

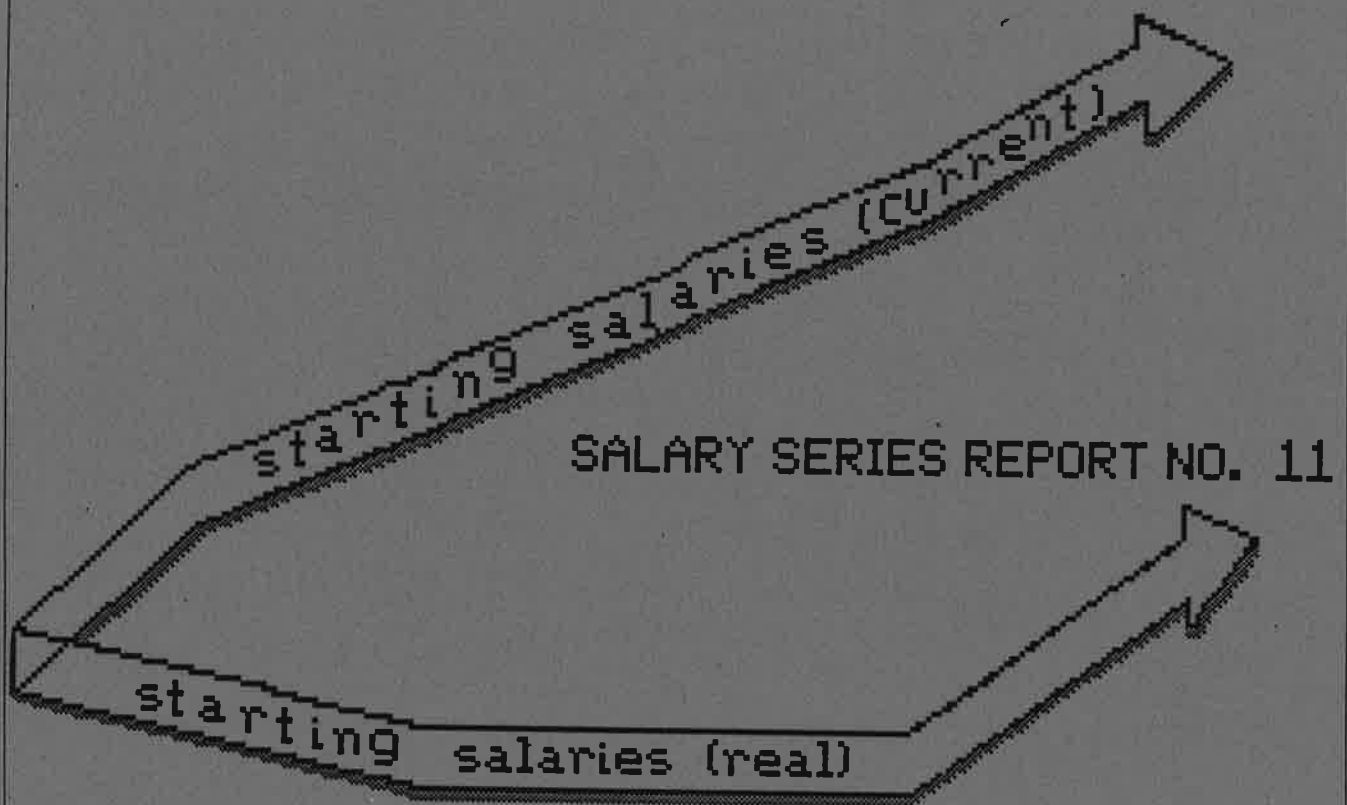
STARTING SALARY TRENDS:
COLLEGE OF SOCIAL SCIENCE, 1978-1985

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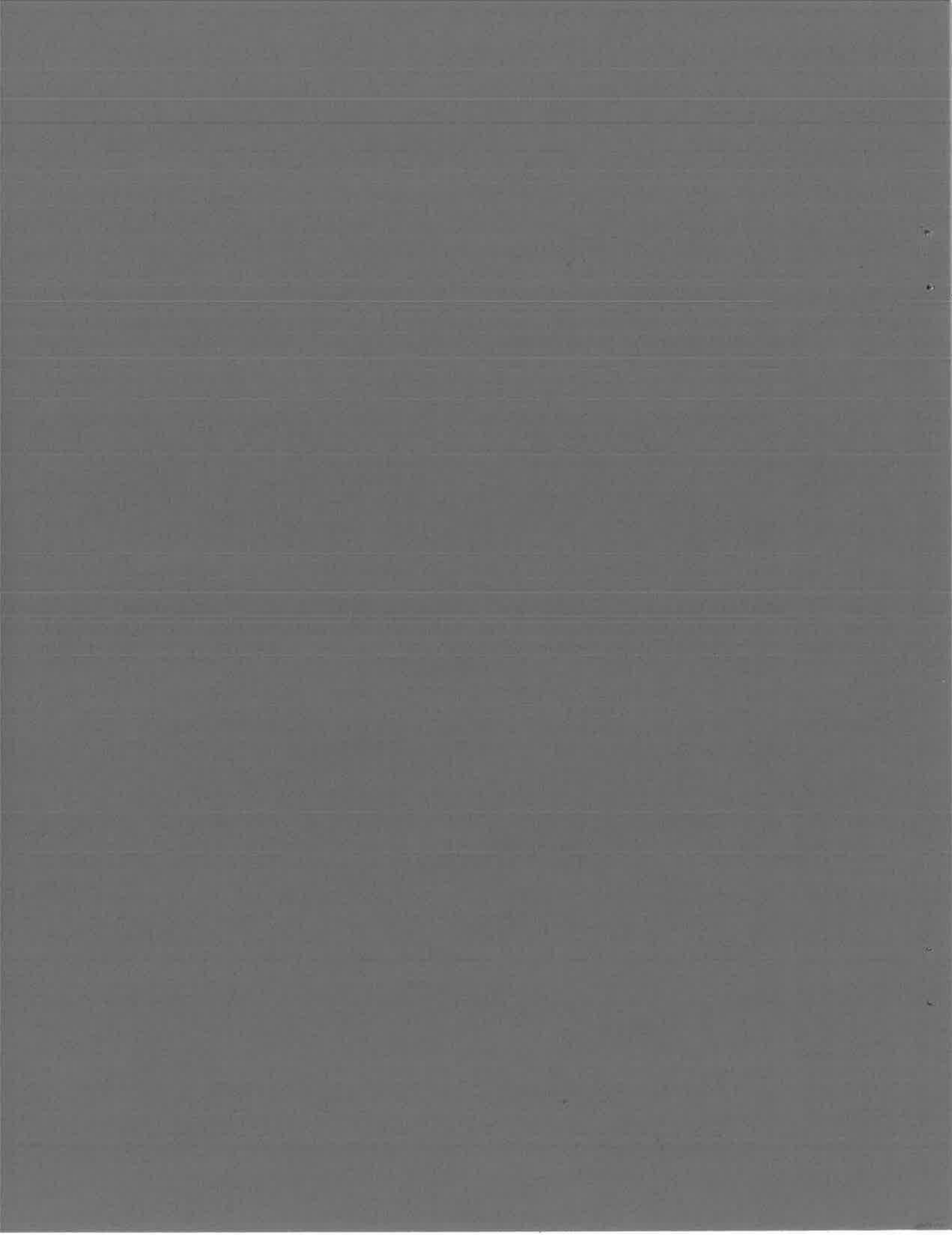
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Over the past decade, both the national and Michigan economies have performed poorly, at times, which has affected the starting salaries of college graduates. Inflation has eroded the earning power of new labor force participants, especially during the early 1980's. In an investigation of starting salaries of recent graduates from Michigan State University, inflation and economic conditions were shown to have affected starting salary performance over a seven year period (see Report No. 2). However, the magnitude of the impact varied by college and sometimes between academic programs within a college. This report reviews recent starting salary trends for bachelor degree recipients of the College of Social Science from August, 1978, to June, 1985. This analysis also makes salary comparisons by gender, race, and job location.

