

# SANTEE-LYNCHES EMPLOYMENT SERIES

## An Evaluation of the Local Manufacturers' Responses to Selected Questions on the "Survey of Area Employers"

### Introduction

The "Survey of Area Employers" was developed and distributed as a major element of the Santee-Lynches Workforce Investment Board's funded study of the impact of the Base Realignment Committee's (BRAC) decision to transfer the Third Army Headquarters to Shaw Air Force Base. The study addresses factors in the Region that should be reviewed and addressed to insure that the economy of the Region, in general, and Sumter, in particular, is prepared to provide the necessary employment opportunities to that percentage of the 2,000 to 3,000 military dependents who will seek employment when transferred to this area. The BRAC study was under the direction of the consulting firm of Wilbur Smith Associates. The Survey was developed by Wilbur Smith Associates, with Survey distribution and results compiled by the Santee-Lynches Workforce Investment Board's staff.

The Survey was sent to approximately 180 businesses and industries in all four counties of the Santee-Lynches Region. A total of 56 businesses responded to the Survey for a response rate of about 30%. Based on the number and type of businesses responding to the Survey, the Manufacturing Sector had the largest number of responses. Manufacturing accounted for 25 of businesses responding or 42% of the Surveys returned. Since Manufacturing accounts for a major percentage of all employment in the Region and local manufacturers responded in such high numbers to the Survey, it is worthwhile to perform a separate evaluation of the Survey from the local manufacturers' perspective.

The 56 businesses which responded had a total of 13,485 employees, both full-time and part-time. Of this total, almost 6,000 employees were from the Manufacturing Industrial Category. Manufacturing employee totals ranged from 2,109 to 14, with an average number of employees per manufacturer of 235. While there were a variety of manufacturing-type businesses responding, of the 25 total manufacturers, 16 stated they were simply manufacturing sites, while 9 stated they had limited to full research and development responsibilities.

This evaluation will analyze the manufacturers' responses to the Survey in two ways. The first is to give equal weight to each manufacturer's response, regardless of the manufacturer's number of employees. The second means of analysis will be to weigh each manufacturer's response based on the number of employees in that business.

This evaluation will deal with only selected questions from the Survey, with the emphasis on those questions that identify the respondents' satisfaction/concern for the quality of the local labor and work force.

Throughout the evaluation local Survey results will be compared to the results the National Association of Manufacturers and Manufacturing

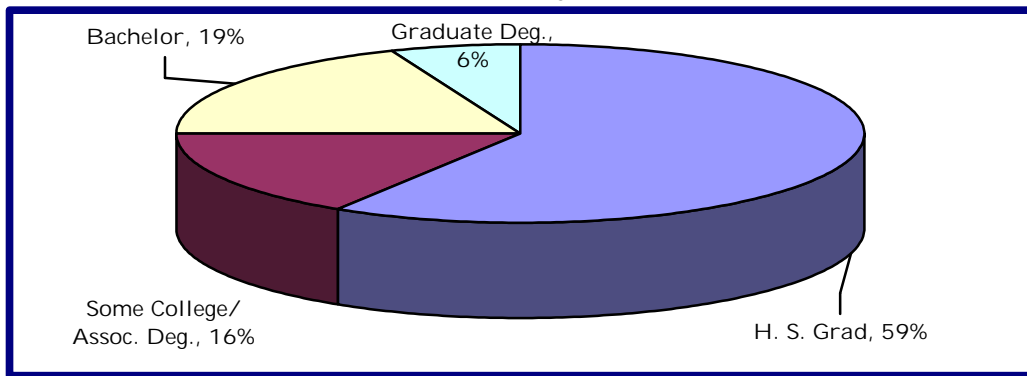
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Institute's national report "2005 Skills Gap Report – A Survey of American Manufacturing Workforce". By comparing national manufacturing survey results to local manufacturers' survey results, the relatively small sample of local manufacturers surveyed will be given greater credibility.

