

OCCUPATIONAL SKILL SURVEY
OF
RILEY AND GEARY COUNTIES

by *D.P.S.*

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TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
II. METHODOLOGY.	3
III. RESULTS.	6
A. Non-response	6
B. Sample and Response.	7
C. Statistical Method and Follow-up	10
IV. DISCUSSION OF RESULTS.	13
A. Occupations.	13
B. Experience	18
C. Skills	21
D. Sex.	23
Employment Status.	23
Education.	24
Income	26
E. Income	27
Dependents	29
Age.	29
F. Age.	32
Percentage not completing High School.	32
Education by Age	32
Work Force	35
Income	41
V. SUMMARY AND CONCLUSION	43
VI. RECOMMENDATIONS.	49

BIBLIOGRAPHY	51
APPENDIX A	53
Tables	
APPENDIX B	71
Letter	
Questionnaire	
APPENDIX C	75
Coding Procedure	
APPENDIX D	84
Occupational Categories	
APPENDIX E	108
Data	
APPENDIX F	145
Program Deck I	
Program Deck II	

LIST OF TABLES

	PAGE
SURVEY RETURNS	9
PROPORTIONAL SIGNIFICANCE AT A 95% CONFIDENCE LEVEL.	11
OCCUPATIONS BY PERCENTAGE.	14
PRESENT OCCUPATION OF POPULATION BY SEX.	15
EXPERIENCE BY PERCENTAGE	19
EXPERIENCE, PERCENTAGE BY SEX.	20
SKILLS BY PERCENTAGE	22
LOOKING FOR WORK	24
MEAN EDUCATIONAL LEVEL	25
COMPLETED HIGH SCHOOL (PERCENTAGE)	25
EDUCATION: 1965 NATIONAL AVERAGES BY PERCENTAGE	25
MEDIAN INCOME.	27
MEAN INCOME.	28
AVERAGE (MEAN) NUMBER OF DEPENDENTS BY INCOME CLASSIFICATION	30
AVERAGE (MEAN) AGE BY INCOME CLASSIFICATION.	31
MANHATTAN EDUCATION INFORMATION BY AGE GROUP (PERCENTAGE).	33
JUNCTION CITY EDUCATION INFORMATION BY AGE GROUP (PERCENTAGE).	34
WORK BY AGE.	36
MEAN INCOME BY AGE	38
PERCENTAGE OF CHANGE NECESSARY FOR INCOMES TO EQUAL NATIONAL AVERAGES.	39
AVERAGE NATIONAL INCOME.	40
EMPLOYED: ANNUAL AVERAGE FOR NATION	41
RETURN OF QUESTIONNAIRES	54

	PAGE
OCCUPATIONS	55
PROFESSIONAL, TECHNICAL, AND MANAGERIAL OCCUPATIONS	56
CLERICAL AND SALES.	57
SERVICE OCCUPATIONS	58
FARMING, FISHERY, FORESTRY, AND RELATED OCCUPATIONS	59
PROCESSING OCCUPATIONS.	60
MACHINE TRADES.	61
BENCHWORK OCCUPATIONS	62
STRUCTURAL OCCUPATIONS.	63
MISCELLANEOUS OCCUPATIONS	64
EXPERIENCE (ACTUAL COUNT)	65
SKILLS; PERCENTAGE BY SEX	66
SKILLS (ACTUAL COUNT)	67
TWO MOST FREQUENTLY MENTIONED OCCUPATIONS IN EACH INCOME	
GROUP IN MANHATTAN.	68
TWO MOST FREQUENTLY MENTIONED OCCUPATIONS IN EACH INCOME	
GROUP IN JUNCTION CITY.	69
PERCENT OF RESPONDENTS MARRIED.	70

CHAPTER I

Introduction

The Problem

An accurate estimate of the skill level of the population within an area plays an important role in the process of attracting new industry and business into the community, as well as serving as a definition of its economic well-being and productive status. Statistics describing the following are generally available to any prospective employer who is contemplating joining the community:

1. Physical Setting
2. Education
3. Communications
4. Culture
5. Churches
6. Recreation
7. Civic Environment
8. Markets
9. Manpower
10. Transportation
11. Taxes
12. Sites and Services¹

There is, however, no empirical source from which the skills and abilities of the population can be derived. The purpose of this thesis was to give an accurate source of information concerning the level of skills and abilities of the people in and around Riley and Geary Counties.

