

# Recruiting Trends 1998-99



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## EXECUTIVE SUMMARY

- Overall, this year's college labor market will continue at the same feverish pace that was experienced last year.
- However, employers are cautious and expressed concern about a slowdown in the economy next spring. "Anxiety continues over the slow turn-around of the Asian economies."
- Underneath the overall picture, several patterns emerged.
  1. Growth in the economy will be lead by the retail and service sectors of the economy. The manufacturing sector, which comprises 37% of respondents, may reduce hiring slightly.
  2. Very large organizations (over 20,000) anticipate reducing hiring levels. The slack will be taken up by medium sized companies (2,200 to 20,000) who expect to hire more graduates this year.
  3. Hiring of business majors will be up; demand for engineers and computer science will keep pace with last year though the total numbers being sought may be down slightly.
  4. MBA's may see hiring reductions, particularly in the financial sector; service sector hires, however, will pick up.
- Starting salaries are expected to increase from between 3% and 5%, for most majors. These rates will be ahead of the current inflation rate.
- Major factors that may negatively impact this labor market are (1) the increase in mergers and restructuring which will lead to layoffs and hiring freezes, and (2) the competitive job market with employers reducing hiring expectations rather than hire poorly qualified candidates.
- Signing bonuses, running 5% to 10% of starting salary, will be used by 36% of these employers with technical majors being the beneficiaries.
- Employers want the "total package" when they hire their next college graduates. Not satisfied with academically well-prepared graduates, employers want individuals who possess and can demonstrate excellent communication and interpersonal skills, teamwork, leadership and computer/technical proficiency. A willingness to learn quickly and continuously, problem solve effectively, and use their common sense is also desired. New employees must also be hard-working, take initiative, and be able to handle multiple tasks.
- The new economy has arrived and the name of the game is competition and speed. As every aspect of business, regardless of sector, becomes more competitive, the strategy is to do everything faster. This dynamic is already affecting recruiting strategies and could have long-term impact on the resiliency of the college labor market.

## **INTRODUCTION**

The new economy, the revolution in global manufacturing and service, has brought with it a confusing set of economic rules that often send conflicting messages. As a result the economy filters mixed signals as to the strength and weakness of labor markets almost daily. The paradoxes in the economy are endless.

This December the national economy will enter its 93<sup>rd</sup> consecutive month of growth accompanied by low inflation (1.5%) and by low unemployment (4.6%); its longest in history. Amid all this joy, December may also set another record with layoffs and job cuts from mergers and restructuring topping the record level set in 1993. Third-quarter gross domestic product grew at 3.9% - double the second quarter figure and much higher than economist expected. Accompanying this growth has been a recovery of consumer confidence. Then why do so many people feel uneasy? It may be explained by the fact the median household is only beginning to creep up and still lags behind income levels attained in the late 1980's. Many workers fear that pushing for higher wages, even though productivity has improved recently, may cost them their job. Wages and prices have also been kept in line by global competition.

During this prolonged recovery, the first several years can be labeled the "jobless recovery." Only in the past 18 months (spring 1997) has labor market demand exploded to the incredible levels experienced this past year. Led by the need for technical graduates, the college labor market benefited everyone. Can market demand be sustained at such dizzying heights for another year?

The new economy has not brought an end to the business cycle - the economy will move through periods when growth slows, inflation flares and hiring expectations are deferred. What can be anticipated for this academic year? Is the half-full glass rising or falling? The signals are mixed. The global economy has slowed yet the national economy continues to grow slightly. The general attitude conveyed in the media is that a slow point will occur in the spring; recruiters mumble the same concerns under their breath.

This report attempts to shed some insight into the state of the college labor market as we reach the midpoint of the academic year.

## **EMPLOYER PROFILE**

This study captured the hiring intentions of 327 employers who responded to a mail survey for 1998-99 college graduates. The survey was completed by a designated individual in the human resources or college relations department. The response approached an adjusted return rate of 20%. Complete details on the research strategy and variable definitions can be found in Appendix A.

## BASIC PROFILE

These employers were primarily in the manufacturing (37%) and business services (22%) sectors of the economy, according to the Standard Industrial Codes (SIC) that they provided or were listed in *Standard and Poor's Register of Corporations, Directors and Executives*. Fifty-four percent (54%) were women representing parent organizations that ranged in size from approximately 40 employees to over 430,000 employees. While 50% recruited in the northcentral region of the country, 36% recruited across the United States, 17% in the northwest, and 14% in the southeast. These employers were less likely to seek candidates in the western states, with the exception of California. About 11% recruited internationally.

A variety of recruiting strategies were utilized to find suitable candidates. More than 90% used on-campus recruiting, including jobs/career fairs, 73% received resumes referred to them by colleges, 70% utilized their co-op and internship programs, 70% provided web environments for direct applications, and 54% employed Internet/web job listing services. The other strategy commonly employed was advertisements in newspapers and professional journals (68%).

When it came to the most effective or primary strategy utilized, nearly 60% placed on-campus recruiting and job fairs at the top. Other strategies making a modest showing as the primary strategy were co-op/internship programs (11%) and newspaper ads (15%). Very few (less than 3%) of these companies considered web/internet options to be primary recruiting strategies.

Each respondent identified the top five academic majors they were seeking this year. Approximately 67% (217) were seeking at least one business major, 60% (194) sought social science, humanities, or natural science majors, and 49% and 44% were looking for engineers and computer science majors, respectively.

A complete profile of organizations responding to this survey can be found in Appendix B.

## EMPLOYMENT OUTLOOK

What forces do these human resource professionals perceive as already or potentially influencing their labor market activities this year? Each respondent was asked, in an open-ended fashion, to list the potentially positive and negative influences on their hiring expectations. The responses were grouped according to common themes.

**POSITIVE INFLUENCERS:** Positive factors clustered in three major areas:

1. Rosy outlook for continued growth and expansion of the respondent's company. Mergers and restructuring have allowed companies to become more competitive; new product development is occurring faster; new markets have opened through growth and venture partnerships; and the improvement of service to customers and clients has increased sales and service contracts.
2. A strong national economy, led by housing and construction starts, improved auto sales since the GM strike, and telecommunications; low interest rates and rebounding stock market have buoyed consumer confidence leading into the holiday season; improved

spending by government (particularly states) to provide services; and the improvement perceived by some in the Asian economies.

3. A competitive labor market that is experiencing increasing retirements and high level of turnover. Compounding the competitiveness of the market, is a shift in the skill requirements needed for the majority of positions. The "total package" employee has arrived center stage.

Few of these employers mentioned the Y2K problem as critical to their hiring considerations this year. Those who did tended to be in federal agencies.

**NEGATIVE INFLUENCERS:** Negative factors clustered in the same categories.

1. Company restructuring or mergers have led to layoffs, downsizing, or hiring freezes; increasing level of competition has impacted sales.
2. An anticipated slowdown in the national economy. The roller coaster stock market that may still be overvalued remains precarious; potential inflationary activity in terms of higher wages; and the lack of federal funding for key initiatives or unfinished deregulation efforts.
3. Global economic problems, particularly in Asia and South America that are being addressed too slowly, may collapse markets in the spring.
4. Competitive labor markets that have made it hard to recruit and required changes in recruiting strategies have resulted in reduced expectations on the number hired. Rather than accept poorly qualified candidates, some employers are willing to cut back on hiring levels.

The tenor for the context of these comments is set by the level of competition being felt throughout the economy and the pace at which organizations have had to react. Competition has stemmed from increasingly competitive product/service markets, labor markets, customer base, product development process, and learning initiatives. Competition has required that organizations move at a much faster pace with regards to new processes and product developments, transactions, recruiting strategies, and learning. This tenor has potentially profound effects on the college labor market. While the economy can gradually cool down, the job market will likely break hard, possibly causing a crash.

#### **PERCEPTIONS OF THE COLLEGE LABOR MARKET**

Respondents were asked to provide their impression of the prospects for new college graduates based on their knowledge of national and regional labor markets, particularly with regards to their industry or service sector. They were asked to rate the markets from which their organization recruited as "excellent" (1) to "poor" (5).

## OVERALL JOB MARKET

In rating the overall labor market;

- 30% responded that it was excellent.
- The average rating was 2.01 – very good.
- Construction sector employers reported the best labor market – approaching excellent in all regions except on the West Coast where it is “very good.”
- Manufacturing employers were more cautious – with the rating falling between “good” and “very good.”
- Size of company did not influence the overall job market ratings.

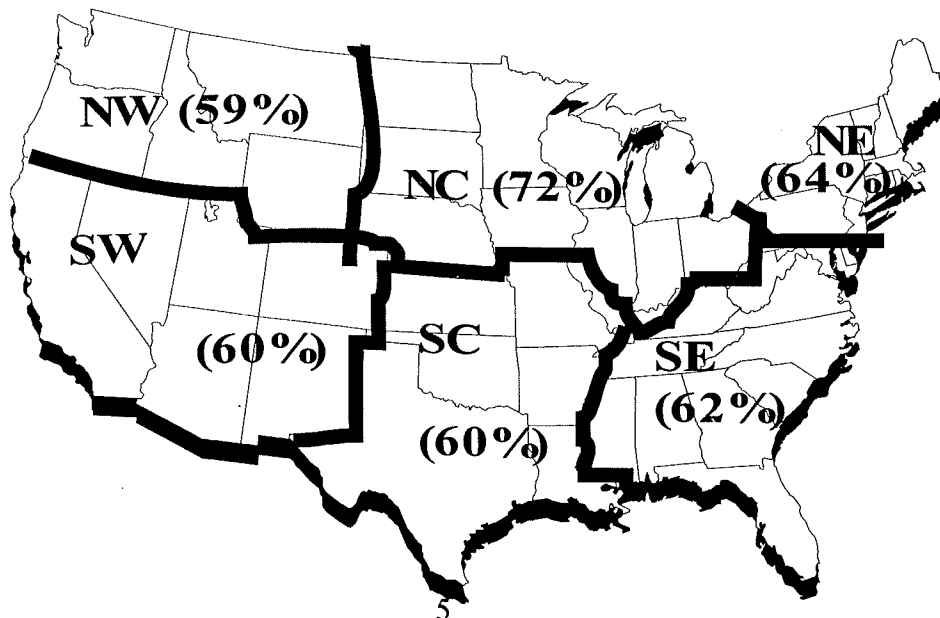
## INDUSTRY JOB MARKET

Asked to rate their industry’s labor market, respondents were slightly more cautious.