## Education Requirements

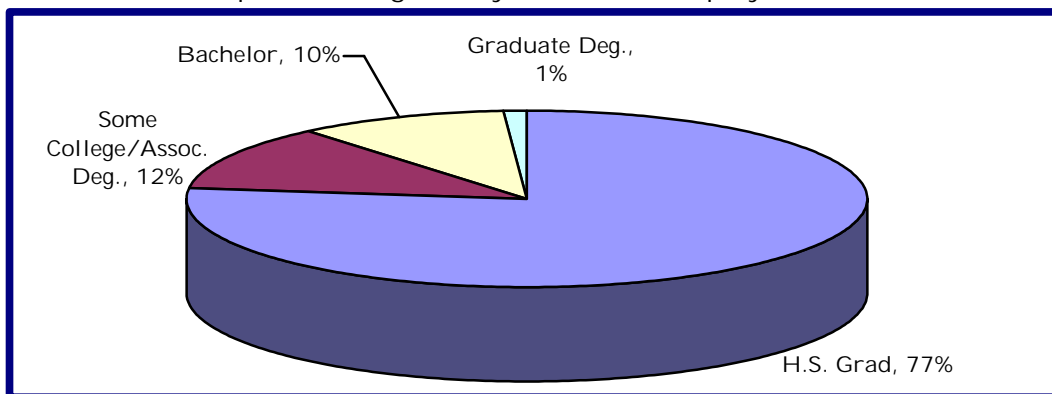
To establish the local manufacturing community's workforce education requirements, the local Survey Question #2 (a) asked manufacturers to identifying the education, degree, or training level required by the local manufacturers' workforce. The response options to this question were High School, Some College, Associate Degree, Bachelor's Degree, and Graduate Degree. The answers were to be expressed in percentages of each education level. It should be noted that a few employers listed non-High School graduates as an education level, but these are not included in the totals.

The Total Response Universe of the Survey (all 56 businesses' responses)



While a majority of all Survey respondents identified High School graduates as the main portion of their workforce needs, the manufacturers have a much higher requirement for workers who only possess a High School diploma.

Manufacturer Responses Weighted by Number of Employees



As the above graphic shows, over three out of every four manufacturing employees in the local area only require a High School diploma. This statistic indicates that the local Manufacturing Sector is composed of primarily lower

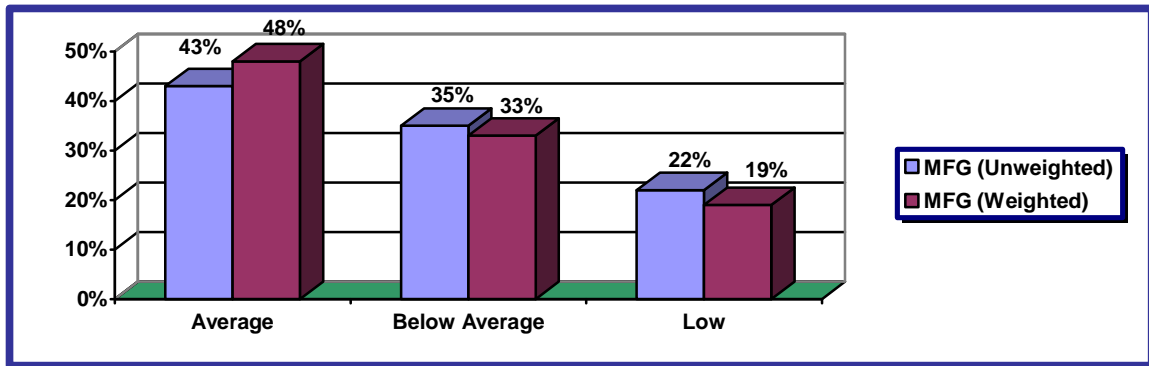
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value-added industries. Lower value-added industries are the more labor intensive and are not as technologically advanced as some of the newer manufacturing segments of the economy. These industries are also those most at risk to move operations off-shore or require additional incentives to remain in the local area. These manufacturers are in contrast to higher value-added industries which are much more reliant on technological innovation that allow a smaller number of employees to maximize productivity.