OVERVIEW

The results presented in this study are based upon starting salary information reported by 1,356 graduates of the College of Social Science (1978-1985). The major findings in this analysis of starting salaries include:

1. Starting salaries have increased annually at an average of 6% since 1978, even though the increase between 1980-81 and 1981-82 was negligible. The average starting salary in 1984-85 was \$17,344 as compared to \$12,359 in 1978-79 (current dollars that have not been adjusted for inflation).

2. The high inflation experienced from 1980 to 1983, combined with the slowdown in economic growth in Michigan during the same period, seriously eroded the salary position of graduates who received degrees in this period. After accounting for inflation, the 1984-85 average was \$11,336 (real), nearly \$1,000 below the 1978-79 level.

3. Real starting salary averages for criminal justice (\$12,107), political science (\$11,907) and social science - multidisciplinary (\$11,815) were the highest averages among all majors. Departments also displayed variations in response to inflation and economic conditions: some experienced cyclical conditions (e.g. political science) while others went through several years of decreases before showing improvement (e.g. psychology).

4. Starting salaries offered by manufacturing organizations and government were higher than all other types of employers. Starting salaries in manufacturing averaged \$13,726 (real) and \$12,413 (real) in government. Average salary within the service sector where many graduates were employed was \$10,269 (real).

5. Location did not play a role in starting salary offers. Nearly 70% of the graduates stayed in Michigan after graduation. Salary levels favored Michigan slightly by, \$235 (real) above the out-of-state average.

6. The average starting salary for men was \$12,127 as compared to \$10,473 (real) average for women. This difference was statistically significant in all comparisons. Only in public administration was the disparity in salaries smaller.

7. Graduates with the highest grades do not necessarily receive the highest starting salaries. Graduates with GPA's below 3.0 have average salaries that are \$500 (real) higher than graduates with GPA's above 3.0.

8. Blacks reported slightly higher salaries than other ethnic groups. The average salary for Blacks was \$12,302 (real) as compared to \$11,998 for other ethnic groups and \$11,231 for Whites. Blacks, however, reported a higher unemployment rate 11%; nearly 4% higher than Whites.

DESCRIPTION OF THE SAMPLE POPULATION

During the period from August, 1978, to June, 1985, 6,684 bachelor degrees were conferred by the College of Social Science. Approximately, 59% (3,924) of these graduates responded to a questionnaire sent to them by Placement Services. Of those who replied, 35% (1,356) were working and reported their starting salary, 26% (1,022) were working but failed to report their starting salary, 25% (978) were continuing their education in graduate school, and 14% were still unemployed six months after graduation. These numbers corresponded to 20%, 15%, 15%, and 9% of the total number of graduates, respectively.

The number of students graduating in social science grew from 939 in 1978-79 to 1,036 in 1981-82, then slipped to 880 three years later. The decline, in part, reflects a lagged response to Michigan's economic problems, particularly between 1980 and 1982, when the job market drastically deteriorated for social science graduates. Without the prospect for employment, some students may have left social science for other disciplines.

The response rate was fairly constant over the entire study period. Non-response was highest in 1980-81 (43%) and 1983-84 (44%). The 1980-81 non-response rate matched the period of highest reported unemployment (12%) which suggests non-respondents were still looking for employment or were accepting low-paying positions unrelated to their education and career goals--two situations many graduates prefer not to convey back to their institution. Interestingly, in 1983-84, the unemployment rate was 7%. It is not clear what factors caused the non-response rate to increase. In 1984-85, the response rate was highest--65%, a testimony to a much better labor market for social science graduates.

Response rates by major are presented in Table 1.¹ The criminal justice, psychology and social science (multidisciplinary) programs graduated 23%, 16%, and 24% of the total population, respectively. The remaining majors were smaller, numbering from 220 to 619 graduates. Response rates that were higher than the overall average (59%) were found for criminal justice, landscape architecture, and social science (multidisciplinary); majors with higher than average non-response rates included psychology (46%) and anthropology/geography/sociology (43%). Looking at only those graduates who reported salary, the distribution was fairly representative of the college, except that criminal justice and

¹Because of sample size restrictions, several majors have been combined. The nine major groups used in this study were: (1) urban planning and all other social science, (2) criminal justice, (3) political science, (4) social science (multidisciplinary programs), (5) public administration, (6) landscape architecture, (7) anthropology, geography, and sociology, (8) psychology, and (9) social work.

social science (MDP) were slightly overrepresented while political science and psychology were underrepresented. Psychology graduates, however, comprised over 30% of those continuing their education. Higher unemployment rates were reported by graduates from majors where the principal employer was the government sector or those organizations that depended upon government funding: criminal justice (11%), public administration (15%), and social work (12%).