- 33% felt their industry’s labor market was excellent; however, the “very good” percentage dropped and “good” and “fair” gained.
- The average of 2.10 still suggested a “very good” labor market across industrial sectors.
- Construction, retail, and service sectors were the most optimistic with ratings between “excellent” and “very good.”
- Manufacturing and, particularly government (federal) the situation was closer to “good.”

## REGIONAL LABOR MARKETS

Asked to rate only regions in which they recruited or hired college graduates, respondents gave the north central region the strongest labor market (“very good”). The other regions clustered together about 10% lower in terms of labor market strength. The appendix contains additional regional labor market maps presented according to industrial sector. The following figure shows the percent of employers rating regional labor markets “very good” or “excellent.”





- 37% reported the north central region to be an “excellent” labor market.
- Manufacturing was noticeably stronger in the north central region than the other regions.
- Public administration (federally employed) looked only “good” across all regions.

**Table 1. Perceptions of the College Labor Market (%)**

	n	Excellent	Very Good	Good	Fair	Poor	Mean
Overall job market	296	30	45	19	6	--	2.01
Job market – industry	293	33	36	21	9	1	2.10
Job market – industry in:							
Northeast	141	29	35	23	9	4	2.23
Southeast	139	27	35	24	11	4	2.30
North central	223	37	35	16	8	4	2.06
South central	128	27	33	24	13	2	2.30
Northwest	105	28	31	22	13	6	2.38
Southwest	123	26	34	20	16	3	2.37

**Table 2. Perceptions from Different Sectors of the Economy (mean)  
(1=excellent, 2=very good, 3=good)**

	Construc.	Manuf.	Transp.	Retail	Financial	Service	Public Admin.
Overall job market	1.70	2.15	1.81	1.75	2.05	1.91	1.86
Job market – industry	1.64	2.40	2.04	1.76	1.93	1.72	2.31
Job market – industry in:							
Northeast	1.43	2.68	1.83	2.11	1.93	1.67	3.33
Southeast	1.67	2.66	1.80	2.00	1.00	1.91	3.17
North central	1.43	2.35	1.87	1.77	1.78	1.82	2.75
South central	1.40	2.63	1.86	2.13	2.31	1.90	2.71
Northwest	1.67	2.66	2.00	2.50	1.94	2.19	3.20
Southwest	1.80	2.67	2.18	2.15	2.28	2.00	3.00

## HIRING INTENTIONS

Hiring intentions are based on a comparison of the number hired last year to the expected number of college hires to be made during the 1998-99 academic year. In 1997-98, the employers who responded to this survey hired 22,591 college students at all degree levels. During 1998-99, they expect to hire approximately 23,204 college students. Approximately 40 respondents did not reveal their hiring intentions for this year.

The first step was to compare the difference between hiring targets for 1997-98 and 1998-99. For all graduates, 23.5% employers were reducing the number of graduates hired; 23.5% were hiring at the same level; and 53% were hiring more students.

**Table 3. Percentage of Employers Decreasing, Increasing, and Hiring at the Same Level Compared to Last Year (%)**

	All Graduates	Associates	Bachelors	Masters	PhD/Prof.
Decreasing Hiring	23.5	25	27	30	47
Hiring same level	23.5	32	23	31	24
Increasing Hiring	53.0	47	50	29	29

When examined by degree level, nearly three-quarters of employers hiring associate and bachelor degree graduates will be hiring at or above last year's level. For master's and PhD/Professional graduates, more employers were likely to be cutting back or holding to their levels of 1997-98.

Because several employers reported hiring levels for 1998-99 but not their 1997-98 hires, the hiring figures had to be averaged to make the second comparison. The average number of new hires per company will be 80.6 this year, compared to 80.4 last year. Essentially the market will remain unchanged from last year.

Employers were asked to separate their total hires by degree level. Not all respondents did this calculation (about 25% depending on the mix of majors they typically hired). Based on this information, hiring at the associate level will be slightly up from last year. Bachelor's degree hires will decline slightly – about 2%. The biggest drop will occur at the master's level where hires will decrease approximately 7%. Doctoral graduates and professionals (in this case pharmacists), will see an increase of about 5%.

**Table 4. Average Hiring Comparisons Between 1997-98 and 1998-99**

All Responses	n	Average Hired 1997-98	n	Average Expected Hires 1998-99	Percent Change
All graduates	288	80.4	281	80.6	None
Associates	71	17.2	71	17.5	+1.7
Bachelors	213	62.2	218	60.9	-2.1
Masters	102	39.7	102	37.0	-6.8
PhD/Prof.	40	26.4	39	27.8	+5.3

## SIZE OF FIRM

Examination of hiring by company size revealed:

- Companies under 20,000 will hire more graduates (all) at rates between 10% and 18% above last year. This offsets a decline in hiring among the largest firms of nearly 9%.
- Where employers broke-out their expected hires by degree level, it would appear that the smallest establishments are the most volatile. (Does not take much of a shift in hiring to produce dramatic percentage swings).
- Mid-sized firms (2,201 to 20,000) appear to be more consistent in their hiring intentions.

- The largest firms, however, still intend to hire approximately 210 graduates, on average, this year. This is a reduction of about 40 hires on average.

**Table 5. Change in Hiring Expectations Between 1997-98 and 1998-99  
Based on Size of Company**

	<b>&lt;400</b>	<b>401-2200</b>	<b>2201-7500</b>	<b>7501-20,000</b>	<b>&gt;20,000</b>
All Graduates	+15.3	+10.9	+18.1	+10.0	-8.8
Associates	-14.5	+19.9	+17.6	-1.2	-3.2
Bachelors	-46.0	NC	+19.9	+8.9	-6.2
Masters	-8.9	+42.7	+6.9	+7.9	-1.9

## **INDUSTRIAL SECTOR**

- Manufacturing, transportation, and government employers are cutting back in their hiring. Manufacturing companies are scaling back slightly but are still hiring large numbers of graduates.
- Financial services are also scaling back noticeably.
- The retail and service sectors are carrying the market by making significant hiring gains this year.

**Table 6. Change in Hiring Expectations Between 1997-98 and 1998-99  
Based on Economic Sector**

	<b>Manuf.</b>	<b>Const.</b>	<b>Trans.</b>	<b>Retail</b>	<b>Finance</b>	<b>Service</b>	<b>Pub. Admin.</b>
All Graduates	-12.4	+7.8	-19.3	+27.3	-1.0	+13.1	-22.0
Associates	-7.0	--	-18.5	+22.0	-29.3	+25.0	-62.3
Bachelors	-14.4	+8.3	-38.2	+10.0	NC	+17.7	-54.6
Masters	-15.7	NH	-64.6	+23.0	-21.8	+3.0	-57.2

## **ACADEMIC MAJOR**

- Communications and telecommunications major hires are up significantly among those employers who target these graduates. Business majors will be hired at slightly higher levels.
- Engineers and computer science majors, while in high demand throughout the economy, will experience reduction in hiring levels compared to last year's record high levels.

**Table 7. Change in Hiring Expectations Between 1997-98 and 1998-99  
Based on Academic Majors**

	<b>Bus.</b>	<b>Eng.</b>	<b>Comp. Sci.</b>	<b>Liberal Arts</b>	<b>Comm.</b>	<b>Ag./Const.</b>	<b>Allied Health</b>
All Graduates	+3.9	-1.6	-4.3	NC	+32.2	-1.0	+8.4
Associates	+1.0	-8.3	-7.1	+2.0	+60.0	-5.0	+25.6
Bachelors	+2.8	-7.1	-4.5	NC	+55.7	-3.8	-2.9
Masters	-7.3	+4.2	-5.2	-5.5	+11.6	NC	-6.7

### **A FINAL LOOK AT HIRING**

A final series of statistical procedures drew a box (called the confidence interval) around the average percentage change expected this year. We wanted to see if 0% - or the no change point - was found within the box. If it was, then the respondents within the interval will be recruiting this year at approximately the same level as last year. In other words, we focus our attention on the main body of respondents and isolate those employers who are making major changes at the extremes (either cutting or hiring in large numbers).

Based on these findings we summarize:

- Overall the college labor market will maintain the hiring pace established last year which was very, very, good. Should the economy sustain its growth, hiring at the bachelor's level may actually increase slightly.
- Size of the parent organization plays an important role in hiring this year.
  - \*The smallest companies (under 400) may increase slightly though hiring at the bachelor's level will be down.
  - \*The largest companies (over 20,000) are holding at last years' level.
  - \*Companies with 2201-20,000 will increase hiring particularly at the bachelor's level.
- Sectors of the economy are hiring at different rates.
  - \*Manufacturing may experience a very slight increase but in general manufacturing companies will hold to last years' hiring levels.
  - \*Hiring growth is strongest among retail, financial, and service sectors with bachelor's degrees being the beneficiaries. MBA's will see fewer hires in financial sector but a pick-up in the service sector.
- Academic majors that will benefit from increased hiring include:
  - \*Computer science at the bachelor's level.
  - \*Business majors at both the bachelors's and master's levels.
  - \*Engineers at the bachelor's level.
  - \*Communications majors will be slightly higher.
  - \*All other majors will be hired at the same level as last year.

These results show how important the extreme can be in influencing the final figures. Major shifts in hiring at the extremes can have a big impact on total hires. However, the firms acting within the confidence interval will establish the initial parameters for the job market.

## SALARY EXPECTATIONS

Respondents were asked to provide the starting salary ranges offered in 1997-98 and expected in 1998-99 for the five key majors that they recruit. They were further asked to provide salary ranges by degree level (associates, bachelors, masters, and Ph.D.). Tables have been prepared for associate, bachelor, and master salaries. Specific majors are included where the number of reported salaries was sufficient to provide stable statistics. Where the observations (n's) are small, caution must be taken in interpreting the salary range. The percentage increase column reflects the midpoint between the shift in the low end of the range and the high end of the range.

General findings, based on the employer's salary information:

- Typically the lower end of salary ranges will move up faster than the top end.
- Overall: Associates' salaries can be expected to increase by 5.7%.  
Bachelors' salaries can be expected to increase by 4.1%.  
Masters' salaries can be expected to increase by 4.5%.
- By type of degree earned at the bachelors' level:  
Business will increase by 3.8% overall.  
Engineering will increase by 3.1% overall.  
Computer Science will increase by 4.3% overall.  
Social Science/Humanities will increase by 4.2% overall.  
Sciences will increase by 5.3% overall.
- By type of degree earned at the master's level:  
Business will increase by 6.6% overall.  
Engineering will increase by 2.6% overall.  
Computer Science will increase by 4.6% overall.  
Social Science/Humanities will increase by 0.5% overall.  
Sciences will increase by 9.0% overall.  
Human Resources/LIR will increase by 3.8% overall.
- By type of degree earned at the associate's level:  
Humanities/Social Science will increase by 2.7% overall.  
Business will increase by 5.3% overall.  
Engineering will increase by 8.0% overall.  
Computer Science will increase by 4.3% overall.