In many areas of the country there is a serious shortage of a skilled labor supply.² This fact is demonstrated by the difficulty private enterprises and governmental agencies have in obtaining the people necessary

¹Manhattan, Kansas: Plant Location Information for Executives.
Manhattan: Agriculture Press.

²"When the Worker is King - Industry's Big Hunt for Talent." U.S. News and World Report, Feb. 14, 1966, Vol. 60, Page 36.

for continuous operation.³ It is through business and governmental agencies that the skill level of an area is usually determined. In some areas, however, such as the Manhattan-Junction City area, a description of the quantity and quality of the labor supply has not been reliably available. The first major objective was to fulfill this need for more accurate and available manpower data.

The fact that the population is reasonably full employed, 3.4% unemployment rate of civilian work force in Riley County in 1965,⁴ does not establish economic security or contentment for an area. The level of wages for the area also plays a major role in the economic outlook of a community. The second objective of this thesis was to examine the level of economic income of the area surveyed. This study has made it possible to compare the "economic employment level" of Riley and Geary Counties with the nation. It has also provided a base to develop a sampling plan and method of analyzing data for suitable conclusions concerning the employed and employable labor force.

³Greener Pastures: More Workers Muster Up Nerve to Switch Jobs. Wall Street Journal, March 10, 1966.

⁴"Estimated Civilian Workforce: Riley County, Kansas, Calendar Years 1965-1961." Manhattan: Kansas Employment Security Division, 1966.

CHAPTER 17

Methodology

The objective of this research methodology was to get the most accurate, representative, reliable responses from the population possible under the limitations of the survey. The questionnaire was designed so that error would be minimized from the respondent not understanding any part of the questionnaire.

After the questionnaire was designed, a sample of the population of one hundred citizens from both Riley and Geary counties was drawn to test the form and effectiveness of the questionnaire. The results were somewhat ambiguous. To those who returned the questionnaire, the form appeared quite acceptable. However, there was a high degree of non-response from the Junction City area. In a consultation with the members of the Junction City Economic Development Committee, the committee attributed this apparent apathy to the lack of respondent association. In the final survey, an attempt was made to make the survey in Junction City more closely associated with that area. This was implemented by using Junction City Development Committee stationery and a local address for the return mail.

In the selection of the final sample, a systematic random sample of 20% of the Manhattan-Junction City population was drawn from the Poik Directories of both cities. A 20% sample size was used to insure a volume of return large enough to be statistically reliable using the Confidence Interval for proportions in binomial distribution test. The directories included not only the residents of Junction City and Manhattan, but also a listing of the adults in Riley and Geary counties. The directory presented, therefore, a relatively accurate representation of the complete population

of employable age in Riley and Geary counties. The Polk Directory was chosen to determine the sample because it was the most comprehensive, complete source available for use.⁵

After the results of the mail questionnaire were received and tabulated, a random block sample of the two counties was designed. The purpose of this sample was to compare a sample of personal interview results with the results which were obtained through the mail questionnaire. The personal interviews also served as a check on the reliability of the mail survey. The size of the personal interview sample was approximately 10% of the usable responses received from the final sample of the mail survey.

⁵Polk's Junction City Directory 1966, R. L. Polk & Company.
Kansas City, Missouri, 1966.

CHAPTER III

Non-Response

The level of non-response can be affected by many factors, which have varying degrees of importance. Not all factors could be taken into consideration in this survey of employable labor skills, but the most important should be noted:

1. Follow-up mailing
2. Personalizing of correspondence
3. Prestige of sponsor
4. Respondent association to survey
5. Accompanying letter⁶

Because of the limited funds and resources available for the research project, it was impossible to use follow-up mailings to increase the return rate. To replace this deficiency, newspaper and radio coverage of the project, stressing the urgency and value of the survey, was used. Furthermore, the limitations of the study also prevented the use of individually typed envelopes. This factor was perhaps the most serious deficiency of the study. Instead of individually typed envelopes, gummed address labels were used for the names and addresses of the respondents.