Women comprised 51% of the college's graduates during this period. Slightly more women (by 1%) responded to the survey than their proportion of the graduating class. However, women were more likely to be unemployed (10% versus 7% for men) and not likely to report salary. Women were underrepresented in the group reporting salary by about 2%; not enough to bias the salary data. Another comparison found that more men than women attended graduate school.

Within academic majors, the proportion of men and women did not necessarily reflect the total 49% - 50% distribution. In social work, women comprised 88% of the graduates; also, psychology had a higher number of women (57%). Men, on the other hand, were concentrated in urban planning, landscape architecture, and political science at 62%, 68%, and 68%, respectively. Considering only those who responded, the numbers were consistent with the distribution of all graduates, except that more women responded in psychology, anthropology/geography/sociology, and social science (MDP) and fewer in urban planning than expected.

Job location was available only for those who responded. Over the seven year period, 71% of the graduates stayed in Michigan to work, go to school, or continue seeking employment. During that time when Michigan encountered economic problems (1980 to 1982); the number staying in the state dropped slightly to 67%. If social science majors leave Michigan, they are likely to go to nearby northcentral states or to the northeast. Public administrative and social work majors were more likely to stay in Michigan, 78% and 84%, respectively. The only major where a large number of graduates left the state was anthropology/geography/sociology; 47% took jobs outside Michigan.

Graduates from social science disciplines sought employment with a variety of different organizations. Nearly 36% of those working graduates were employed in the service sector, primarily in medical services and retail sales. Another 24% were employed by government with the majority at the state level. In the "other" group, 19% of the graduates found work in consulting firms and volunteer organizations. Only about 9% of the graduates entered education at the primary or secondary level.

Approximately 91% of the graduates were White. Blacks comprised another 7% with Hispanics, Native Americans, and Asian-Americans splitting the remaining 2%. Graduates from the minority groups tended to be concentrated in the departments of psychology, criminal justice, and social science (MDP). Minorities were underrepresented in political science, anthropology/geography/sociology, and landscape architecture, except for Asian-Americans in the latter program. The response rate from minorities, particularly Blacks, was below the overall average of 60%. Blacks had a 49% response rate. A reason may be found in the high unemployment rate among Blacks, reported at 11%, 3.5% higher than Whites. Many of the Black graduates who did not respond may have been unemployed or working in non-career path positions--facts which they did not care

to report to the University. Blacks were also the least likely to continue their education immediately after completing their bachelor degree.

In summary, the data to be used in the salary analysis were representative of the general population of social science graduates. One possible area of bias is the underrepresentation of Blacks in the sample population. To overcome the problem associated with the small numbers of Hispanics, Native Americans, and Asian-Americans in the sample, all minorities have been collapsed into one group (non-white) for the analysis.

SALARY TRENDS AND COMPARISONS

The average reported starting salary (current dollars not adjusted for inflation) for 1978-79 was \$12,359 (Table 2). Annual increases have averaged 6%, even though the increase between 1980-81 and 1981-82 was negligible. By 1984-85, starting salaries had reached an average \$17,344.

When salary figures were adjusted for inflation (1978-79=100), the impact of inflation on current salary levels could be determined. Between 1978 and 1982, real salary (adjusted) increases failed to keep pace with inflation, as indicated by the negative percentage figures in the real column of Table 2. Starting salaries declined by approximately 17% during this period. The magnitude of this decline also revealed the very weak job market faced by social science graduates. Government (all levels), social service organizations, educational institutions, as well as manufacturing firms, drastically curtailed their hiring during this period. Those graduates who were hired had to accept salaries that did not keep pace with inflation.

Salaries began to improve in 1983, 4% higher than the previous year. Salary increases continued over the next two years. In three years, salaries increased 10%. The average for 1984-85, \$11,336 (real), still fell nearly \$1,000 below 1978-79 level. Inflation and poor economic conditions have eroded the economic position of recent graduates such that their purchasing power is considerably lower than graduates of ten years ago.

Year of graduation had a significant impact on salary levels ($F=10.87$, $p<.0001$). In comparisons of the yearly averages, significant differences were identified. The years 1979, 1980, and 1985, were significantly higher than the other years. Differences that met the statistical criterion for significance are listed at the end of Table 2.

Academic Programs

Graduates from different academic program areas within the College of Social Science have experienced slightly different labor markets which are often reflected in starting salary offers. The average starting salaries (real) are listed by program in Table 3. Cases where the sample sizes are small have been included for completeness, but caution should be taken in interpreting the representativeness of the salaries reported. The highest salary averages were reported by criminal justice (\$12,107), political science (\$11,907), and social science-multidisciplinary (\$11,815) graduates. Programs in the middle of the salary range included public administration, urban planning (other social science), and

landscape architecture with salaries ranging from \$10,900 to \$11,500. Grouped together were anthropology/geography/sociology, psychology, and social work at approximately \$10,600. Several significant differences were identified upon the testing of the program means, as shown at the bottom of Table 3.

Unlike the overall trend (in real dollars), annual salary increases for the departments and programs varied. Several programs such as public administration, psychology, and social work experienced four successive years of declining salaries before annual increases exceeded the inflation rate. The other programs followed more erratic paths with increases interspersed with decreases. In every case, however, several years of decline were grouped together. For political science graduates, the trend cannot be viewed with optimism as salaries have fallen off by 8% over the last two years. Only the 1984-85 salaries for anthropology, geography, and sociology graduates approached 1978-79 levels; but, in this case, the sample sizes were so small as to question the reliability of the reported figures.

Employer

The average starting salary (real), as reported in Table 4, offered by manufacturing firms was significantly higher than the other sectors, at \$13,726. Government salaries (\$12,413) were higher than service, education, and the "other" group that includes consulting firms, volunteer organizations, and self-employed. Educational institutions paid the lowest salaries throughout the entire study period.

When sorted by year of graduation, each major employer group was rocked by inflation, especially between 1980 and 1982. The manufacturing and service sectors experienced sharp declines in yearly salary levels until 1982 (service) and 1983 (manufacturing) before reporting strong increases the next two to three years. In these two cases, real salary levels in 1984-85 were approximately 3.5% lower than in 1978-79.