For college graduates at all levels expected salary increases will exceed the yearly inflation rate as currently being estimated.



**Table 8. Associates Degree  
1998-99 Expected Starting Salary Range Compared to 1997-98 Salary Range (\$)**

<b>Seeking</b>	<b>n</b>	<b>Starting Salary Range 1997-98 (\$)</b>	<b>n</b>	<b>Starting Salary Range 1998-99 (\$)</b>	<b>% Increase</b>
All majors	5	20200-27400	7	22100-29700	6.4
Humanities/Social Science	25	19300-22400	25	19900-22900	2.7
Business					
All business	17	23700-27600	15	24700-30900	8.0
Accounting	6	23000-25500	6	22300-25700	NC
Business Administration	10	21000-24900	9	23600-26000	6.2
Finance	6	20700-30800	7	24900-28600	15.0
Marketing	8	21300-30800	8	22100-31800	3.5
Hospitality	7	24100-29400	7	26000-29900	5.0
Majors – all	65	23100-28100	64	24300-29600	5.3
Engineering					
All majors	24	25000-28900	25	27200-31000	8.0
Computer Science					
Computer Science	17	29200-31000	16	32300-33900	10.0
Management Info. Systems	10	31000-33450	11	34700-37500	12.0
All majors	38	30000-32300	37	32900-35200	4.3
All reported	182	24600-28600	181	26100-30100	5.7

**Table 9. Bachelor's Degree  
1998-99 Expected Starting Salary Range Compared to 1997-98 Salary Range (\$)**

<b>Seeking</b>	<b>n</b>	<b>Starting Salary Range 1997-98 (\$)</b>	<b>n</b>	<b>Expected Starting Salary Range 1998-99 (\$)</b>	<b>% Increase</b>
All majors	9	23800-30200	8	26300-32000	8.0
All technical	10	33000-38100	10	33500-38800	1.6
All liberal arts	16	26600-31800	17	27800-33200	4.5
All sciences	30	35200-37300	29	37300-39100	5.4
All humanities/social science	37	23100-26500	37	24100-27600	4.2
Business					
All majors	48	27700-31900	49	29200-33000	4.4
Accounting <sup>1</sup>	45	30200-32000	48	31000-32500	2.0
Business Administration	41	28400-31000	38	29300-32800	4.5
Finance	32	28500-32000	32	29700-33300	3.8
Marketing	46	27500-29100	46	29100-32600	5.4
Logistics/Supply Chain Mgt.	25	31100-33900	27	32200-35400	3.9
Hospitality	18	25500-29600	18	26300-30800	4.4
Majors – all	283	28600-31700	282	29700-32900	3.8
Engineering					
Civil	11	33700-35100	11	34800-36400	3.0
Chemical	20	42600-44000	19	44000-46400	4.3
Computer	24	39200-42800	22	40500-44200	3.3
Electrical	45	39500-42800	46	40400-43900	2.5
Engineering Tech.	13	36400-41000	15	37500-40800	1.5
Industrial	22	37400-40800	25	38400-42000	2.8
Mechanical	37	40200-42800	37	41600-44400	3.6
Majors – all	216	38700-41700	221	39900-43000	3.1
Computer Science					
Computer Science	61	36950-39600	63	38300-41600	4.3
Programming	19	35900-39000	19	37000-40600	3.6
Management Info. Systems	34	35200-37600	37	36800-39700	4.9
Information Sciences	14	32800-40500	15	39800-42700	5.4
Communication/Telecomm.	23	26000-28800	23	28100-30900	7.6
Human Resources/LIR	10	29000-33300	8	28500-33750	1.0
Construction	9	29500-32700	9	29800-32800	0.5
Allied Health	10	36550-38200	9	38050-39800	4.1
Agriculture/Const.	16	24000-27500	15	25600-29400	6.8
All Reported	795	32600-35700	801	33900-37200	4.1

<sup>1</sup> Accounting salaries do not include any information on salary ranges from the National Public Accounting firms.

**Table 10. Master's Degree  
1998-99 Expected Starting Salary Range Compared to 1997-98 Salary Range (\$)**

Seeking	n	Starting Salary Range 1997-98 (\$)	n	Expected Starting Salary Range 1998-99 (\$)	% Increase
Sciences	18	43400-45300	15	47700-49300	9.0
Humanities-Social Science	14	27300-35100	14	27400-35300	0.5
Business					
All majors	17	47000-54400	17	50400-57300	6.3
Accounting	18	39200-43500	18	40800-45400	4.2
Business Administration	14	46100-56200	14	49400-59000	6.1
Finance	13	52600-57700	13	53700-59500	2.6
Marketing	15	39900-45300	16	45000-51000	13.0
Logistics/Supply Chain Mgt.	7	52700-57200	8	56200-62100	7.6
Majors – all	93	45900-51300	91	48800-54900	6.6
Engineering					
Computer	16	47800-51700	14	48700-52300	1.6
Electrical	16	48400-48900	16	48600-51900	3.0
Majors – all	74	45300-49000	73	46400-50400	2.6
Computer Science					
Computer Science	26	44450-47000	25	46000-48550	3.4
Management Info. Systems	15	48000-50900	13	54200-59000	13.5
Majors - all	55	45750-48200	53	47800-50500	4.6
Human Resources/LIR	9	44200-47600	7	46300-49000	3.8
Selected Masters <sup>1</sup>	55	36200-40800	52	36900-41400	1.7
All Masters	278	43800-47900	270	45600-50200	4.5
All Ph.D.	17	55100-57100	13	55150-55850	nc

<sup>1</sup>Does not include business, engineering, and computer science

## RECRUITING ISSUES

### DIFFICULTY IN RECRUITING CANDIDATES

**\*\*Technical Graduates Remain the Hardest To Find\*\***

Employers seeking entry level associates degree graduates reported moderate difficulty (51%) to no difficulty (37%) in finding them. Bachelors' graduates were also somewhat to moderately difficult to find (64%). The labor market was tighter for technical graduates with 41% of employers indicating that these graduates were "very" to "extremely difficult" to find. The supply of MBA was also somewhat limited – 28% of employers found it "very difficult" to find them. Management positions were more likely to be moderately difficult to find though 21% reported difficulty in finding these graduates.

No differences were found by size of company though the largest companies found it slightly easier to find MBAs and management personnel than smaller organizations. Overall the construction and retail sectors found it more difficult to find employees; government agencies reported major difficulties in filling technical positions.

**Table 11. Difficulty in Recruiting Candidates (%)**

	Not Difficult	Somewhat to Moderately Difficult	Very to Extremely Difficult	Mean
Entry level associate	37	51	12	2.09
Entry level bachelors	23	64	13	2.34
Technical	7	52	41	3.16
MBA	13	59	28	2.88
Management	15	64	21	2.69

### **SIGNING BONUSES**

- 36% will utilize signing bonuses, ranging from 1% to 25% of base salary – 5% to 10% being typical.
- Majors more likely to receive bonuses include Chemical Engineers (57% of companies recruiting them), Mechanical Engineers (55%), Electrical Engineers (51%), and all types of Computer Science majors (50%). Accounting majors more likely than other business majors to see bonuses.
- Manufacturing sector (46%) will pay bonuses this year.
- The smallest companies seldom use bonuses (only 11% reported using them) while approximately 46%-55% of firms over 2201 use bonuses. If small firms offer bonuses the percentage of base pay seldom exceeds 5%; larger firms where 5% is common are more likely to be 10% and higher.

**Table 12. Use of Bonuses in 1998-99 Recruiting Year**

Number utilizing bonuses:	36% of respondents
Range of bonus:	5% to 10% of base (high 25%, low 1%)
Sector:	46% of manufacturing companies 41% of financial organizations 40% of transportation/utilities
Recipients:	Engineers – Chemical (57%), Electrical (51%), Mechanical (55%), Computer (48%), Computer Science and MIS (49%), Business – Accounting (49%), Finance (46%), Marketing (47%)

### **COSTS OF RECRUITING CANDIDATES**

Unadjusted for the use of head hunters and other external recruiters, the cost of finding a candidate can range from \$2,000 to \$3,200 for associates' degree candidates to \$5,400 to

\$11,600 for management positions. External recruiters were more common in the searches for MBAs, managers, and technicians.

- Employers seeking liberal arts graduates spent significantly more to find associate degree candidates than other employers.
- Employers seeking engineers spent significantly more finding suitable candidates to fill management positions.
- Expenditures across industrial sector varied widely (some cells had few observations, limiting usefulness of information); generally the transportation/utilities sector paid the highest except for retail employers seeking technical and MBA candidates.

**Table 13. Costs Associated with Recruiting A Candidate (\$, range)**

	Associates (\$)	Bachelors (\$)	Technical (\$)	MBA's (\$)	Management (\$)
All	1,926-3,180	3,734-6,352	4,625-9,859	\$4,498-8,386	5,391-11,555
Construction	1,000-2,000	950-3,800	1,000-4,300	4,000-8,000	7,000-12,000
Manufacturing	1,700-2,500	4,900-8,300	4,800-10,000	4,600-8,500	6,700-14,800
Transportation	3,100-5,250	5,600-8,700	5,700-13,000	1,600-4,000	12,500-17,500
Retail	2,450-3,400	2,350-3,750	6,100-9,500	10,200-13,850	3,300-5,900
Finance	4,500-6,200	5,500-8,200	6,900-11,400	6,000-10,000	6,700-13,200
Service	600-1,300	1,600-3,600	2,500-6,800	2,600-6,100	4,000-8,500
Public Admin	2,700-4,300	2,300-3,900	2,600-7,900	150-250	5,540-12,100
Computer Sci	1,700-3,000	4,200-7,200	4,300-9,600	3,400-7,000	6,850-13,200
Business	1,900-3,200	3,700-6,350	4,600-9,850	4,500-8,400	5,400-11,550
Engineers	1,800-3,350	5,000-8,400	5,100-11,200	5,300-10,200	6,900-16,050
Liberal Arts	2,100-3,100	3,650-5,900	3,900-9,300	3,500-6,900	5,800-11,500
Other majors	1,900-3,200	3,800-6,400	4,650-9,900	4,500-8,400	5,400-11,600

#### **SOURCES FOR TRAINING/UPGRADING EMPLOYEES' COMPETENCIES**

To upgrade the skills and competencies of their employees, these organizations most frequently utilized personnel within the organizations to do training and instruction (75% used frequently). Slightly more than one-quarter (28%) used resources at four-year colleges/universities. Seldom used was distance learning through the Internet or television.