To enhance the local prestige of the sponsor, Junction City Economic Development Committee stationery was utilized for the Junction City survey area. This stationery helped to show that the study was for the benefit of Junction City. It was decided that Kansas State University and the Manhattan Chamber of Commerce were of approximately equal prestige in Riley County, and therefore, Kansas State University stationery was used for the questionnaire in the Manhattan area.

⁶Clifford L. Eubanks, "An Investigation of Some Problems and Procedures in the Use of the Mail Survey in Marketing Research." Unpublished Ph.D. dissertation, University of Arkansas, 1967, Pg. 18.

One of the strongest measures used to combat the non-response problem was the intensive use of publicity for the study. Before the survey was actually implemented, it was given coverage in the Manhattan Mercury, Kansas City Star, Junction City Union, and the Kansas State University Collegian. After the questionnaires were sent out, newspaper coverage in the Manhattan Mercury and the Junction City Union continued, and the KMAN and KJCK radio stations gave continual public service reminders emphasizing the importance of the survey and the necessity for prompt return of the questionnaires. The extremely fine cooperation received from news media of both Junction City and Manhattan provided an increase in interest in the project and at the same time increased the return rate of the questionnaires. It was not possible to quantify the amount which the news media aided the study; however, the increase was estimated to be substantial. The effect of the news coverage on the project was evidenced by the failure of the return rate of the questionnaires to decline at the previous rate after the intensive news coverage was started.

The letter (Appendix C) accompanying the questionnaire was designed with the ultimate goal of stimulating the respondent. Information pertaining to the study and a plea for cooperation were the basis of the letter.

There are other factors which could have an effect on the non-response level. One of these, whose value is intangible, is the shade and color of paper which is used for the questionnaire.⁷ Pastels of blue, pink and yellow are generally considered the most effective.⁸ Although the effect of the colors may have been minute, 2,500 questionnaires of both blue and pink pastels were used in this study in an attempt to raise the level of non-response.

⁷Ibid., p. 92

⁸Ibid., p. 92

The largest factor to which the level of non-response was attributed was the high (25-28%) annual level of transient population in the Junction City and Manhattan areas.⁹ This measurement includes both people of employable age and those of unemployable age, the high percentage of transient population was a significant factor in the survey. The ratio of transient military personnel and students to the general population made a "good" response for the survey difficult. However, the study was directed at the stable, permanent population of Riley and Geary counties. The transient population is a feature of the two counties, and must be considered by employers. Eleven percent of the questionnaires was returned because of "nondelivery" to addressee. Since the addresses were taken from a 1966 directory, this percentage is not felt to be too high for purposes of tabulation and estimation of labor skills.

The Sample and Response

The total sample size for Riley and Geary counties was 7,062. The sample included 4,741 questionnaires sent to the residents of Riley County and 2,321 to the residents of Geary County. The sample was divided almost exactly between male and female, with 3,498 female participants and 3,564 male participants. The returned questionnaires were not as evenly divided as the sample was with respect to the sexes. Females constituted 58.6% of the Manhattan responses, 56.8% of the Junction City responses were females, the females constituted 58% of all responses available for analysis. Only the Junction City returns were sent by first class mail, and of the 2,321 participants from Junction City, 251 were not delivered for various reasons, leaving 2,067 questionnaires effectively delivered. This nondelivery

⁹ Sharon Billings, "Transients: A City's Assets or Liabilities," Manhattan Mercury (Manhattan), July 30, 1967.

rate was approximately 11% of the total Junction City sample. Manhattan and Riley County's questionnaires were mailed on bulk mailing, third class permit. As a result of this method of mailing, the non-deliverable questionnaires were not returned to the sender; therefore, for lack of an empirical source of data, it was assumed that the nondelivery rate for Manhattan and Riley County was equivalent to that of Junction City and Geary County. Using this assumption, 521 letters to residents of Riley County were estimated to have been undelivered, lowering the estimated Riley County sample size to 4,190 questionnaires received by respondents.