Graduates accepting employment in the government sector were least affected by inflation. In two periods (1978-79 - 1980-81 and 1980-81 - 1982) salary levels declined. For other periods, salaries improved modestly. Comparing 1984-85 and 1978-79 levels, the 1% difference was the smallest found among all types of employers.

The situation in education and the other group could be described as serious. Education salaries eroded by 15% within two years. A strong rebound in 1981-82 (11%) followed by two modest increases of 1% and 2% could not offset a 6% drop in 1984-85. An indication of the weakness in education salary can be discerned in the sharp decline in number of graduates reporting salary in 1982-83. During this period, education was not an attractive employment option. The "other" group, because of its composition, displayed a very cyclical pattern. Salaries in 1984-85 for this category were 14% below the 1978-79 level.

Job Location

The decision to accept a position in Michigan versus one outside the state may be based on the salary offer. The difference in starting salary averages between in and out-of-state was \$235 (real), advantage to in-state positions (Table 5). This difference was not statistically significant.

Salary differences due to location are given in Table 5 by program. Only political science and anthropology/geography/sociology graduates reported higher salaries outside Michigan with differences of \$687 and \$646, respectively. The largest differences favoring in-state positions occurred in public administration (\$765) and landscape architecture (\$650). The remaining differences ranged from \$167 to \$455.

In 1978-79, new social science graduates were earning \$12,540 (real), nearly \$780 more than graduates who left the state (Table 6). Over the next three years, Michigan salary levels eroded by approximately 17% against inflation. During the same time, out-of-state salary levels dropped by 14%. In 1981-82, the salary difference, still favoring Michigan, had decreased to \$288. Over the last three years, however, out-of-state salaries have increased nearly 17%, as compared to 6% for Michigan. As a result, the salary advantage has swung to out-of-state positions.

When comparing salaries of the major economic sectors by location, Michigan's strongest advantages were in government (\$931), manufacturing (\$755), and education (\$607) (Table 7). While smaller, the differences for service (\$340) and the other group (\$555) favored out-of-state positions. A significant interaction effect for location and industry was observed, $F=3.27$, $p \leq .01$, that suggests location can be important in determining employment with some types of employers.

Grade point average relationships will be discussed below, but several locational aspects are worthy of mentioning at this time (Table 8). The out-of-state relationship between grades and salary was negative. As grade point average increased, salary decreased. In Michigan, lower grades, below 3.00, received higher pay but the difference between top and bottom was only \$500 (real) as compared to over \$1,000 (real) for out-of-state positions. Michigan employers paid higher salaries for all GPA levels, except for below 2.50.

In summary, the comparison of average salaries found little difference between in and out-of-state positions though Michigan salaries were slightly higher. The locational difference in salary has recently swung to favor out-of-state positions. Service sector employment was the only sector where salaries favored out-of-state positions over the entire study period.

Gender

The average starting salary for men was \$12,127 (real) as compared to the \$10,473 (real) average for women; a difference of \$1,654 (Table 9). When other variables were not held constant, this difference proved to be statistically significant ($F=107.0$, $p \leq .001$).

Women's salaries dropped approximately 18% between June, 1979, and June, 1982 (Table 9); during the same time period, men's salaries declined 14%. Over the next three years, women's salaries increased by 10% even though salaries leveled off between 1983-84 and 1984-85. Growth in men's salaries was slower, just under 1% in the two years 1982-83 and 1983-84, before experiencing a 6% increase in 1984-85.

The timing of these changes affected the magnitude of the gender gap in salaries. Between 1979-80 and 1981-82, the average difference was approximately \$1,750 (highest \$1,888). The gap was cut in half to \$951 by 1983-84, as a result of the 10% growth in women's salaries. However, the large male increase, combined with the near 0% increase in real terms for women in 1984-85, has caused the difference to nearly double to \$1,700.

Across majors, men commanded higher salaries in every field, though the difference in public administration was small, \$198, (Table 10). The largest difference was reported in social work (\$2,438), a field where women comprise the majority of graduates. A small sample of men may have influenced their average, but the comparison is consistent for other fields where women dominate, such as psychology and social science (MDP).

The salaries for men and women differed depending on location. Women's salaries did not differ much between locations, \$118 (Table 11). For men, the salary difference was much larger with Michigan paying more than \$350 (real) above other states. Intraregional gender comparisons found men's salaries considerably higher than women's salaries, particularly in Michigan where the difference was \$1,730 (real).

Men received higher salaries across all economical sectors (Table 12). The differences ranged from \$470 to \$1,693. The smallest differences were reported in education (\$470) and manufacturing (\$574). Differences in service, government and "other" were 3 to 4 times higher at \$1,074, \$1,693, and \$1,661, respectively. The large difference in government and "other" can be partially attributed to the type of employment taken by men and women. Men tend to be in protective services while many women are in social services; the latter positions pay lower salaries.

Grade Point Average

Grade point average, as pointed out above, introduced some interesting comparisons. Graduates with the highest GPAs do not necessarily receive the highest salaries. Graduates with GPAs below 3.0, have average salaries that are more than \$500 (real) higher than those graduates with grades above 3.0 (Table 13). For some majors, grades do appear to influence salaries. In urban planning, criminal justice, and public administration, graduates with grades above 2.5 tend to have higher salaries. Social work majors presented an interesting case in that salaries were similar irrespective of GPA.

The interaction term for year and GPA was modestly significant ($F=1.59$, $P \leq .05$), indicating some variation among GPA groups across years. The salary trends for each group are presented in Table 14. The below 2.5 group experienced three years of precipitous decline in starting salary, totally nearly 29%. A strong increase between 1981-82 and 1982 of 11% was compromised by a 2% decline the next year. The above 3.5 group has also experienced dramatic changes in salary: over two years salary dropped 25%, followed by an 11% increase, only to drop by 5% the next year. Salary trends for groups with GPAs between 2.5 and 3.5 were typical of the general trend established earlier.

The manufacturing sector paid the highest salaries, regardless of GPA group (Table 15). Within manufacturing, the GPA-salary relationship was generally positive: as grades increased so did salaries (a slight anomaly for the 3.0 to 3.5 group). For the remaining sectors, the below 2.5 group tended to have the highest salaries, except in education where salaries were comparable across all groups.