**Table 14. Resources Utilized to Train Employees (%)**

Resources	Not At All	Seldom-Moderately	Frequently All the Time
In-house trainers	4	21	75
Community college	33	51	16
Technical school	30	56	14
4-year college/university	22	50	28
Distance learning	38	52	10



## CANDIDATE CHARACTERISTICS

**THE ENTIRE PACKAGE:** What do employers want to see when they begin evaluating college candidates for employment? The entire package! Extracted from responses to the question, “What are the five most important skills or competencies that a candidate needs to possess in order to be considered for employment?” The “total package” that candidates should possess includes these skills:

**The Total Package:** Candidates need to be academically prepared in their discipline as it pertains to their employment – this is considered a given by employers. Plus,

1. Communication skills (228 comments) that demonstrate solid verbal, written, and listening abilities. The capstone is presentation skills that include the ability to respond to questions and serious critique of the presentation material.
2. Computer/technical aptitudes (124 comments) based on the level required for the position being filled. Computer ability is now perceived as a given core skill; right up there with reading, writing, and mathematics. The ability levels (expectations) for computer knowledge and application continue to rise.
3. Leadership (82 comments) – the ability to take charge or relinquish control (followership) according to the needs of the organization; closely aligned with possessing management abilities.
4. Teamwork (70 comments) – working cooperatively and collaboratively with different people while maintaining autonomous control over some assignments.
5. Interpersonal abilities (80 comments) that allow a person to relate to others, inspire others to participate, or mitigate conflict between co-workers.
6. Personal traits. The shape of the above competencies are molded by a combination of personal traits, specifically demonstrate initiative and motivation; flexible/adaptable to handle change and ambiguity; hard-working (work ethic) and reliability; honesty and integrity; and ability to plan and organize multiple tasks. Emerging as a key personal trait is an individual’s ability to provide “customer service” – anticipating customer needs and the demeanor to respond positively to customer concerns.

**The Wrapping:** Several skills or experiences bind the package and are essential to holding it together. Without these skills, a candidate may not be able to deliver the package.

1. Critical thinking/problem solving – the ability to identify problems and their solutions by integrating information from a variety of sources and effectively weigh alternatives.
2. Intelligence and common sense.
3. Willingness to learn quickly and continuously.
4. Work related experiences that provided an understanding of the workplace and served to apply classroom learning.

This list should be no surprise to anyone – these skills and competencies have been bantered about since the new economy began to emerge in the late 1980’s. Why this section needs our attention is the context in which many employers expressed their qualifications. Because the economy is moving so quickly, candidates must enter their position already demonstrating their

command of these competencies. There is no time or the luxury of training a highly qualified academic candidate in these skills. Employers demand that the "total package" be delivered at graduation.

## CO-CURRICULAR ACTIVITIES

Students are encouraged to participate in various co-curricular activities that allow them to gain experience applying their learning in different situations. Overseas study and service learning programs have expanded throughout the 1990's as vehicles to engage students in multicultural environments and to increase their awareness of community needs and their role beyond work and school. Unfortunately, these employers placed very little importance on overseas study and only moderate importance on service learning during the initial selection process.

Involvement in a student organization was very important to 34% of these employers with 59% believing membership in a student organization was moderately important. Employers reserved their highest importance for work-related experiences such as internships, co-ops, and summer employment (career-related).

- The largest companies and the smallest companies placed more importance on community service.
- Medium sized (2,200-20,000) companies (not the largest or the smallest) credited more importance to co-op and internships with credit than other sized organizations.
- Co-op was significantly more important for employers seeking engineering majors than those who were not.
- Companies seeking engineers also felt that internships (both types) were significantly more important than other companies.
- Computer science majors also benefited from co-op as employers seeking these majors rated co-op higher than other majors, except engineering.

**Table 15. Importance of Co-Curricular Activities to Employers**

Co-Curricular	% None	% Some-Moderate	% Great Deal-Extremely
Overseas study	61	34	5
Community service	16	68	16
Student organization membership	7	59	34
Internship (credit)	4	27	69
Internship (no credit)	5	29	66
Co-op	8	29	63
Summer work (career-related)	2	17	81

## GRADE POINT AVERAGE AND EMPLOYMENT

To 43% of these employers grades were very important in the evaluation of college students. Another 39% indicated that grades were moderately important. When asked what the minimum

acceptable grade point in their organization was, the response ranged from 2.0 to 3.6. The average was 2.8 and the median 2.9.

Grade point average requirements did not vary by size of company – it was more than moderately important (on average) across all size groups. The largest companies, however, were more likely to consider grades very important. While the actual acceptable GPA was not significantly different between different sized companies, the average tended to rise with size: 2.71 (2201-7500) to 2.89 (7501-20,000).

Academic majors where GPA standards were higher included computer science and the liberal arts with engineering close behind. Higher grades were required by government agencies, service companies, and manufacturing firms.

Characteristics of those respondents who had GPA requirements above the median (2.9) included computer science majors, liberal arts majors, and company size (larger companies). Within the low GPA group were found retail and transportation employers. Classification was based on a discriminate analysis using below and above median GPA groups.

**Table 16. Role of Grade Point Average on Candidate Selection**

- a. Distribution of all respondents across importance scale.
 

Grades do not matter	4%
Somewhat important	14%
Moderately important	39%
Very important	34%
Extremely important	9%
Average: 2.8 – Acceptable minimum GPA	
Median: 2.9	
Mode: 3.0	
- b. Means of importance and minimum GPA standard

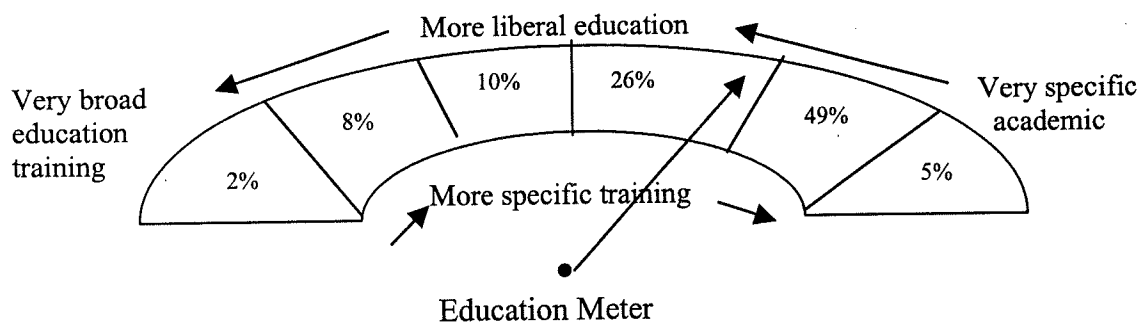
<b>Majors</b>	<b>Importance</b>	<b>Minimum GPA</b>
Computer Science	3.45	2.87
Business	3.36	2.83
Engineering	3.48	2.83
Liberal Arts-humanities	2.76	2.72
Liberal Arts-Science	3.79	2.94
Communications	3.00	2.91
Ag/Construction	3.20	2.65
Health	2.69	2.83
<b>Economic Sector</b>		
Construction	3.25	2.43
Manufacturing	3.43	2.83
Transportation	3.17	2.81
Retail	2.97	2.72
Financial	3.26	2.80
Service	3.21	2.82
Government	3.71	2.81
Ag & Mining	3.57	2.90

## NON-TECHNICAL POSITIONS

### Important Selection Criteria

Faced with the task of choosing from a group of widely different college students for a non-technical position, respondents were asked to select which characteristic, competency, or experience would be key to their consideration. Grade point (only 6%) and academic major (18%) were infrequently selected. The factors that would influence consideration were internship experience (39%) and leadership experience (37%).

The final question defined two types of students: (1) A liberally educated person with an education that emphasizes writing, mathematics, foreign language and international culture and (2) a narrower focused education that is heavily concentrated in a specific discipline with few educational courses beyond the major. Respondents were asked to place an arrow on a meter that ranged from very broad to very specific. The results showed that these employers preferred specific training with some additional coursework.



Characteristics of employers who favored more liberal education (above the mid-point on the meter), included the following:

- The smallest employers 39% of those with 400 employees or less and 28% of those with 2,200 or fewer employees.
- The largest employers (over 20,001) where 31% preferred liberally education graduates.
- Industrial sectors of retail (30%), finance (53%), and service (32%) were more likely to prefer liberally educated graduates. Less likely to seek liberally educated were manufacturing and transportation (both 17%).
- Employers seeking liberally educated placed lower importance on grade point average as a requirement in the hiring decision. Actual GPA levels were 2.82 (specifically education) versus 2.76 (liberal education).
- Employers who seek liberally educated individuals place very high importance on leadership qualities and, unexpectedly, lower importance on internships.

## APPENDIX A

### RESEARCH METHODS

A list of potential employer contacts was constructed from employers who had responded to the 1997-98 *Recruiting Trends* survey, and employer members listed in the directories of the Midwest Association of Colleges and Employers and the National Association of Colleges and Employers. The initial list contained slightly fewer than 2,000 contacts.

The initial mailing was sent in mid-September. After concerted efforts to track down bad addresses, the list was adjusted to about 1,825 contacts. Also deleted from the list were a few companies that declined to participate because of company policy.

After a reminder letter, sent through Midwest ACE President Michael Avgenackis, a concerted effort was made to contact as many non-respondents by telephone. From this effort, it was estimated that 25%-30% of the contacts were either no longer in the identified position, or telephone numbers had changed, or the company was no longer in the location listed in the directory.

To augment this master list, employers found on public lists such as the fastest growing companies in America (Fortune), best companies to work for (Web), and leading black businesses (Web) were contacted (approximately 300), were sent surveys. This effort generated few responses.

Finally, several community college groups (Illinois, Michigan, and Ohio) and private/small college groups (Illinois and Minnesota) distributed surveys to their leading contacts. Their efforts resulted in about 40 returned surveys.

After adjusting the list of employers, approximately 1,700 to 1,800 employers were contacted that could potentially respond. Thus the response of 327 employers represented an 18% to 20% response rate.