## Basic Skills of Local High School Graduates

Since the local Manufacturing Industry Category has such a preponderance of employees only requiring graduation from high school, it is important to determine how this industry sector rates the local high school graduates. Question #2 (k) asks manufacturers how they would rank the math and reading skills of new high school graduates in the S-L Region? The response options for this question were High, Above Average, Average, Below Average, and Low. No manufacturer ranked local high school graduates' basic skills as High and only about one-tenth of one percent of manufacturing respondents, based on numbers of employees, rated the local graduates Above Average in reading and mathematics.

Comparison of Manufacturers' Ranking of Local High School Graduates' Basic Skills Ability (Number of Manufacturers vs. Manufacturers' Number of Employees)



The remaining three ranking options make up 99.9% of manufacturers' responses. The Manufacturing employers rated 43% of high school graduates' Average in basic skills, with the remaining 57% percent rating them either Below Average or Low. When manufacturers' responses are weighted by number of employees these percentages change to 48% Average and 52% Below Average and Low. The difference in the percentages for weighted and unweighted manufacturer results is due to the fact that the largest Manufacturing employer in the Region (a Food Processing Company) rated local High School graduates Average.

Fifty-seven percent (57%), or in the case of weighted ratings – 52%, of local manufacturers showed dissatisfaction with local graduates basic skill levels. These results compare favorably with the findings in the National Association of Manufacturers/ Manufacturing Institute Report "2005 Skills Gap Report – A Survey of American Manufacturing Workforce". The results of this national

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manufacturing survey stated that 61% of manufacturers ranked applicants with High School/GED qualifications as poorly prepared for typical entry level jobs.

Another question in the national survey asked for specific deficiencies of the Public Education System in preparing students for the workplace.

## The Top Three Answers to Public Education Deficiencies

| Basic Employability Skills | Math & Science | Reading/Comprehension |
|----------------------------|----------------|-----------------------|
| 55%                        | 51%            | 38%                   |

2005 Skills Gap Report, (Figure 17, Page 17)

These national responses relate directly to the original local Survey question asking manufacturers to rank graduates reading and mathematics skills.

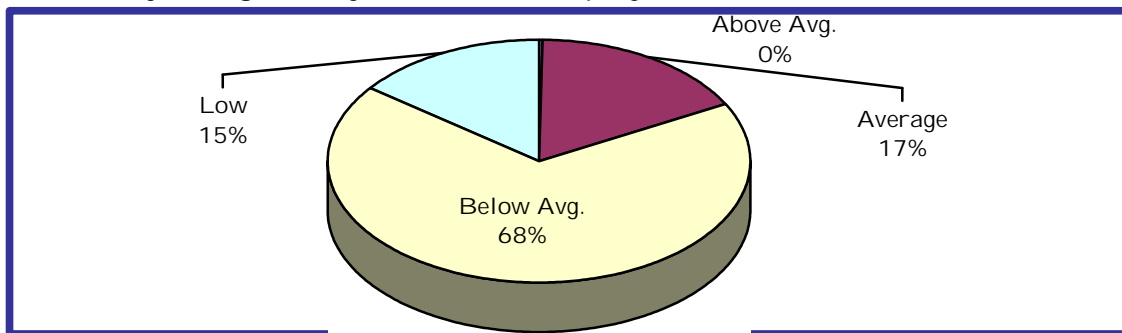
## Skill Level of Available Labor Force

New graduates make up a portion of the Region's labor force, which includes those who are not employed but are looking for work. Local Survey Question #2 (I) asked manufacturers to rank the availability of skilled workers in the Region. Again, the response options were High, Above Average, Average, Below Average, and Low.

None of the 56 businesses responding to the Survey ranked the availability of skilled workers in the Region as High, but over one-half (51%) of all local responding businesses, weighted by number of employees, ranked skilled worker availability as Average or above.

The results of the weighted manufacturers' responses are dramatically different from those of the total businesses responding to the local Survey. The two top answer categories (High and Above Average) only received less than 0.1% of all weighted manufacturers' responses. Only 17% of the weighted answers ranked the availability of skilled workers as Average or just two percent more than ranked the skilled worker availability as Low. The vast majority of weighted manufacturers' answers to this question ranked the skilled worker availability in the Region as Below Average.

Manufacturing Respondents Ranking of the Region's Skilled Worker Availability, Weighted by Number of Employees.