A final comparison of grade point by gender found that men had higher salaries across all GPA groups (Table 16), even though women have the higher overall grade point average. The smallest gender

difference was found within the 3.0-3.5 group. For the remaining groups, the differences exceeded \$1,700 (real).

Race

The average salary reported by Blacks from social science was \$12,302 (real) which was slightly higher than the average for other minorities, \$11,998, and Whites, \$11,231. Generalizations drawn from reported Black salaries needs to be done with care. The high non-response and unemployment rates for Blacks suggest that those Blacks working in high paying jobs may not be typical of the work experience of the majority of Blacks who have recently graduated. Because of the small number of minority graduates reporting, no other comparisons have been made.

STARTING SALARY DETERMINANTS

The salary comparisons made above indicate that several factors are important in determining starting salary levels: major, year of graduation, and gender. Because of confounding effects caused by the relationship between independent variables, the unique contribution of a single factor cannot be specifically determined. A final analytical exercise, using hierarchical regression analysis, was performed to identify the key determinants of the starting salary for social science graduates (real salaries were employed in the analysis).

In order to measure a particular effect, class variables were created for area of concentration, year of graduation, grade point average, industry of employment, and race. The dummy variables for gender and job location (in or out of Michigan) were also treated as class variables.

Each independent class variable was then regressed separately (alone) onto the dependent variable, starting salary. The R^2 was obtained for each variable, as well as the regression coefficient for each member of the class. These measures reflect the causal relationship between the independent and dependent variables with all other effects uncontrolled. The next step was to regress the entire set of explanatory variables whose causal priority (order of entry) had been prespecified onto starting salary. For example, to test the hypothesis that year of graduation did not have an effect in starting salary, the explanatory variables were entered in the following order: area of concentration, industry, gender, grade point average, job location, race, and, finally, year. The incremental R^2 for the last variable was entered (in example, year) and was then calculated by subtracting the final R^2 from the R^2 for the model obtained prior to the entry of year. Similar tests were made for the other independent variables.

The statistical inference assumed the null hypothesis that in the population, there was no increment in starting salary variance accounted for when year, for example, was added to the model. The null hypothesis or incremental R^2 's significance was tested by using the F-test as described by Cohen and Cohen (1983).

RESULTS

A complete model that included all independent variables accounted for 31% of the starting salary variance for graduates of

the College of Social Science. The regression coefficients, as reported in Table 17, represent the value when the variable entered last in the model. Coefficients for certain years, majors, gender, and employment with certain types of manufacturing firms stand out as the most important explanatory factors after holding all other possible effects constant.

Using a significant criterion of $p \leq .01$, year of graduation and industry: manufacturing had significant incremental R^2 's (Table 18). Relaxing the criterion to $p \leq .05$ would also allow major to be reported as significant. These variables offer a unique contribution to the explanation of starting salary. The contribution of each variable is presented in Table 3 where the R^2 's for each variable alone are listed in column one, and the unique R^2 in column two. The general F-tests for each incremental R^2 can be found in column three.

Year of Graduation

Year of graduation uniquely explained 2.3% of salary variance. The regression coefficients show that the salary levels from 1980-81 to 1984-85 were not statistically different from each other, all other conditions held constant. Salaries between 1981-82 and 1983-84 were, however, below the 1984-85 average. The two years of significance were 1978-79 and 1979-80, when salaries were higher than all other years. After 1980, inflation and the downturn in Michigan's economy really played havoc with starting salaries. Today, these effects still linger as social science salaries still lag behind salaries graduates received five and six years ago.

Academic Major

Without controlling for spurious relationships, academic major explained 6.7% of salary variance. After controlling for all other effects, the unique portion of starting salary variance explained by variance was 1.8%.

There was not a lot of difference in starting salary between majors. Examination of the regression coefficients revealed two basic groups: (1) a lower salary group, including landscape architecture, anthropology/geography/sociology, psychology, and social work, as indicated by the insignificant coefficients and (2) a higher salary group, composed of urban planning, criminal justice, political science, and social science (MDP), for whom the regression coefficients are significantly different than for the lower salary group. Upon further investigation, top salary majors were not significantly different from each other, all other factors held constant. Public administration appeared to be in a pivotal position, poised between the higher and lower groups.

Employer

The major employer groups, represented by the employer, failed to explain a significant unique portion of starting salary variance. In the final model, the regression coefficients were not significant. These results show that employer is not a critical factor in determining salary levels. The employer effect has been captured by other factors, primarily major.

Separating sectors and examining salary levels of firms within each sector did produce some significant results. Manufacturing made a significant incremental contribution of 3.7% to the explanation of

salary variance. The principal force behind the significance of this variable was the high salaries paid by aerospace, petroleum, and automotive firms.

Gender

Even though the F-ratio for the incremental R^2 explained by gender was large ($F=38.96$), the F-ratio failed to meet the statistical requirements for significance. This failure does not mean that gender was not important in establishing salary levels. Gender's regression coefficient was highly significant ($p \leq .001$). The negative sign indicated that women had lower salaries, by more than \$1,000, than men, all other things being equal. Upon comparing coefficients from the alone and final models, there was only a relatively small change in the size of the coefficients. After holding all other variables constant, the effect of gender remained strong: in the social sciences, gender was important in determining starting salary levels.

Other Variables

Two other variables showed some strength in the final regression model. Race had a negative coefficient which was significant at the .05 level. White's salaries were slightly lower when all other factors were controlled, than non-white's salaries (\$751). The second variable was government (sector of employment) where salaries paid by state governments were significantly higher than all other levels of government.

The remaining variables lent little to the explanation of salary. Noticeable among these variables were job location and grade point average. Location and academic achievement did not influence salary levels to any appreciable extent for social science graduates. A well-paying job is more likely the result of individual effort exerted in finding a rewarding job.

CONCLUSIONS

After comparing starting salary means by selected characteristics for College of Social Science graduates and employing regression analysis, several variables were found to be important when determining salary levels: year of graduation, major, gender, and type of employer. Specific employers, especially automotive, electronics companies, public utilities, and state government, had the strongest impact on salary.

Year of graduation captures the economic conditions prevailing at the time of graduation. From 1978 to 1983, conditions in the economy depressed salary levles, such that yearly salary increases (current terms) did not keep pace with inflation. Graduates actually lost ground in terms of their salaries' purchasing power during these years. Improvement has been observed over the last several years with current salary increases equalling or slightly ahead of inflation.

