aluminum) roll	31,272,767	253	16,258,806
177	Copper rolling- drawing- extruding and alloying	29,318,704	295	13,568,669
238	Broadcast and wireless communications equipment ma	27,076,450	288	21,803,429
174	Aluminum product manufacturing from purchased alum	17,962,787	201	9,575,961
253	Electricity and signal testing instruments manufac	17,862,547	219	12,776,453
273	Wiring device manufacturing	15,990,671	197	9,826,114
239	Other communications equipment manufacturing	15,976,977	253	11,636,198
270	Storage battery manufacturing	13,328,827	191	10,032,772
332	Transport by air	10,397,697	173	5,487,212
159	Glass product manufacturing made of purchased glas	8,599,865	182	5,246,396
335	Transport by truck	7,307,629	140	4,686,703
256	Watch- clock- and other measuring and controlling	6,585,735	161	4,594,512
TOTAL		201,680,656	2,553	125,493,225

* 2007 Dollars

Table 58: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in IC - Tertiary NAICS Codes



5) Lincoln County (LC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
136	Paint and coating manufacturing	17,855,697	180	10,151,310
240	Audio and video equipment manufacturing	15,206,876	220	10,887,048
259	Electric lamp bulb and part manufacturing	13,197,394	151	8,758,809
213	Other commercial and service industry machinery ma	11,702,354	150	7,553,170
193	Hardware manufacturing	11,375,780	158	6,280,534
194	Spring and wire product manufacturing	10,120,192	144	6,133,708
151	Rubber and plastics hoses and belting manufacturin	10,023,378	147	6,371,223
252	Totalizing fluid meters and counting devices manuf	9,113,646	143	7,376,511
403	Spectator sports companies	6,507,246	125	4,859,557
320	Retail Stores - Motor vehicle and parts	5,453,736	107	3,521,385
414	Automotive repair and maintenance- except car wash	4,159,494	119	2,207,261
TOTAL		114,715,793	1,644	74,100,516

* 2007 Dollars

Table 59: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in LC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
178	Nonferrous metal (except copper and aluminum) roll	27,919,553	199	14,060,022
177	Copper rolling- drawing- extruding and alloying	25,345,957	232	10,926,880
238	Broadcast and wireless communications equipment ma	22,927,555	228	19,138,351
174	Aluminum product manufacturing from purchased alum	16,062,169	171	8,303,044
253	Electricity and signal testing instruments manufac	15,074,739	175	11,202,958
273	Wiring device manufacturing	13,797,362	165	8,401,604
270	Storage battery manufacturing	11,654,564	164	8,932,157
239	Other communications equipment manufacturing	11,505,949	194	8,767,298
159	Glass product manufacturing made of purchased glas	9,879,699	156	5,811,917
256	Watch- clock- and other measuring and controlling	8,345,774	142	6,715,077
332	Transport by air	6,935,627	156	1,924,881
335	Transport by truck	6,630,668	132	3,817,741
TOTAL		176,079,616	2,113	108,001,930

* 2007 Dollars

Table 60: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in LC - Tertiary NAICS Codes



6) Mecklenburg County (MC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
136	Paint and coating manufacturing	28,498,444	253	14,301,263
240	Audio and video equipment manufacturing	23,696,414	283	16,049,585
213	Other commercial and service industry machinery ma	16,534,513	175	10,318,791
259	Electric lamp bulb and part manufacturing	15,966,059	167	10,290,723
193	Hardware manufacturing	15,698,631	176	8,396,638
151	Rubber and plastics hoses and belting manufacturin	12,582,902	157	7,775,072
194	Spring and wire product manufacturing	12,069,310	152	7,039,086
252	Totalizing fluid meters and counting devices manuf	10,942,355	177	7,623,860
320	Retail Stores - Motor vehicle and parts	9,352,465	124	5,443,062
414	Automotive repair and maintenance- except car wash	7,335,902	131	4,347,479
403	Spectator sports companies	7,083,319	134	4,933,278
TOTAL		159,760,314	1,927	96,518,837

* 2007 Dollars

Table 61: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in MC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
178	Nonferrous metal (except copper and aluminum) roll	132,714,166	470	28,040,695
238	Broadcast and wireless communications equipment ma	52,450,151	332	43,041,565
177	Copper rolling- drawing- extruding and alloying	39,622,625	294	17,875,608
174	Aluminum product manufacturing from purchased alum	28,304,206	208	14,196,057
239	Other communications equipment manufacturing	24,787,585	267	17,908,386
273	Wiring device manufacturing	15,988,329	183	9,431,101
270	Storage battery manufacturing	14,227,141	181	10,339,091
253	Electricity and signal testing instruments manufac	14,104,077	199	9,130,405
332	Transport by air	13,582,084	173	8,850,658
256	Watch- clock- and other measuring and controlling	12,523,182	172	9,052,147
335	Transport by truck	10,077,132	146	6,494,677
159	Glass product manufacturing made of purchased glas	6,554,648	131	3,095,582
TOTAL		364,935,326	2,755	177,455,972

* 2007 Dollars

Table 62: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in MC - Tertiary NAICS Codes



7) Rowan County (RC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
136	Paint and coating manufacturing	17,278,980	232	10,259,228
240	Audio and video equipment manufacturing	17,138,143	255	12,488,241
259	Electric lamp bulb and part manufacturing	14,611,389	172	9,609,681
213	Other commercial and service industry machinery ma	12,329,124	163	8,076,429
193	Hardware manufacturing	10,846,634	165	5,965,591
194	Spring and wire product manufacturing	9,218,928	147	5,589,317
151	Rubber and plastics hoses and belting manufacturin	9,155,430	151	5,853,435
320	Retail Stores - Motor vehicle and parts	6,487,940	115	4,151,375
252	Totalizing fluid meters and counting devices manuf	5,764,657	151	4,357,730
403	Spectator sports companies	5,561,410	131	4,071,846
414	Automotive repair and maintenance- except car wash	5,103,226	124	2,984,844
TOTAL		113,495,861	1,804	73,407,717