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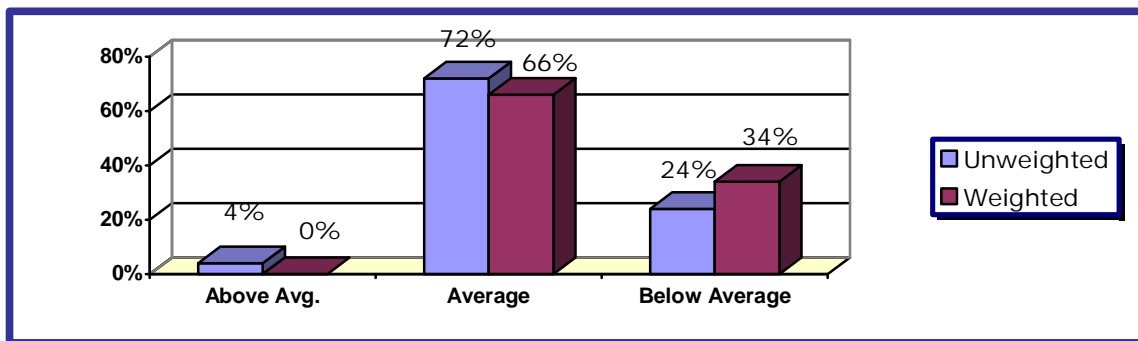
The Manufacturing Sector's low degree of confidence in the number of skilled workers available for employment in the Region is of even greater concern when 77% of this Sector's employees only require a high school diploma.

While there was not a similar question in the "2005 Skills Gap Report – A Survey of American Manufacturing Workforce", the Survey Report's Executive Summary confirms the nation's manufacturers' concerns with the talent pool of available workers. The Executive Summary states, "More than 80 percent of respondents indicated that they are experiencing a shortage of workers overall". This statement is further expanded upon in the following quote, "90 percent of respondents indicate a moderate to severe shortage of qualified skilled production employees".

### Capability of the Current Manufacturing Employees

Question #2 (m) of the local Survey asked businesses to rank the skill level of the workforce. This question was designed to determine how businesses (for our purposes manufacturers), evaluated the skill level of their current employees. The response options to this question were Strong, Above Average, Average, Below Average, and Weak. Twenty-two (22) manufacturers answered this question in sufficient detail for an evaluation. The local manufacturer with the largest number of employees was one of those who did not answer this question.

The results of the weighted manufacturers' responses were only slightly more negative than the total unweighted manufacturing responses. Neither the top nor bottom answer categories (High and Weak) received a single vote. The overwhelming majority of responding manufacturers, both weighted and unweighted, consider their current workforce as average.



While the Average ranking is not a glowing endorsement of the workforce, it appears that our local Manufacturing community is generally content with its current workers.

These local results are in marked contrast to the results of the national Survey. The Executive Summary of the "2005 Skills Gap Report – A Survey of American Manufacturing Workforce" makes the following statement. "In addition to shortages of various types of employees, manufacturers surveyed reported they are also dissatisfied with the skills of their current employees.

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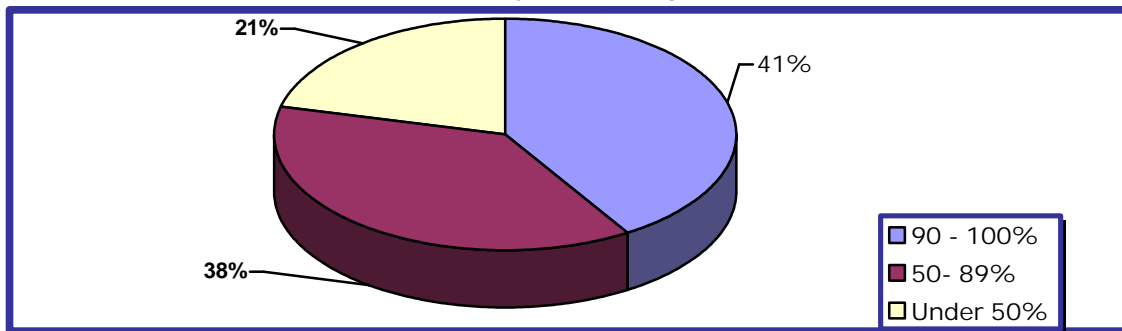
Among respondents to the national survey, nearly half indicate their current employees have inadequate basic employability skills, such as attendance, timeliness, and work ethic, while 46% reported inadequate problem-solving skills and 36% indicated insufficient reading, writing, and communication skills."