Graduates from certain majors consistently received higher salaries. Criminal justice, social science (MDP), and political science graduates had the highest salary averages. Salaries within social science may also reflect an oversupply of graduates in relation to the number of available jobs; low-paying training programs which eventually lead to increased salaries; or historically low remuneration for a particular field.

A significant finding was the gap in initial earnings between men and women. In all comparisons, women lagged behind men in terms of salary, even when all other variables were held constant. This earnings gap at graduation suggests that labor market discrimination may be evident for some types of employers. Further investigation into these patterns is warranted.

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Table 1. Response Rate by Category of Response for Each Major in the College of Social Science.

Academic Major	Total (1)	% Total (2)	Working Salary			Working No Salary			Graduate School		
			n (3)	% This category (4)	% Major (5)	n (6)	% This category (7)	% Major (8)	n (9)	% This category (10)	% Major (11)
Urban Planning/ Other Soc Sci	453	7	95	7	21	68	7	15	86	9	19
Criminal Justice	1,521	23	356	27	23	286	28	19	150	16	10
Political Science	556	8	72	5	13	61	6	11	163	17	29
Social Science (NDP)	1,057	16	285	21	27	135	13	13	94	10	9
Public Administration	220	3	47	4	21	30	3	14	24	2	11
Landscape Architecture	276	4	95	7	34	61	6	22	9	1	3
Anthro/Geogr/Soc	261	4	43	3	16	58	6	22	31	3	12
Psychology	1,600	24	231	17	14	213	21	13	307	32	19
Social Work	619	9	113	8	18	95	9	15	100	10	16

Table 1. (continued)

Academic Major	Unemployed			Non-response		
	n (12)	% This category (13)	% Major (14)	n (15)	% This category (16)	% Major (17)
Urban Planning/ Other Soc Sci	21	4	5	183	7	40
Criminal Justice	160	29	11	564	21	37
Political Science	25	4	5	235	9	42
Social Science (MDP)	96	17	9	447	17	42
Public Administration	33	6	15	86	3	39
Landscape Architecture	27	5	10	84	3	30
Anthro./Geogr./Socio.	16	3	6	113	4	43
Psychology	107	19	7	742	28	46
Social Work	73	13	12	238	9	38

Source: Follow-up report data base for 1978-1985, Placement Services,
Michigan State University, East Lansing, Michigan 48824.

Table 2. Average Starting Salary, Current and Real, for all College of Social Science Graduates for August, 1978, through June, 1985.

Year	n	Average Salary (current)	% Change	Average Salary (real)	% Change
1978-79	222	12,359		12,359	
1979-80	225	13,468	9	11,919	-4
1980-81	205	14,116	5	11,203	-6
1981-82	205	14,155	.3	10,332	-8
1982-83	168	15,269	8	10,753	4
1983-84	161	16,324	7	11,030	3
1984-85	170	17,344	6	11,336	3

Significant differences at the $p < .05$ level.

1978-79: 1980-81, 1981-82, 1982-83, 1983-84, and 1984-85

1979-80: 1981-82, and 1982-83

1980-81: 1981-82

1984-85: 1981-82

Source: Follow-up report data base for 1978-1985, Placement Services,
Michigan State University, East Lansing, Michigan 48824.

Table 3. Average Starting Salary (Real) for Academic Programs in the College of Social Science, 1978-1985.

Year	Urban Planning All Other Soc Sci			Criminal Justice			Political Science			Social Science Multidisciplinary			Public Administration		
	n	\$	%	n	\$	%	n	\$	%	n	\$	%	n	\$	%
1978-79	16	12,472	-5	50	12,921	3	12	12,433	-1	47	13,359	-4	5	12,240	-1
1979-80	20	11,808	-10	56	13,274	-9	16	12,351	-16	37	12,805	-11	5	12,162	-4
1980-81	8	10,629	-12	65	12,136	-7	6	10,317	8	41	11,370	-9	13	11,703	-5
1981-82	12	9,377	34	56	11,383	-4	4	11,131	13	37	10,326	10	11	11,646	-14
1982-83	18	12,528	-15	43	10,933	9	10	12,534	-7	36	11,360	-1	6	10,021	5
1983-84	11	10,601	2	43	11,911	0	7	11,670	-1	44	11,264	6	3	10,509	5
1984-85	11	10,856		44	11,915		17	11,593		43	11,923		4	11,062	
Total/Avg	96	11,404		357	12,107		72	11,907		285	11,815		47	11,450	

Year	Landscape Architecture			Anthropology/Geography Sociology			Psychology			Social Work		
	n	\$	%	n	\$	%	n	\$	%	n	\$	%
1978-79	24	12,369	-2	4	10,640	-3	38	11,448	-8	23	10,715	-8
1979-80	18	12,110	-17	12	10,333	15	39	10,501	-2	20	9,909	-1
1980-81	13	10,055	1	5	11,843	-8	36	10,321	-2	15	9,829	-20
1981-82	8	10,146	-9	10	10,851	-9	40	10,095	-4	23	8,150	-3
1982-83	8	9,261	4	7	9,915	-7	27	9,645	8	12	7,916	19
1983-84	10	9,620	8	3	9,234	38	28	10,448	3	9	9,808	-16
1984-85	14	10,397		2	12,745		23	10,717		11	8,443	
Total/Avg	95	10,974		43	10,625		231	10,473		113	9,342	

Comparisons of average salary that were significant at the .05 level:
 Social Work: Urban Planning, Criminal Justice, Political Science,
 Social Science (Multidisciplinary), Public Administration,
 and Landscape Architecture.
 Psychology: Urban Planning, Criminal Justice, Political Science, and
 Social Science (Multidisciplinary).

Source: Follow-up report data base for 1978-1985, Placement Services,
 Michigan State University, East Lansing, Michigan 48824.

Table 4. Average Starting Salary (Real) by Economic Sector from 1978 to 1985 for the College of Social Science.