The total gross return, calculated on the effective delivery, was 23.1%. Unusable questionnaires lowered the return rate 3.8% to 19.3%, leaving 1,211 usable questionnaires. Most of the unusable questionnaires were properly completed but were returned by respondents over the stratified age limit of sixty years. The forms returned incompletely by respondents were a small minority of the total forms returned - less than 2%. In view of the limitations and the type of study, the gross return of 23% was considered satisfactory and representative for the Labor Skills Survey.

TABLE III-1
SURVEY RETURNS

	Manhattan	Junction City	Total
Mailed	4,741	2,321	7,062
Not delivered	<u>521*</u>	<u>254</u>	<u>775</u>
Effective delivery	4,220	2,067	6,287
Gross return	975	481	1,456
Unusable questionnaires	<u>139</u>	<u>106</u>	<u>245</u>
Net return	836	375	1,211
Gross return percentage [#]	23.1	23.2	23.1
Net return percentage [#]	19.8	18.1	19.3

*Estimated

[#]Calculated on effective delivery

STATISTICAL METHOD AND FOLLOW-UP

Manhattan was chosen as the location of the follow-up personal interview survey. The sample for this survey was selected in a random block sample design. From a city map the street, side of the street, and block were randomly selected. Members of the Manhattan Junior Chamber of Commerce then interviewed the first five houses, starting from a pre-selected point on that block. The interviewers attempted to keep the number of male and female respondents approximately equal in size. In the personal interview survey there were 34.7% male and 45.3% female respondents. This combination of respondents was near enough to the mail questionnaire proportion of 42% male and 58% female respondents to allow valid statistical analysis.

The only variations in the questionnaire forms for the mail and personal interviews was the elimination of question 10, concerning incomes, in the personal interviews. The interviewers felt that this question would not supply correct or valid answers for the survey. It was agreed that the question should be eliminated completely in the personal interview.

After the interviews were completed there were 64 usable questionnaires. Some of the questionnaires were eliminated because the respondents were over the stratified limit of 60 years of age. The net return for the personal interviews was slightly below the expected return, 10% of the 836 usable questionnaires for the Manhattan Mail Survey. However, the 64 responses were enough to apply statistical analysis.

The method of analysis chosen for this survey tested for significant variations between proportions of the mail and follow-up surveys. The purpose of the follow-up survey and the statistical test was to verify that

TABLE III-2
 PROPORTIONAL SIGNIFICANCE
 AT A 95% CONFIDENCE LEVEL

Occupational Classification	Personal Interview (Percent)	Mail Sample (Percent)	Acceptable Ranges (Percent)	
			High	Low
Professional, technical and managerial	35.9	39.8	22.9	46.8
Clerical and sales	21.8	20.0	11.4	31.4
Service	14.0	7.1	7.0	24.9
Farm	1.5	2.2	0.2	9.1
Processing	1.5	0.7	0.2	9.1
Machine trades	4.5	1.5	1.0	12.1
Benchwork	0.0	1.2	0.0	5.6
Structural work	3.0	3.3	0.5	11.1
Miscellaneous	1.5	1.5	0.2	9.1
Housewife	12.5	21.5	5.6	22.6
NA	3.0	1.3	0.6	5.6

the survey was valid and that the mail questionnaires and the personal interviews were directed at the same basic population. If the mail questionnaire proved valid, then generalization as to the characteristics of the main population could be made from the thesis.

Occupational classifications were used as the basis in testing for significant statistical proportional differences. The test was illustrated in Table (III-2). For the mail survey to be considered valid and representative, the proportion of each occupational classification must be within the acceptable ranges designated on the table. The ranges were determined by the magnitude of the proportions of the responses in each occupational classification on the personal interview survey.

None of the mail sample proportions were outside of the acceptable ranges established by the personal interview results. Therefore, it was determined that the results were valid with a 5% probability of error.