The local Manufacturing Community's response to this question, while more positive than the national Survey, indicates that manufacturing employers are reasonably content with their current workers, but worried about the ability to replace these workers from the local labor force. This concern will only increase as new industries requiring a higher employee education level locate in the Region. Statewide projections of an almost stagnant labor force between 2010 and 2030 (see Santee-Lynches Monograph "[U.S. Census Population Projections Through 2030 – South Carolina's Aging Will Affect Future Labor Force Availability](#)") will add to the pressure on manufacturing and education for a more technologically proficient labor force.

### Skill Training for Current Workforce Mostly Accomplished In-House

Manufacturers' answers to the local Survey Question #2 (c): "What percentage of skill development of your organization' workforce are acquired in-house versus externally", heavily favored in-house training.

Percent of Local Manufacturers' Employee Training Done In-House



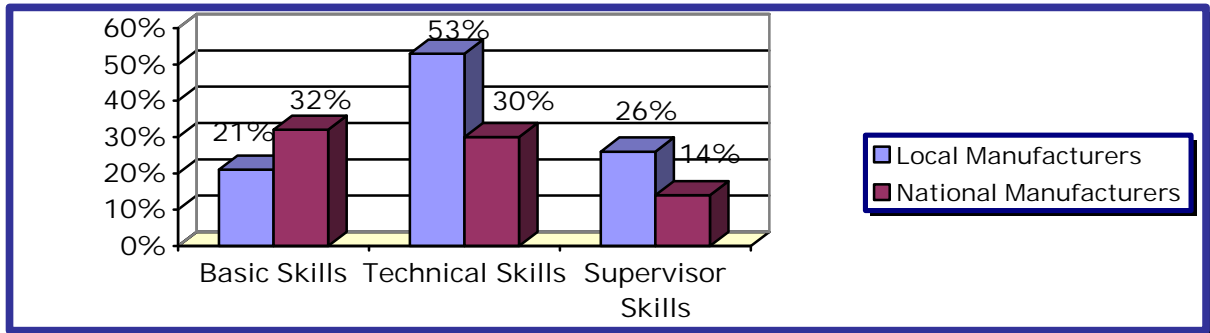
The national Survey did not quantify the percentage of in-house training for manufacturing nationally, but it did state on page 14, "... the most important training programs were reported as those supporting specific skills for a particular job". The bulk of this specific job related training is ordinarily carried out within the manufacturing facility.

### Educational or Training Programs Manufacturers Need from External Sources

In both the national and local Surveys, the manufacturers' responses to this subject ranged from the very specific to the more general in nature. In order to make any comparison the answers were interpreted to fit into categories of education and training. The top three categories of education/training were: Basic Skills, Technical Skills and Supervisory Skills. The following graphic compares the local manufacturers' needs in these categories with the manufacturers' responses to the national Survey.

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Type of External Education/Training Needed by Local versus National Manufacturers



Local manufacturers training needs are heavily weighted toward technical skills, while the national manufacturers were equally divided between basic and technical skills. A possible reason for the high percentage of technical training needs in the local area is that over three-quarters of the employees are only high school graduates. Nationally, there are a large percentage of manufacturing jobs that require at least some college. The national Survey asked manufacturers to assess the preparation levels of applicants with High School/GED accreditation and the preparation level of applicants with a certificate from a two-year college.