* 2007 Dollars

Table 63: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in RC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
178	Nonferrous metal (except copper and aluminum) roll	29,263,343	226	15,158,630
177	Copper rolling- drawing- extruding and alloying	26,385,893	256	11,945,069
238	Broadcast and wireless communications equipment ma	24,875,616	264	20,592,496
253	Electricity and signal testing instruments manufac	15,682,430	190	11,685,047
174	Aluminum product manufacturing from purchased alum	15,234,541	184	7,957,146
273	Wiring device manufacturing	15,211,089	180	9,437,108
332	Transport by air	14,137,406	188	9,517,218
239	Other communications equipment manufacturing	13,391,513	226	10,189,859
270	Storage battery manufacturing	12,173,893	175	9,379,752
159	Glass product manufacturing made of purchased glas	11,288,098	177	6,653,639
335	Transport by truck	9,803,592	148	6,765,162
256	Watch- clock- and other measuring and controlling	9,655,789	163	7,668,416
TOTAL		197,103,203	2,377	126,949,542

* 2007 Dollars

Table 64: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in RC - Tertiary NAICS Codes



8) Stanly County (SC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
136	Paint and coating manufacturing	18,188,550	196	10,261,513
240	Audio and video equipment manufacturing	14,806,997	235	10,591,999
259	Electric lamp bulb and part manufacturing	13,305,846	163	8,838,978
213	Other commercial and service industry machinery ma	11,967,718	163	7,724,881
194	Spring and wire product manufacturing	10,256,457	153	6,218,668
151	Rubber and plastics hoses and belting manufacturin	10,038,726	153	6,348,161
252	Totalizing fluid meters and counting devices manuf	9,357,285	156	7,540,358
193	Hardware manufacturing	8,762,898	176	6,570,914
320	Retail Stores - Motor vehicle and parts	6,125,557	114	3,787,379
403	Spectator sports companies	4,955,698	124	3,526,596
414	Automotive repair and maintenance- except car wash	4,195,390	122	2,148,601

TOTAL **111,961,122** **1,753** **73,558,048**

* 2007 Dollars

Table 65: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in SC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
178	Nonferrous metal (except copper and aluminum) roll	28,244,904	222	14,273,879
177	Copper rolling- drawing- extruding and alloying	25,024,564	250	10,742,181
238	Broadcast and wireless communications equipment ma	23,877,358	261	19,768,215
174	Aluminum product manufacturing from purchased alum	16,511,603	186	8,446,693
253	Electricity and signal testing instruments manufac	15,143,073	190	11,186,368
239	Other communications equipment manufacturing	12,143,821	217	9,212,634
270	Storage battery manufacturing	11,754,979	176	8,990,789
273	Wiring device manufacturing	11,160,957	173	6,716,089
332	Transport by air	10,229,485	167	6,777,764
159	Glass product manufacturing made of purchased glas	9,959,569	166	5,871,819
256	Watch- clock- and other measuring and controlling	8,842,887	158	7,027,275
335	Transport by truck	6,575,205	132	3,233,568

TOTAL **179,468,405** **2,297** **112,247,274**

* 2007 Dollars

Table 66: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in SC - Tertiary NAICS Codes



9) Union County (UC)

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
136	Paint and coating manufacturing	19,292,993	186	10,857,056
240	Audio and video equipment manufacturing	19,231,083	258	13,320,201
259	Electric lamp bulb and part manufacturing	14,064,235	156	9,272,182
193	Hardware manufacturing	13,054,692	164	7,249,082
213	Other commercial and service industry machinery ma	12,498,329	156	8,043,352
252	Totalizing fluid meters and counting devices manuf	11,157,172	161	8,720,016
151	Rubber and plastics hoses and belting manufacturin	10,292,599	146	6,514,401
194	Spring and wire product manufacturing	10,267,938	143	6,226,896
320	Retail Stores - Motor vehicle and parts	6,878,287	112	4,429,837
414	Automotive repair and maintenance- except car wash	5,505,049	122	3,104,388
403	Spectator sports companies	2,258,711	107	1,259,707
TOTAL		124,501,088	1,709	78,997,118

* 2007 Dollars

Table 67: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in UC - Secondary NAICS Codes

Industry Sector	Industry (IMPLAN Classification)	Value Added Impact*	Employment Impact (Number of Jobs)	Employee Compensation Impact*
177	Copper rolling- drawing- extruding and alloying	26,595,387	244	12,234,105
178	Nonferrous metal (except copper and aluminum) roll	26,591,478	204	14,087,714
238	Broadcast and wireless communications equipment ma	24,422,564	240	20,012,869
174	Aluminum product manufacturing from purchased alum	16,966,981	176	8,927,428
253	Electricity and signal testing instruments manufac	16,829,623	189	12,083,199
273	Wiring device manufacturing	14,578,598	170	8,879,792
239	Other communications equipment manufacturing	13,527,867	211	9,862,859
332	Transport by air	12,610,309	160	8,107,164
270	Storage battery manufacturing	12,397,981	168	9,360,879
159	Glass product manufacturing made of purchased glas	10,511,371	161	6,215,445
256	Watch- clock- and other measuring and controlling	9,351,050	149	7,217,001
335	Transport by truck	7,487,936	133	4,679,474
TOTAL		191,871,145	2,205	121,667,929

* 2007 Dollars

Table 68: Economic Impact of adding 100 jobs in 2010 to the MV/MS Industries in UC - Tertiary NAICS Codes