CHAPTER IV
DISCUSSION OF RESULTS

Section A: Occupations

This section is concerned with occupational status, i.e., what the respondent was doing at the time of the survey. Present occupational status is the strongest direct measure of a person's abilities. The occupational status provides a valid measure of at least one employable skill, since the respondent is presently employed using the stated skill.

Under the DOT classification system there are nine basic occupational categories (Appendix D). Each category contains broad, general fields of employable skills. These basic categories, which were used to analyze the results of the "Skills Survey," include:

1. Professional, technical, and managerial occupations
2. Clerical and sales occupations
3. Service occupations
4. Farming, forestry, fishing, and related occupations
5. Processing occupations
6. Machine trades occupations
7. Bench work occupations
8. Structural work occupations
9. Miscellaneous occupations
10. Homemaker
11. Not applicable

To facilitate the analysis of the questionnaires, two additional categories were added: "Homemaker" and "Not Applicable," numbers ten and eleven, of the preceding list. Homemaker included all of the female respondents who were not in the labor force; whereas, the Not Applicable category included those unemployed and those who did not respond to the question. A more exact classification of the Not Applicable respondent is available in the Program Deck II output (Appendix F).

TABLE IV-1
OCCUPATIONS BY PERCENTAGE

Occupation Classification	Manhattan	Junction City	Area
Professional, technical and managerial	39.8	25.4	35.3
Clerical and sales	20.0	26.9	22.2
Service	7.1	13.9	9.3
Farm, forestry, fishing	2.2	1.6	2.0
Processing	.7	1.0	.8
Machine trades	1.5	1.6	1.5
Bench work	1.2	2.1	1.4
Structural work	3.3	3.2	3.3
Miscellaneous	1.5	2.9	1.9
Homemaker	21.5	16.3	19.9
NA	1.3	5.1	2.4
Total	100.0%	100.0%	100.0%

TABLE IV-2
PRESENT OCCUPATION OF POPULATION BY SEX

Occupational Divisions	Manhattan		Junction City	
	Male	Female	Male	Female
Professional, technical, and managerial	57.5	27.2	30.4	21.2
Clerical and sales	10.1	27.2	21.1	31.6
Service	7.5	6.9	18.1	10.4
Farm, forestry, fishing	5.3	0.0	3.7	0.0
Processing	0.9	0.6	1.7	0.5
Machine trades	3.7	0.0	3.7	0.0
Bench work	2.6	0.2	3.2	1.4
Structural work	7.5	0.0	7.4	0.0
Miscellaneous	3.7	0.0	6.4	0.5
Homemaker	0.0	36.3	0.0	28.3
NA	1.2	1.6	3.7	6.1
Total	100.0%	100.0%	100.0%	100.0%

The total Manhattan and Junction City occupational grouping is characterized by a concentration of people in the professional-technical category. This category, with an itemized breakdown in Appendix A, contains 35.3% of the respondents from the Manhattan-Junction City area. The individual occupational grouping most affecting the size of this category was the educational division, which accounted for 46% of those in the professional and technical category. The number of employees in the field of education was attributed to Kansas State University. Forty per cent of the respondents in the Manhattan area, which contains the university, were in the professional and technical category, and 49% of these people had occupations in education.

The next most frequently mentioned occupational category was Clerical and Sales Occupations. At the time of the survey, 22.2% of the respondents in the total survey area were employed in clerical or sales occupations. The occupational divisions which accounted for 60% of the clerical and sales category employees were stenography, typing, filing, computing, and account-recording. It is felt that Kansas State University, in conjunction with the military establishment, Fort Riley, played an important role in contributing to the number of people employed in the clerical and sales categories. The second largest grouping in the clerical and sales category included the salesmen and merchandising divisions, which constituted 21% of that category. This last division contains those which work in retail stores in the Manhattan-Junction City area.

The next major occupational category is Service Occupations. This category includes employees such as policemen, firemen, military servicemen, kitchen workers, barbers, and cosmetologists. This category was responsible for 9.3% of the occupations reported by all of the respondents, and it constituted 13.9% of the returns from the Junction City area alone.