The survey that employers completed contained four sections, presented on four pages. The first section asked for background about their organization (size, industrial sector, respondent location, recruiting territory, recruiting techniques, and the five key academic majors they recruited). The second section concerned their perceptions of the national and regional labor markets, hiring intentions for 1998-99 and their actual hires from 1997-98, and the starting salary ranges offered last year and expected this year. The third section covered recruiting issues that employers were concerned about, such as signing bonuses, difficulty in finding certain types of candidates, and the cost of recruiting. The final section focused on issues raised by college members, including critical candidate competencies, role of grade in hiring, and employers' perception of liberal arts graduates.

One factor that affected the response rate was the decision this year to accept only complete surveys. To tell a complete story, employers were asked to complete as many questions as possible, realizing some companies may not have set hiring expectations or want to reveal salaries.



Key variable definitions that were used in this report are included to clarify the text.

- a. Academic majors: The list was taken from the National Association of Colleges and Employers major categories (a list familiar to many professionals). Added to the list were categories for "all majors," "liberal arts," "all majors in selected categories," (technical, business, etc.) and majors omitted from their list, such as packaging engineer and supply chain management.
- b. Regions of the United States:
  - Northeast-Mid-Atlantic: Maine, Vermont, New Hampshire, Massachusetts, New York, Rhode Island, Connecticut, Delaware, New Jersey, Pennsylvania, and Maryland
  - Southeast: Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, and Kentucky
  - Northcentral: Ohio, Indiana, Michigan, Illinois, Wisconsin, Minnesota, Iowa, Nebraska, North Dakota, and South Dakota
  - Southcentral: Missouri, Arkansas, Louisiana, Texas, Oklahoma, and Kansas
  - Southwest: Colorado, New Mexico, Arizona, Utah, California, and Hawaii
  - Northwest: Wyoming, Montana, Idaho, Oregon, Washington, and Alaska
- c. Standard Industrial Classifications (taken from Standard Industrial Classification Manual):
  - Agriculture and Mining Services:* Establishments engaged in agricultural production, agricultural services, and in mining activities.
  - Construction:* Includes contractors and operative builders engaged in construction of residential, industrial, and commercial buildings; heavy construction, such as highways, bridges, etc. are also included; special trade contractors and service providers associated with construction.
  - Manufacturing:* Establishments engaged in the mechanical or chemical transformation of materials or substances into new products; also include assembling of component parts and blending of materials.
  - Transportation, Communication, Electrical Services:* Establishments, which provide to general public and business enterprises, passenger and freight transportation, communication services, or public utilities.
  - Wholesale Trade:* Establishments engaged in selling merchandise to retailers, other wholesalers, or business/industrial users.
  - Retail Trade:* Establishments engaged in selling merchandise for personal or household consumption and rendering services incidental to the sale of the goods.
  - Finance:* Establishments operating primarily in the fields of finance, insurance, and real estate.
  - Services:* Establishments that provide a wide variety of services for individuals, business and government; includes hotels, health, consulting, engineering, professional services, education, and business (advertising, computer programming, and accounting).
  - Public Administration:* Includes activities of federal, state, and local governments.
- d. Company size. Respondents were asked to provide the sizes of their parent unit and the unit that they recruited. If missing, the size was taken from (1) Standard and Poor's or (2) information off the Internet business guides. The range was reduced to five groups with each group containing approximately 20% of the sample.

All the analyses were conducted using the SPSS statistical package. Access to the data can be requested from the senior investigator, Dr. Phil Gardner.

## APPENDIX B EMPLOYER PROFILE

The characteristics of the 327 responding establishments to this study are provided in this appendix. These employers have a definite Midwest, manufacturing, slant though every section of the country and major industrial sector are represented in the set of responses.

Respondents' Gender: 54% female, 46% male

Location (mailing state) or organization by region:

	<u>% Received</u>	<u>% Mailed</u>
Northeast	15	21
Southeast	7	12
Northcentral	62	42
Southcentral	10	12
Northwest	1	2
Southwest	5	10

Size of Parent Organization (number of employees) that has been grouped into five categories:

<u>Organizational Size</u>	<u>%</u>
<400	21
401-2,200	20
2,201-7,500	20
7,501-20,000	20
>20,001	19

The unit size, or the number of employees in the unit that they are responsible for recruiting candidates, was also obtained or assumed to be equivalent to size of parent organization if not provided.

<u>Unit Size</u>	<u>%</u>
<120	20
121-435	20
436-1631	20
1632-7000	21
>7001	19

Industrial Sector: Each respondent was allowed to list three major standard industrial classifications (SIC) codes that reflected their organizations' products and services. A computer manufacturer may build components (manufacturing) and sell computers (retail), for example. Only about 25 employers in this pool listed multiple SIC codes that crossed industrial sectors. According to their responses, the group represented these industrial sectors:

<u>Industrial Sector</u>	<u>%</u>
Agriculture/mining	2
Construction	3
Manufacturing	37
Transportation	8
Wholesale	1
Retail	9
Finance	13
Services	22
Public Administration	4
Could not classify	1

Recruiting Territory: Respondents were asked which areas of the United States that their organizations recruited candidates. They were allowed to check all the areas that applied.

<u>Recruiting Areas</u>	<u>%</u>
International	11
Entire United States	36
Northeast	17
Southeast	14
Northcentral	50
Southcentral	12
Northwest	5
Southwest	11

Techniques and Strategies Used to Recruit College Graduates. Each respondent was asked to check the strategies that their organization used to find qualified college candidates for employment. The following list provides the percentage that utilized the strategy. Employers use a variety of techniques to identify candidates – the most common being “on-campus recruiting.”

<u>Recruiting Technique/Strategy</u>	<u>% Utilizing</u>
On-campus recruiting/job fairs	94
Resume referral by college	73
Co-op/internship program	70
Web/Internet posting – application	70
Advertisements paper/magazines	68
Job listing services – Internet/web	54

Then they were asked to select only one strategy as their primary strategy. About 50 provided two answers so a total list was compiled and weighted. Accordingly 60% indicated that their primary strategy was on-campus recruiting and job fairs. The other strategies were not widely used.

<u>Primary Strategy</u>	<u>%</u>
On-campus recruiting/job fairs	60
Advertising paper/magazines	15
Co-op/internship program	11
Resume referrals	6
Job listing service – Internet/web	3
Web applications	2

Majors Sought: Respondents could identify the top five academic majors they were seeking in 1998-99. An employer could be in five different classifications, depending on the mix of majors.

<u>Academic Major Sought</u>	<u>n</u>	<u>% of Total</u>
Computer Science	141	44
Engineering	158	49
Business	217	67
Liberal Arts <sup>1</sup>	194	60
Agriculture/Construction	17	5
Allied Health	14	4
Communication	20	6

<sup>1</sup>Liberal Arts included physical and biological sciences, including mathematics and statistics, social sciences, humanities, all majors, and all liberal arts.

## APPENDIX C

**These average salaries by major serve as benchmarks for comparing the salary ranges respondents from this study expect to offer this year.**

### Average Salary Benchmarks: NACE and MSU

Academic Majors	NACE <sup>1</sup> 1998 Salaries (\$)	MSU <sup>1</sup> 1998 Estimates (\$)
Accounting	32,825	32,357
Business Administration	31,454	29,054
Finance	33,691	34,645
Marketing	29,231	30,804
Hospitality	25,534	28,287
Human Resources (not LIR)	27,151	31,321
Logistics/Supply Chain Mgt.	-----	37,855
Advertising	25,331	22,033
Communications	26,570	27,500
Chemical Engineering	45,104	44,021
Civil Engineering	35,335	33,176
Computer Engineering	43,865	43,150
Electrical Engineering	43,282	44,791
Industrial Engineering	40,923	-----
Mechanical Engineering	41,260	41,355
Engineering Technology	39,390	-----
Packaging	-----	39,046
Computer Science	41,949	42,297
Information Sciences	37,469	-----
Management Information Systems	39,218	-----
Construction	34,773	33,519
Mathematics	36,203	-----
Chemistry	33,392	-----
Biological Sciences	26,494	25,500
Political Science	27,967	29,045
Psychology	25,689	27,941

<sup>1</sup>Taken from National Association of Colleges and Employers. Salary Survey: A study of 1997-98 beginning offers. September, 1998. Bethlehem, PA 18017 and Career Services and Placement. The Salary Report for 1997-98 Graduates: An Interim Report. November, 1998. Michigan State University, E Lansing MI 48824.



## APPENDIX D

### Additional Data Tables and Figures

#### Hiring Patterns for Firms of Various Sizes by Degree Level

Size	Average Hires Made 1997-98	Average Hires Expected 1998-99	Expected Change
All graduates			
<400	(58) 13.2	(57) 15.2	15.2
401-2200	(56) 29.6	(59) 32.9	11.1
2201-7500	(55) 53.5	(55) 63.2	18.1
7501-20,000	(59) 71.7	(60) 78.9	10.0
>20,001	(52) 241.1	(55) 219.9	-8.8
Associates			
<400	(17) 3.2	(18) 2.7	-15.6
401-2200	(15) 11.7	(16) 14.1	20.5
2201-7500	(12) 40.4	(11) 47.5	17.6
7501-20,000	(13) 12.3	(13) 12.2	-0.8
>20,001	(13) 24.5	912) 23.8	-2.9
Bachelors			
<400	(32) 10.1	(33) 6.9	-31.7
401-2200	(45) 22.0	948) 22.0	0.0
2201-7500	(46) 44.7	(46) 53.5	19.7
7501-20,000	(51) 58.3	(51) 63.6	9.1
>20,001	(38) 174.5	(38) 163.7	-6.2
Masters			
<400	(13) 3.7	(14) 3.4	-8.1
401-2200	(16) 4.1	(16) 7.2	75.6
2201-7500	(19) 3.9	(19) 4.2	7.7
7501-20,000	(30) 24.0	(30) 25.9	7.9
>20,001	(23) 132.4	(21) 129.9	-1.9

( ) Number of respondents reporting a figure.