Comparison of Job Preparation of High School versus Two-Year College Applicants by Size of Manufacturing Business

|                     | HIGH SCHOOL GRADUATES |                 | TWO-YEAR COLLEGE GRADUATES |                 |
|---------------------|-----------------------|-----------------|----------------------------|-----------------|
|                     | > 500 Employees       | < 500 Employees | > 500 Employees            | < 500 Employees |
| Poorly Prepared     | 61%                   | 60%             | 8%                         | 19%             |
| Adequately Prepared | 39%                   | 40%             | 92%                        | 81%             |

Source: Figures 19 & 20, 2005 Skills Gap Report – A Survey of American Manufacturing Workforce

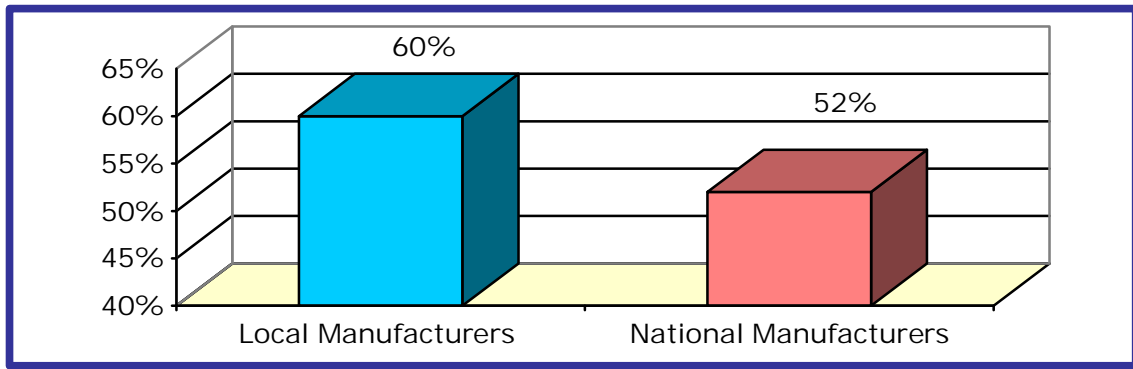
The high percentage of two-year college graduates which are ranked as adequately prepared in the national Survey is a testimonial to the value of upgrading the job educational requirements for local manufacturing production workers.

## The Use of Increased Wages to Attract/Retain Technically Qualified Workers

While the questions asked concerning this subject, in both local and national Surveys, differ, a reasonable interpretation of the results of both Surveys can arrive at some conclusions. The national Survey asks about methods of retaining qualified workers, while the local Survey asks if manufacturers are willing to pay higher wages to better access a skilled workforce Region-wide. In both Surveys, increased wages are still considered a valuable tool to gain or keep a more skilled workforce.

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Percent of Manufacturers Willing to Use Higher Wages to Insure a More Skilled Workforce



Responders to the national Manufacturing Survey also considered improved healthcare and 401K/retirement benefits as other means of retaining or recruiting higher skilled workers. In both the local and national results it is assumed that higher wage offers would be in relation to like companies in the Manufacturing Sector.

### Summation

The local Manufacturing Survey sample mirrors the national Manufacturing Survey in most of the selected topics; however, there are also some definite differences between the national and local manufacturers' responses.

The key finding of "2005 Skills Gap Report – A Survey of American Manufacturing Workforce" national Survey is "the vast majority of American manufacturers are experiencing a serious shortage of qualified employees, which in turn is causing significant impact on business and the ability of the country as a whole to compete in a global economy." If this situation affects national manufacturing, it is at least as serious for local manufacturers.

Since twenty-one of the local manufacturing employers or 84% of responders have a workforce that is composed of at least 70% High School graduates, this indicates that a majority of the Regional manufacturing survey sample is composed of lower value-added businesses. Low value-added manufacturers are at risk of moving off-shore, requiring additional State and local government incentives, and/or merging/downsizing to remain in business. Since a major element of local economic development is support of existing businesses and many of the surveyed manufacturers employ hundreds of workers, it is important that every effort be made to provide a proficient labor supply for the Region's existing manufacturing companies.

Manufacturing's responses to both the national and local Surveys show a general dissatisfaction with the basic skills (reading and math) proficiency of High School graduates. New High School graduates make up a significant portion of the available labor force. If these graduates do not meet the basic skills needs of the Region's major employers, the potential for these employers to look elsewhere for a productive workforce increases.