Year	Manufacturing			Service			Government			Education			Other		
	n	Average Salary (\$)	% Change	n	Average Salary (\$)	% Change	n	Average Salary (\$)	% Change	n	Average Salary (\$)	% Change	n	Average Salary (\$)	% Change
1978-79	43	14,350	-2	48	11,277	-1	74	12,748	-4	15	10,267	-3	42	11,619	0
1979-80	35	14,024	.7	61	11,118	-8	71	12,199	3	19	9,980	-12	39	11,619	-11
1980-81	29	14,128	-9	83	10,225	-12	45	12,525	-4	15	8,802	11	33	10,381	-7
1981-82	27	12,908	-1	79	8,983	11	42	12,065	1	18	9,787	1	39	9,666	.7
1982-83	25	12,775	5	72	10,009	1	30	12,205	2	8	9,893	2	33	9,733	-1
1983-84	28	13,452	3	66	10,112	7	29	12,425	1	13	10,042	-6	25	9,635	3
1984-85	25	13,906		61	10,831		33	12,589		9	9,434		42	9,963	
Overall Avg	212	13,726		470	10,269		324	12,413		97	9,757		253	10,455	

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 5. Average Starting Salary (Real) Differences Between Michigan and Outside the State for Social Science Majors, 1978-1985.

Major	Michigan		Outside		Difference (\$) (M-O)
	n	Average Salary (\$)	n	Average Salary (\$)	
Urban Planning/OSS	65	11,458	31	11,291	167
Criminal Justice	241	12,233	116	11,847	386
Political Science	49	11,688	23	12,375	-687
Social Science (MDP)	194	11,937	94	11,553	384
Public Administration	32	11,694	15	10,929	765
Landscape Architecture	54	11,255	41	10,605	650
Antro/Geo/Soc	20	10,279	23	10,925	-646
Psychology	162	10,603	69	10,166	437
Social Work	91	9,431	22	8,976	455
Total/Average	908	11,393	431	11,158	235

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 6. Average Starting Salary (Real) Trends for Social Science Graduates Working in Michigan and Other States, 1978-1985.

Year	Michigan			Outside Michigan			Difference (\$) (M-O)
	n	Average Salary (\$)	% Change	n	Average Salary (\$)	% Change	
1978-79	171	12,540	-5	51	11,751	2	789
1979-80	162	11,887	-5	63	12,000	-9	-113
1980-81	139	11,327	-8	66	10,943	-7	384
1981-82	123	10,447	6	82	10,159	.2	288
1982-83	110	11,056	-3	58	10,179	14	877
1983-84	105	10,722	3	56	11,608	2	-866
1984-85	110	11,046		60	11,866		-820

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 7. Average Starting Salary (Real) for Social Science Graduates by Major Employment Sectors as Compared to In and Out-of-State Job Location, 1978-1985.

Industry	Michigan		Outside Michigan		Difference (\$) (M-O)
	n	Average Salary (\$)	n	Average Salary (\$)	
Manufacturing	156	13,925	56	13,170	755
Service	306	10,151	164	10,491	-340
Government	220	12,712	104	11,781	931
Education	77	9,882	20	9,275	607
Other	161	10,253	92	10,808	-555

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 8. Average Starting Salaries (Real) for Social Science Graduates by Various Grade Point Average Groups as Compared to In and Out-of-State Job Locations, 1978-1985.

Grade Point Average	Michigan		Outside Michigan		Difference (\$) (M-O)	Staying in Michigan (%)
	n	Average Salary (\$)	n	Average Salary (\$)		
<2.50	201	11,630	83	11,763	-133	71
2.51-3.00	372	11,592	166	11,169	423	69
3.01-3.50	255	11,029	145	10,914	115	64
3.51-4.00	92	11,133	42	10,716	417	69

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 9. Average Starting Salary (real) Trends for Male and Female Social Science Graduates and Yearly Salary Differences, 1978-1985.

Year	Male			Female			Difference (\$) (M:F)
	n	Average Starting Salary \$	% Change	n	Average Starting Salary \$	% Change	
1978-79	130	12,973	-1	92	11,492	-5	1,481
1979-80	117	12,825	-6	108	10,937	-5	1,888
1980-81	99	12,099	-7	106	10,366	-8	1,733
1981-82	95	11,303	.8	110	9,493	6	1,810
1982-83	85	11,397	.8	83	10,094	4	1,303
1983-84	84	11,485	6	77	10,534	-3	951
1984-85	84	12,194		86	10,497		1,697
Avg/Total	694	12,127		662	10,473		1,654

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 10. Differences in Average Starting Salaries (real) for Men and Women by Academic Program, 1978-1985.

Program	Males		Females		Difference (\$) (M-F)
	n	Average Starting Salary \$	n	Average Starting Salary \$	
Urban Planning/ Other Soc Sci	54	11,656	42	11,080	576
Criminal Justice	225	12,816	132	10,900	1,916
Political Science	51	12,396	21	10,721	1,675
Social Science (MDP)	128	12,674	157	11,113	1,561
Public Administration	28	11,530	19	11,332	198
Landscape Architecture	64	11,426	31	10,042	1,384
Anthro/Geog/Soc	20	11,385	23	9,964	1,421
Psychology	103	10,958	128	10,083	875
Social Work	14	11,478	99	9,040	2,438

Source: Follow-up report data base 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 11. Differences in Average Starting Salaries (real) Comparison for Male and Female Social Science Graduates by Location, 1978-1985.

Gender	Michigan		Outside Michigan		Difference (\$) (M-O)
	n	Average Starting Salary \$	n	Average Starting Salary \$	
Female	448	10,511	214	10,393	118
Male	472	12,241	222	11,887	354
Overall Difference (M-F)		1,730		1,494	

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 12. Differences in Average Starting Salaries (real) for Male and Female by Economic Sector, 1978-1985.

Employment Sector	Male		Female		Difference (\$) (M-F)
	n	Average Starting Salary \$	n	Average Starting Salary \$	
Manufacturing	137	13,918	75	13,374	544
Service	212	10,859	258	9,785	1,074
Government	194	13,092	130	11,399	1,693
Education	37	10,048	60	9,578	470
Other	114	11,367	139	9,706	1,661

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 13. Average Starting Salaries (real) for Social Science Majors According to Grade Point Average Levels, 1978-1985.