**Average Hires in 1997-98 and Expected in 1998-88 by Economic Sector**  
(number of observations)

Economic sector	Average Hires Made 1997-98	Average Hires Expected 1998-99	% Change
<b>All graduates</b>			
Ag/Mining	(8) 60.4	(8) 75.0	+24.2
Manufacturing	(113) 67.7	(120) 59.3	-12.4
Construction	(11) 20.4	(11) 22.0	+7.8
Transportation	(25) 92.2	(26) 74.4	-19.3
Retail	(30) 68.8	(27) 87.6	+27.3
Finance	(40) 69.3	(42) 68.7	-1.0
Service	(71) 117.8	(70) 133.2	+13.1
Government	(10) 119.5	93.2	-22.0
<b>Associates</b>			
Ag/Mining	(2) 9.0	(2) 10.0	+11.1
Manufacturing	(24) 9.9	(25) 9.2	-7.0
Construction	---	---	No hiring
Transportation	(8) 8.1	(8) 6.6	-18.5
Retail	(10) 44.9	(9) 54.8	+22.0
Finance	(11) 25.6	(12) 18.1	-29.3
Service	(20) 12.0	(18) 15.0	+25.0
Government	(5) 9.4	(4) 3.5	-62.3
<b>Bachelors</b>			
Ag/Mining	(7) 48.7	(7) 46.1	-5.3
Manufacturing	(97) 47.3	(162) 40.5	-14.4
Construction	(9) 24.0	(9) 26.10	+8.3
Transportation	(19) 77.7	(19) 48.0	-38.2
Retail	(20) 63.9	(18) 70.3	+10.0
Finance	(26) 63.7	(27) 64.0	No change
Service	(48) 101.4	(47) 119.4	+17.7
Government	(8) 57.7	(6) 26.2	-54.6
<b>Masters</b>			
Ag/Mining	(4) 11.5	(4) 4.2	-6.3
Manufacturing	(55) 24.2	(56) 20.4	-15.7
Construction	---	---	No hiring
Transportation	(9) 13	(9) 4.6	-64.6
Retail	(5) 12.6	(4) 15.5	+23.0
Finance	(12) 14.2	(11) 11.1	-21.8
Service	(25) 107.6	(24) 110.8	+3.0
Government	(5) 25.0	(4) 10.7	-57.2

( ) Number of respondents providing information.

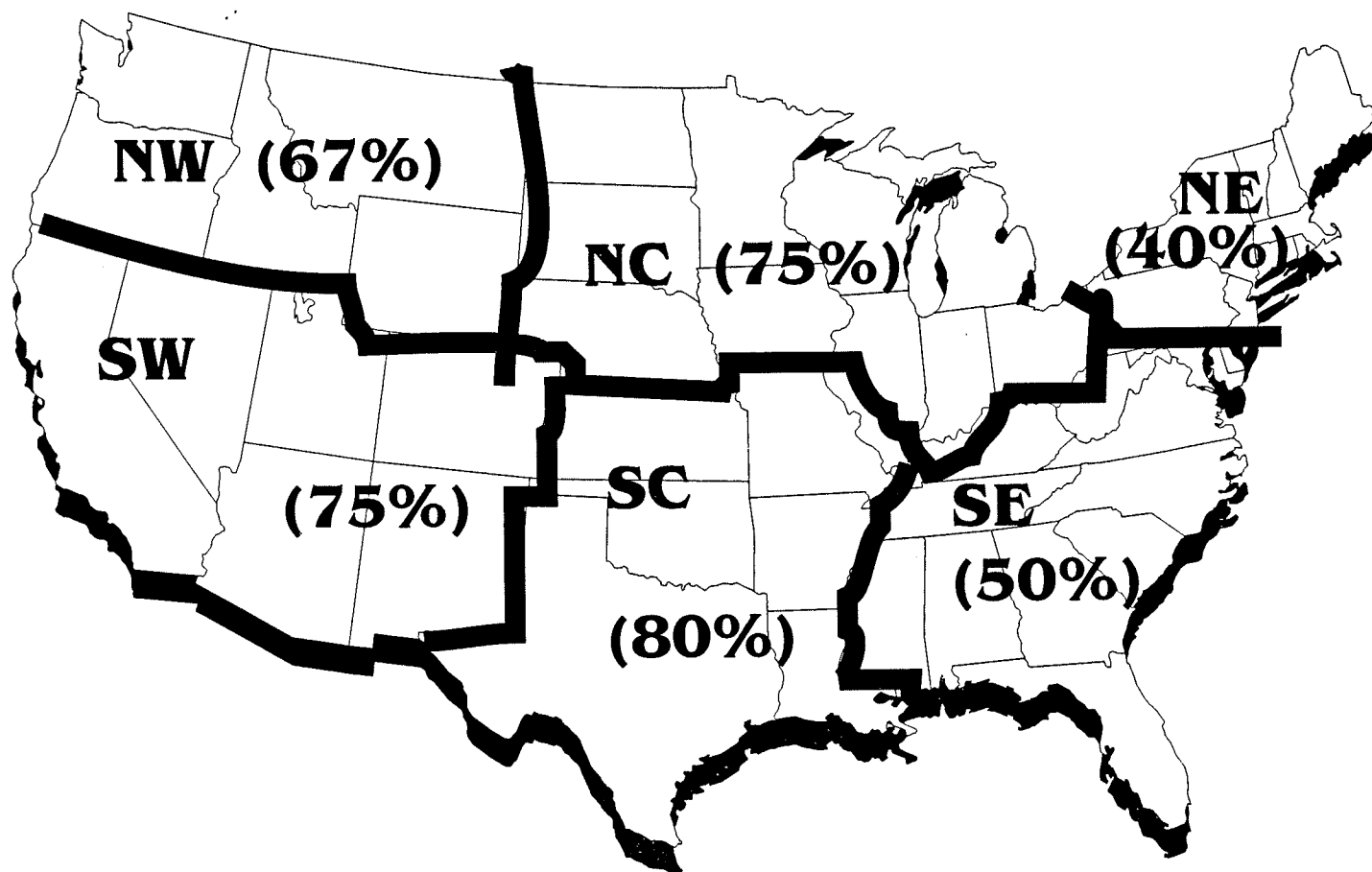
**Average Number of Hires in 1997-98 and Expected in 1998-99  
by Everyone Who Recruited at Least One Major from These Categories**

<b>Academic Major</b>	<b>Average Hires Made 1997-98</b>	<b>Average Hires Expected 1998-99</b>	<b>% Change</b>
<b>All graduates</b>			
Business	(193) 95.7	(197) 99.4	+3.9
Engineering	(137) 79.3	(141) 78.0	-1.6
Computer Science	(125) 124.2	(130) 118.9	-4.3
Liberal Arts	(173) 111.9	(178) 111.8	No change
Ag/Construction	(17) 58.8	(17) 58.2	-1.0
Allied Health	(12) 119.6	(12) 129.7	+8.4
Communication	(19) 42.6	(20) 56.3	+32.2
<b>Associates</b>			
Business	(47) 20.2	(48) 20.4	+1.0
Engineering	(27) 12.1	(27) 11.1	-8.3
Computer Science	(39) 12.7	(39) 11.8	-7.1
Liberal Arts	(49) 20.1	(49) 20.5	+2.0
Ag/Construction	(4) 9.7	(4) 9.2	-5.0
Allied Health	(6) 9.0	(6) 11.3	+25.6
Communication	(4) 5.0	(5) 8.0	+60.0
<b>Bachelors</b>			
Business	(144) 74.8	(148) 76.9	+2.8
Engineering	(114) 55.1	(116) 51.2	-7.1
Computer Science	(97) 90.1	(98) 87.6	-4.5
Liberal Arts	(130) 84.3	(131) 84.3	No change
Ag/Construction	(14) 59.8	(14) 57.5	-3.8
Allied Health	(6) 87.0	(6) 84.5	-2.9
Communication	(12) 27.3	(13) 42.5	+55.7
<b>Masters</b>			
Business	(69) 54.4	(70) 50.4	-7.3
Engineering	(63) 25.7	(63) 26.8	+4.2
Computer Science	(49) 71.2	(48) 67.5	-5.2
Liberal Arts	(66) 56.3	(65) 53.2	-5.5
Ag/Construction	(4) 10.2	(4) 10.2	No change
Allied Health	(4) 29.0	(4) 27.0	-6.7
Communication	(6) 15.5	(7) 17.3	+11.6

( ) Number of respondents providing information.

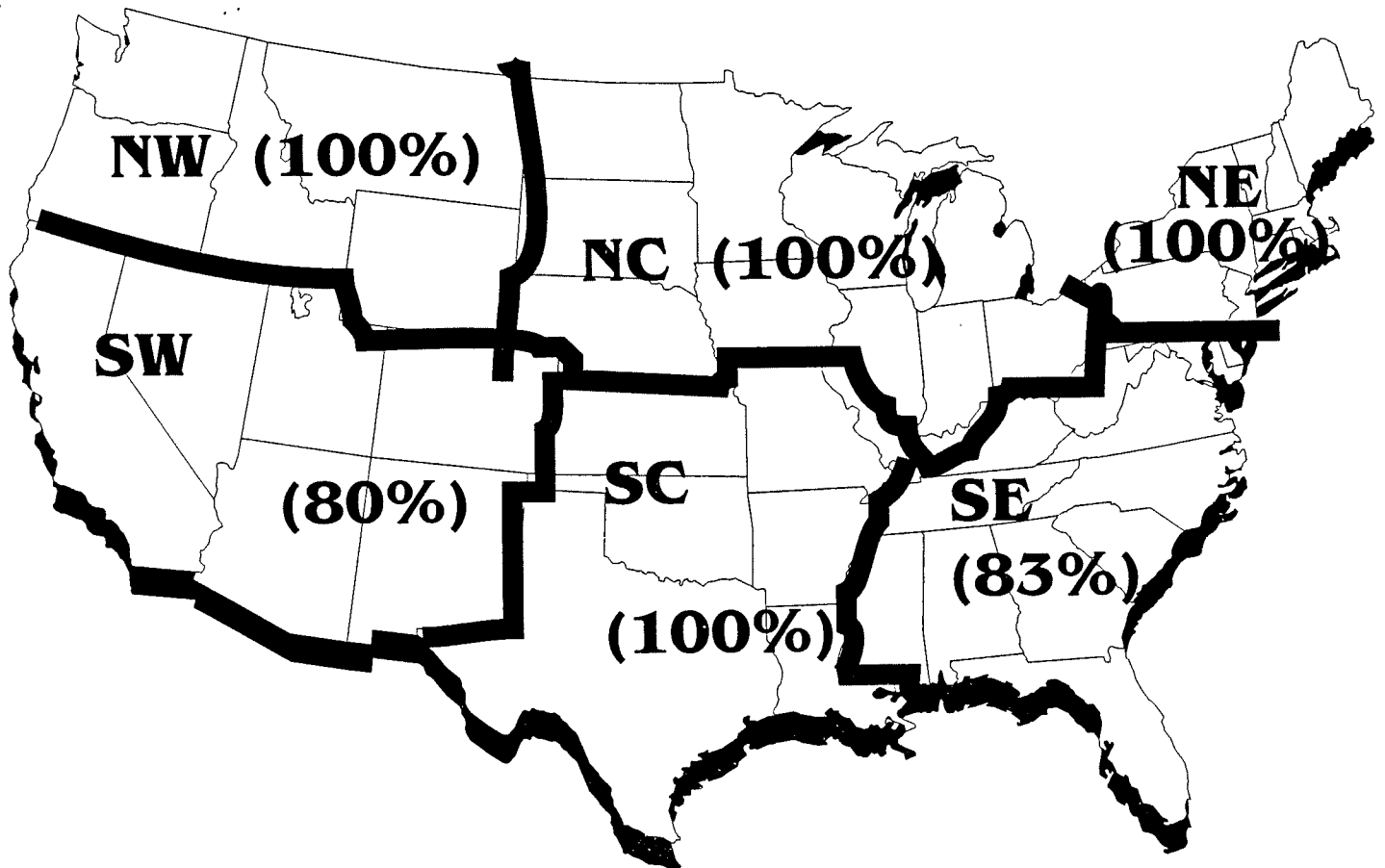
# Regional Labor Markets by Industrial Sector