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There is a growing awareness among all elements of manufacturing that a technically productive, high-performance workforce is essential for business growth. A quote from the national Survey "2005 Skills Gap Report – A Survey of American Manufacturing Workforce" brings this point home. "Notwithstanding the bleak picture of the workforce situation today, manufacturers surveyed believe that having a high-performance workforce is the most important driver of future business success. Nearly three out of every four respondents selected this as a key to future success." In past national surveys "low cost producer status" or a lean efficient operational model, was the lead driver in the search for success. In the 2005 Survey this low cost driver option came in third. This finding accentuates the growing belief of U. S. manufacturing executives that the productivity of their workforce determines their company's survivability in the more technically oriented global economy. The availability of international technical talent (China, India, etc.) combined with the shortages of such talent in this country means that America's manufacturing future may now be at stake.

These concerns are borne out in the results of the Surveys' responses to the availability of a skilled workforce. Both national and local manufacturers expressed their growing concerns about the shortage of qualified workers overall. The national Survey asked manufacturers about the job preparedness of High School graduates and those individuals who completed a two-year college course of study. Whether for companies of more or fewer than 500 employees, over 80% of workers who had a two-year college certificate were rated as adequately prepare for employment. This was over twice the percentage given to the preparedness of High School graduates.

Based on both Survey results, manufacturers responding to the national Survey were much more disappointed in the skill levels of their current workforce than local manufacturers. Two-thirds or more of both weighted and non-weighted local manufacturers rated their current workforce skill levels as average. The national Survey showed at least one-half of manufacturers nationwide were dissatisfied with the employability, problem solving, and basic skills of their current employees. The small to non-existent percent of local manufacturing employers who rated their workforces' skill levels as high or above average is indicative of an underlying concern these businesses have about their employees' productivity. The local results may also mean our manufacturers have lower expectations of the local employees' skill levels. It is apparent from the local Survey sample that local manufacturers believe that their current workforce can meet their basic expectations, but local manufacturing employers have little confidence that the Region's labor market has sufficient individuals who could adequately replace those they currently employ.

Manufacturers, both nationally and locally, rely on in-house training to maintain or upgrade their workers' skill level. The key reason for their reliance on in-house training is that the training emphasis of most employers is in specific job-related skills. When asked what training they need from

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external sources (technical/vocational schools, two-year colleges, universities, State/local government agencies, federal training programs, or consultants) both national and local manufacturers concentrated on three types of training. These external education/training needs fall mainly into one of these categories: basic skills, technical skills, or supervisory skills. Locally, manufacturers placed greater emphasis on technical skills training than national Survey responders. This may be a result of local manufacturing's reliance on High School graduates (77%) as an employee base.

Finally, respondents to both the national and local Surveys indicated that they are or would be willing to increase wages if that could provide some assurance that higher skilled workers would remain in their workforce or that a more technically skilled labor pool existed in the Region. While compensation is still considered a major retention/recruitment tool, many manufacturers are looking at more non-traditional means (flex time, increased employee input, etc.) to meet their workforce concerns.

### Recommendations

Based on the workforce situation facing the national and local manufacturers, the following recommendations are provided for consideration:

- 1) Expand local Work Keys in conjunction with WIN for high school evaluations and manufacturer profiling. To address the local manufacturer's dissatisfaction with the High School graduates basic skills, Work Keys and WIN should become a mandatory requirement for all high school juniors in the Region's seven School Districts. This testing should encompass, at least in the three basic areas of Applied Mathematics, Reading for Information, and Locating Information. This approach, coupled with an expansion of the number of Work Keys job profiles for local manufacturers, will provide employers with objective evaluations of applicants' basic skills proficiency.
- 2) The Region's higher value-added manufacturers should be surveyed by the local Career Centers to determine their specific technical training needs. This will enable these industries to more effectively fill the skill gaps that arise when trained employees leave the company.
- 3) More higher value-added manufacturers should consider partnership arrangements with Central Carolina Technical College to develop programs that meet the requirements of their higher technical level positions. This program would include a full range of benefits to the employee(s) being trained at the Technical College.
- 4) Manufacturers, in general, must develop more effective relationships with public education and local workforce systems that result in private/public partnerships. These partnerships would provide potential workers with an understanding of available career options. These efforts could include; apprenticeships/internships programs, curricula input, field trips to industry, and other means of educating students, teachers, and counselors about manufacturing.