GPA Group	Total			Urban Planning/ All Other Soc Sci			Criminal Justice			Political Science			Social Science (Multidisciplinary)		
	n	Average Salary \$		n	Average Starting Salary \$		n	Average Starting Salary \$		n	Average Starting Salary \$		n	Average Starting Salary \$	
< 2.50	280	11,671		7	10,430		76	11,660		17	12,533		106	12,224	
2.51-3.00	531	11,466		39	11,158		140	12,462		31	12,244		114	11,787	
3.01-3.50	395	10,980		40	11,807		108	11,894		18	11,243		47	11,467	
3.51-4.00	133	10,980		10	11,433		33	12,341		6	10,389		18	10,483	

GPA Group	Public Administration			Landscape Architecture			Anthropology/ Geography/Sociology			Psychology			Social Work		
	n	Average Starting Salary \$		n	Average Starting Salary \$		n	Average Starting Salary \$		n	Average Starting Salary \$		n	Average Starting Salary \$	
< 2.50	12	10,377		3	14,687		6	12,533		41	10,781		12	9,507	
2.51-3.00	15	12,309		45	11,169		18	9,813		79	10,889		50	9,228	
3.01-3.50	15	11,450		38	10,465		11	10,826		82	9,991		36	9,212	
3.51-4.00	5	11,448		9	10,915		8	10,743		29	10,269		15	9,906	

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 14. Average Starting Salary Trends (real) for Social Science Graduates According to Grade Point Average Levels, 1978-1985.

Year	< 2.5			2.5-3.0			3.0-3.5			> 3.5		
	n	\$	%	n	\$	%	n	\$	%	n	\$	%
1978-79	35	13,819		85	12,363		68	11,949		34	11,666	
1979-80	49	12,996	-6	94	11,644	-6	61	11,012	-8	21	13,269	7
1980-81	49	10,869	-16	73	12,024	3	63	10,926	-4	20	9,899	-20
1981-82	37	10,111	-7	72	10,396	-14	73	10,505	-6	23	9,940	-5
1982-83	38	11,231	11	64	10,733	4	46	10,486	-3	20	10,525	11
1983-84	38	11,013	-2	73	11,305	4	43	10,725	4	7	10,122	-5
1984-85	38	11,624	6	77	11,458	2	46	11,130	4	9	10,123	.3

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 15. Social Science Graduates' Average Starting Salaries (real) for Major Employment Sectors According to Grade Point Average Levels, 1978-1985.

Employment Sector	< 2.5		2.5-3.0		3.0-3.5		> 3.5	
	n	Average Starting Salary \$	n	Average Starting Salary \$	n	Average Starting Salary \$	n	Average Starting Salary \$
Manufacturing	56	12,662	94	14,149	47	13,725	15	15,042
Service	123	11,046	190	10,303	117	9,611	40	9,649
Government	56	12,737	113	12,793	119	12,068	36	11,855
Education	14	10,057	37	9,256	333	10,029	13	10,171
Other	35	11,212	104	10,485	84	10,218	30	10,126

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 16. Average Starting Salaries (real) for Men and Women from the College of Social Science According to Grade Point Average, 1978-1985.

GPA	Men		Women		Difference (\$) (M-W)
	n	Average Starting Salary \$	n	Average Starting Salary \$	
< 2.5	203	12,398	132	10,628	1,770
2.5-3.0	321	12,373	294	10,350	2,023
3.0-3.5	223	11,512	257	10,530	982
> 3.5	59	12,242	106	10,379	1,863

Source: Follow-up report data base for 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan 48824.

Table 17. Regression Coefficients for the Full Model of Starting Salary in which the Variable Entered Last.

	B (alone)	Final B		B (alone)	Final B
Intercept		10,501*			
Year			Employer		
1978-79	1,023*	899*	Manufacturing	3,271*	149
1979-80	583	763*	Service	-186	-161
1980-81	-133	117	Government	1,958*	700
1981-82	-1,004*	-525	Education	-698	-939
1982-83	-582	-327	Other (intercept)	10,455*	
1983-84	-306	-294	Ind:Manufacturing		
1984-85 (intercept)	11,336*		Aerospace/Petroleum	3,036*	117*
Academic Major			Automotive	5,243*	4,951*
Urban Plan/All SS	2,050*	1,178*	Electronics/Public Utils	1,836*	1,703
Criminal Justice	2,780*	1,292*	Chemical/Electrical	1,652*	1,493
Political Science	2,565*	1,505*	Construction	2,190*	1,679
Social Science (MDP)	2,484*	1,529*	Other (intercept)	10,874*	
Public Administration	2,108*	1,101**	Ind:Service		
Landscape Architecture	1,632*	924	Medical Services	-2,452*	-358
Anthro/Geog/Soc	1,283**	542	Accounting	-584	624
Psychology	1,131*	626	Banking/Finance	-1,094*	280
Social Work (intercept)	9,342*		Merchandising	-1,193*	23
Gender			Hotels/Restaurants	1,614*	-78
Female	-1,654*	-1,057*	Other (intercept)	11,833*	
Male (intercept)	12,127*		Ind:Government		
Grade Point Average			State	1,856*	1,435*
< 2.5	667**	36	Military	1,388	-43
2.5 - 3.0	458	158	City, Federal, Foreign	1,567*	951**
3.0 - 3.5	-15	-76	County (intercept)	10,998*	
> 3.5 (intercept)	11,003*		Ind:Education		
Job Location			Post Secondary	-922	865
Outside Michigan	-245	127	Elem-Second (intercept)	11,352*	
Michigan (intercept)	11,398*		Ind:Other		
Race			Research/Consulting	-1,106*	208
White	-1,060*	-751**	Volunteer Organization	-1,251**	130
Non-white (intercept)	12,291*		Other (intercept)	11,483*	

* Significant at the 0.01 level.

** Significant at the 0.05 level.

Source: Follow-up report data base, 1978-1985, Placement Services, Michigan State University, East Lansing, Michigan.

Table 18. R (alone) and R (unique) for Variance in Regression Model
With Corresponding F-test, 1978-1985.

Variables	R (a)	R (u)	F (a)
Year	.040	.023	7.11*
Major	.067	.018	4.17**
Gender	.063	.021	38.96
GPA	.007	.001	0.62
Job Location	.001	.000	---
Race	.008	.004	7.42
Employee	.175	.005	2.32
Ind:Manufacturer	.138	.037	13.73*
Ind:Service	.059	.001	0.37
Ind:Government	.041	.006	3.71
Ind:Education	.003	.001	0.89
Ind:Other	.015	.000	---

*Significant at the .01 level

**Significant at the .05 level

Source: Follow-up report data base for 1978-1985, Placement Services,
Michigan State University, East Lansing, Michigan 48824.