## Agriculture/Mining



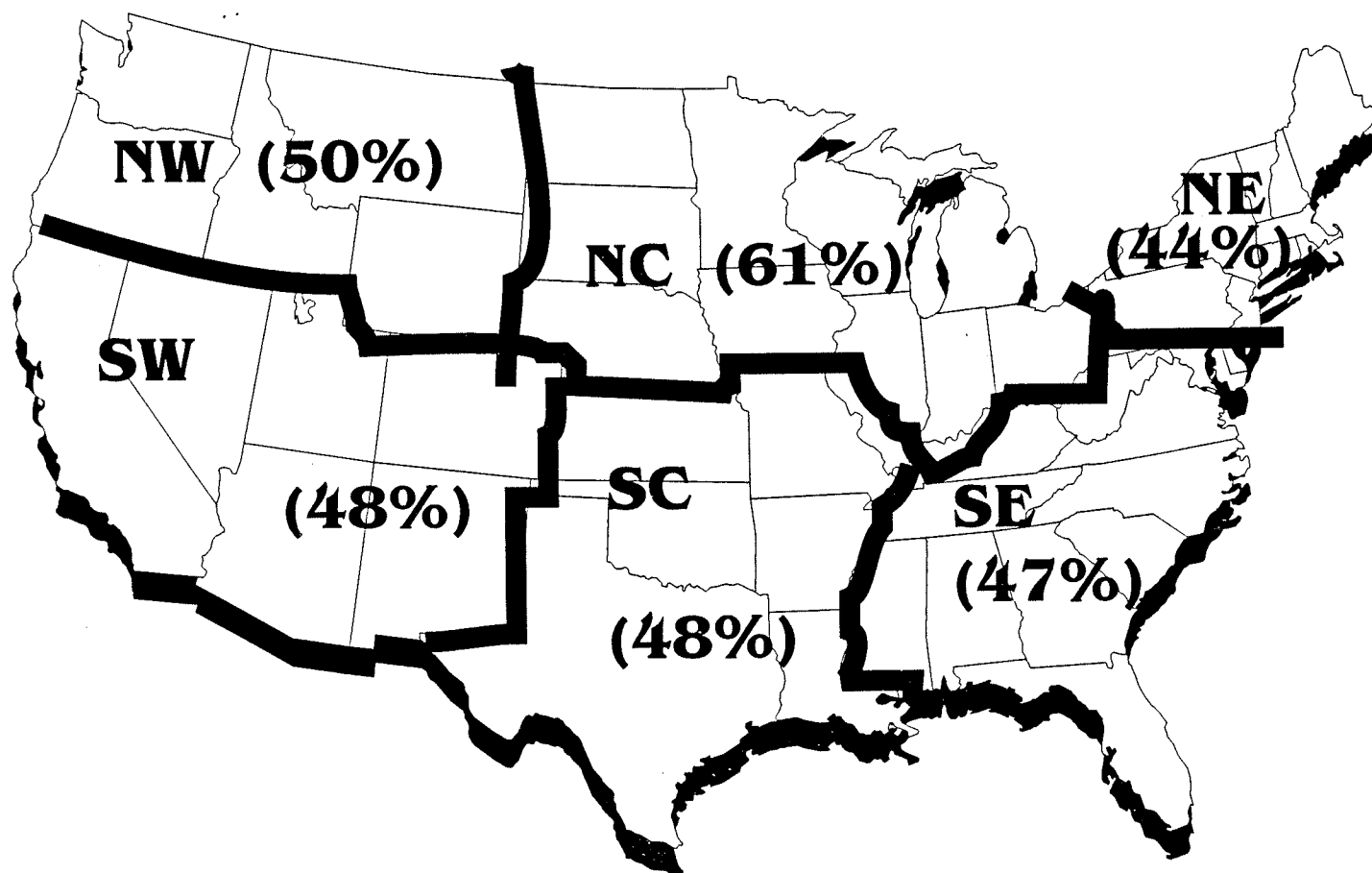
# Regional Labor Markets by Industrial Sector

## Construction



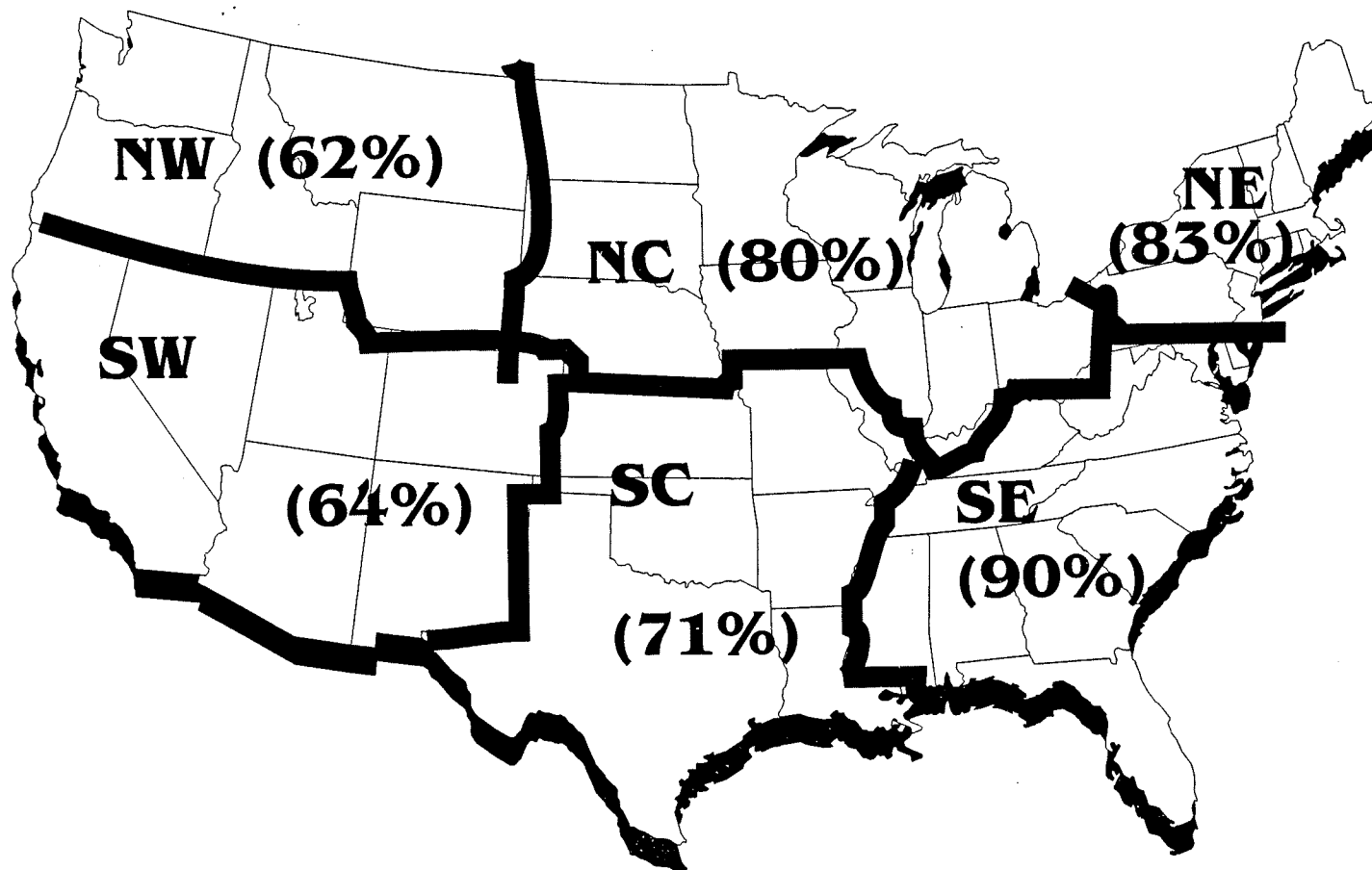
# Regional Labor Markets by Industrial Sector

## Manufacturing



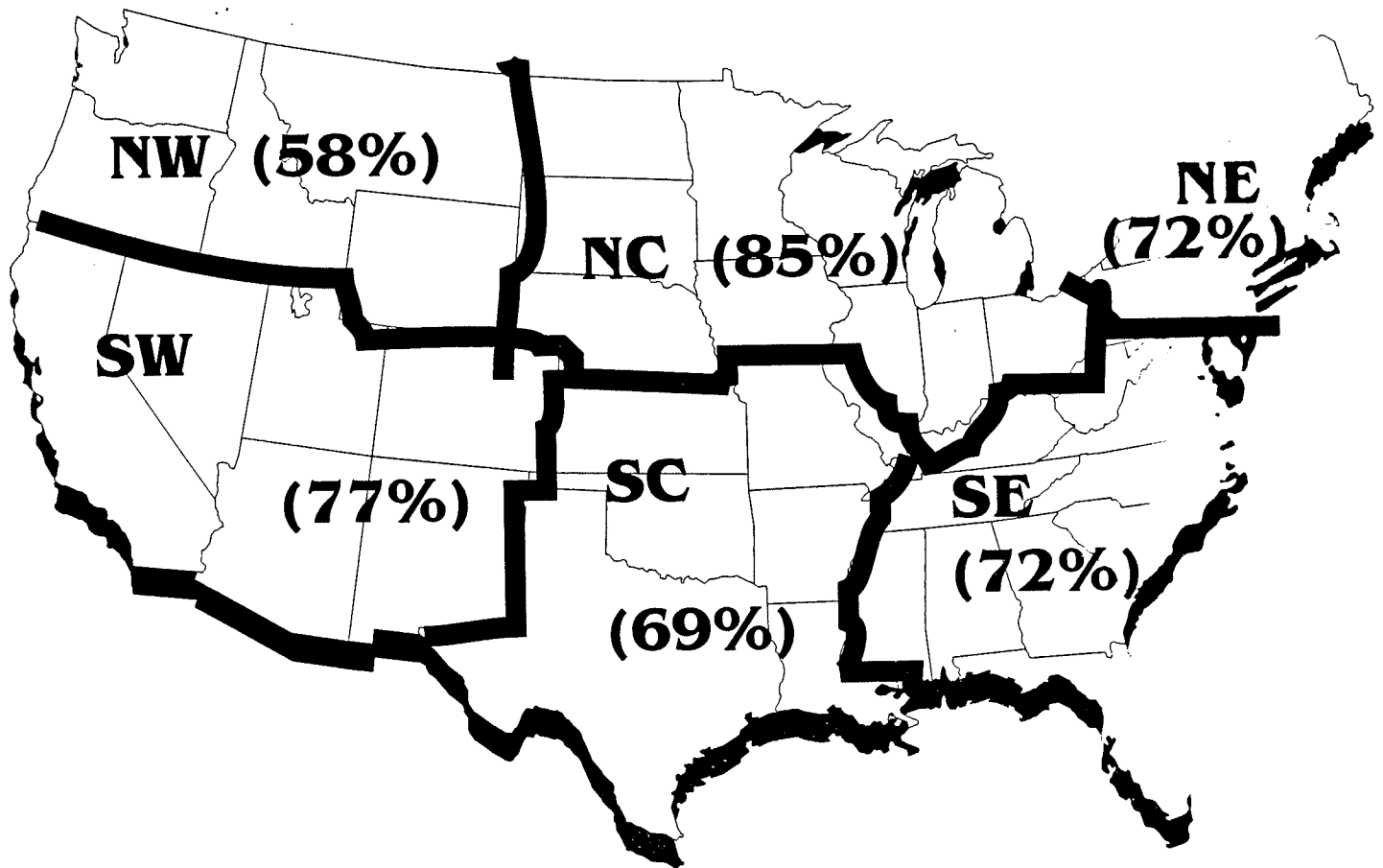
# Regional Labor Markets by Industrial Sector

## Transportation



# Regional Labor Markets by Industrial Sector

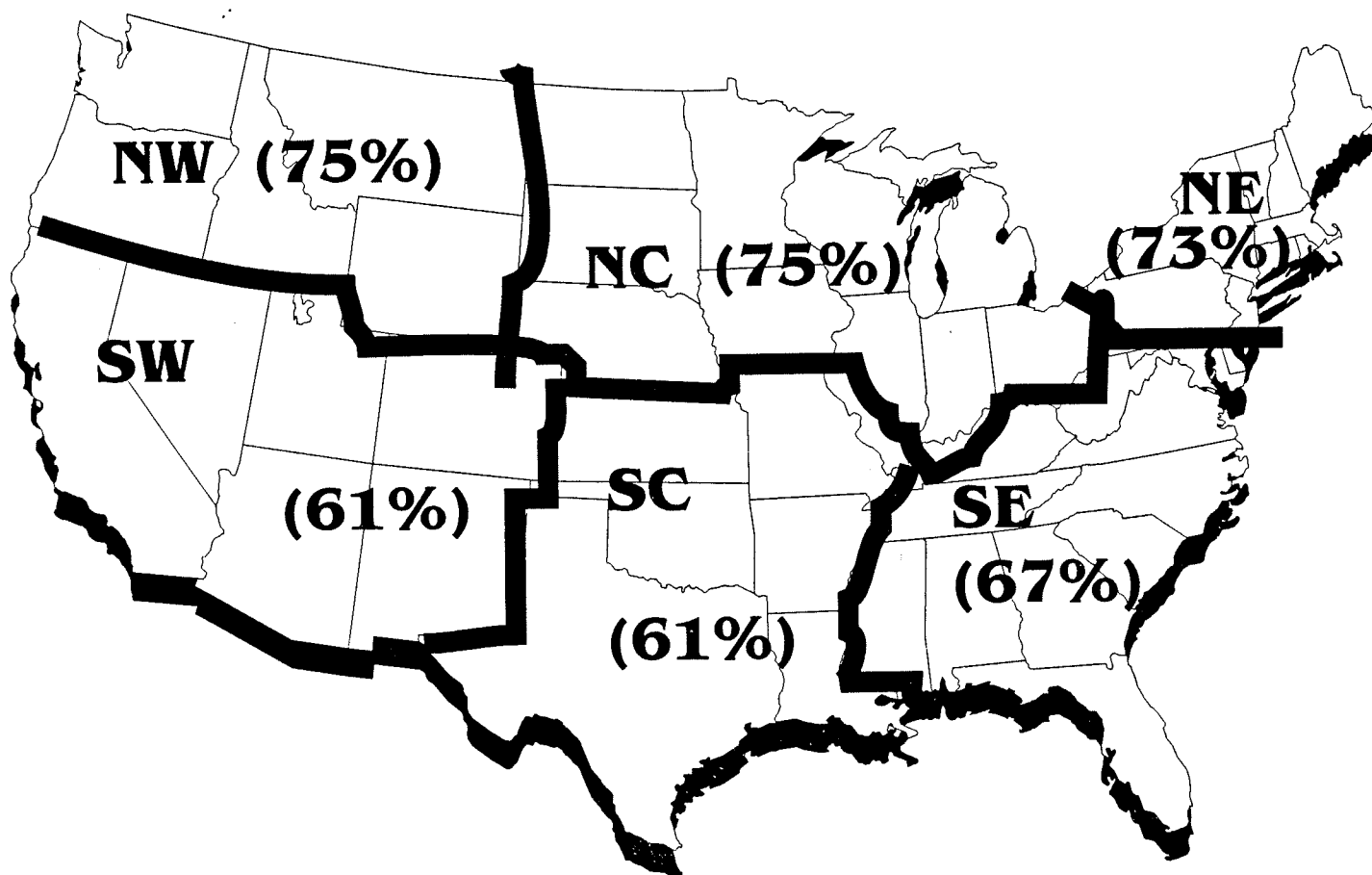
## Retail





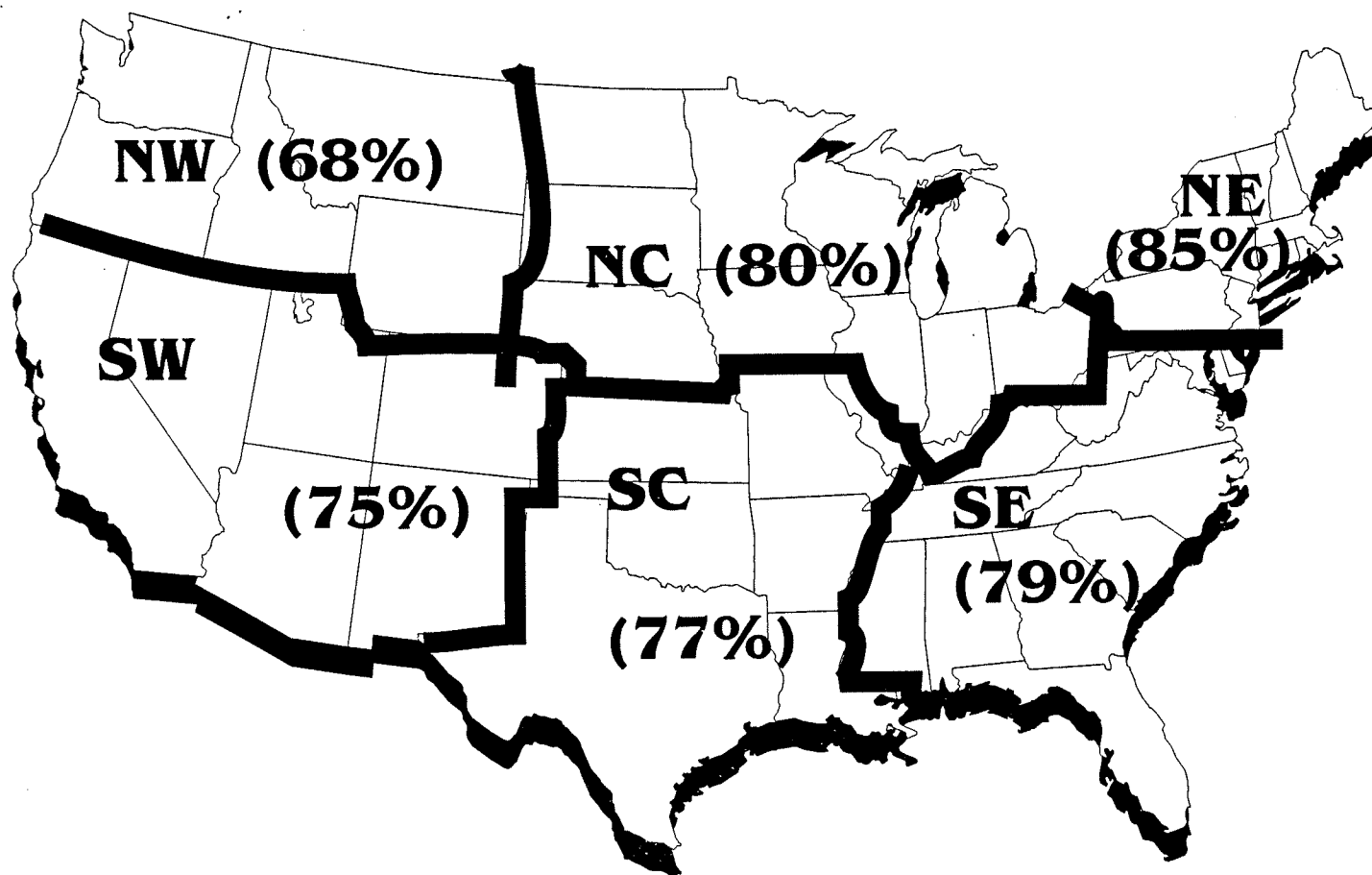
# Regional Labor Markets by Industrial Sector

## Finance



# Regional Labor Markets by Industrial Sector

## Service



# Regional Labor Markets by Industrial Sector

## Public Administration