This fact can be attributed to the proportion of military personnel who live in Junction City to the general population. The protective service division provided almost one-third of the respondents in service occupations in the Junction City area.

Only small portions of the population (10.4% total) were actively engaged in the remaining types of occupations (Table IV-1), and none of these categories contained more than 3.3% of the population in the labor force. This fact was an indicator of the present low level of industrial employment active in the survey area.

Section B: Experience

Section B presents the past work experience of the respondents, obtained from jobs actually held in the past. Past work experience is a measure of potential, utilizing the past as an indicator of future development. The purpose of this study was not to enumerate those available for or looking for employment, but to serve as an indicator of the potential employable skills.

There were noticeable and marked changes in the percentages of respondents in each occupation classification when the author compared occupations and job experiences. The largest single change in the occupational divisions occurred in the clerical and sales occupations - 13.6% more respondents had previous employment in these occupations than were employed at the time of the survey in this category. Much of this change occurred as a result of homemakers leaving the labor force. As an example of the effect of the homemakers, 54.7% of the female respondents from the Junction City area reported past work experiences in the clerical and sales occupational category, but only 31.6% listed occupations in this category (Tables IV-3, IV-4).

One of the more significant differences between present and past occupations involved the Machine Trade category. Both Manhattan and Junction City male respondents reported that 3.7% were employed in Machine Trade occupations. However, 8.8% of the Manhattan males and 13.7% of the Junction City males had had past jobs in this category. These past work experience percentages were more than double the percentage of respondents who were, at the time of the survey, engaged in machine occupations.

TABLE IV-3
EXPERIENCE BY PERCENTAGE*

Occupational Classification	Manhattan	Junction City	Total
Professional, technical, and managerial	35.3	21.9	31.9
Clerical and sales	34.5	39.2	35.8
Service	9.7	13.9	10.9
Farm, forestry, fishing	4.4	3.0	4.0
Processing	.1	1.6	.9
Machine trades	3.6	5.7	4.2
Bench work	2.3	4.9	3.0
Structural work	6.0	3.9	5.5
Miscellaneous	<u>2.9</u>	<u>5.9</u>	<u>3.8</u>
Total	100.0	100.0	100.0

*Calculated on usable answers

TABLE IV-4
EXPERIENCE
PERCENTAGE BY SEX*

Occupational Classification	Manhattan		Junction City	
	Male	Female	Male	Female
Professional, technical, and managerial	37.7	34.7	21.5	22.2
Clerical and sales	12.0	18.2	18.3	54.7
Service	5.2	12.6	10.8	16.3
Farm, forestry, fishing	10.2	.5	6.0	.8
Processing	.9	.5	1.8	1.2
Machine trades	8.8	.2	13.4	.0
Bench work	3.2	1.6	7.6	2.8
Structural work	15.1	.0	8.6	.4
Miscellaneous	<u>6.9</u>	<u>.4</u>	<u>12.0</u>	<u>1.6</u>
Total	100.0	100.0	100.0	100.0

*Calculated on usable answers

Section C: Skills

It is evident from the results of the analysis of the questionnaire, that avocational skills vary greatly from vocational skills (Tables IV-3, IV-5). The avocational skills, represented by the skill index, were in the most ambiguous section from which an estimate of the employable skills potential may be derived. These skills may or may not have been attained professionally. In addition to this fact, one can question the practical competence of the person who reported the skill. The main thought which this section is attempting to project is that these respondents have shown interest and some degree of aptitude towards an employable skill.

The responses of the skills index were concentrated in the manual and blue-collar occupations, rather than in the white-collar occupations as the answers in the two previous sections were. More than 40% of the males in the survey area reported skills involving structural work occupations. These occupations include many skills which can be cultivated nonprofessionally, such as carpentry, welding, and small appliance repair. Also, this category contains skills which require more formal training such as those of heavy equipment operators. It would be difficult to determine the degree of professionalism without more information than was provided by the questionnaire.

Seventy-five per cent of the total female respondents were included in the clerical and sales and bench work categories. Bench work occupations, predominantly sewing, embodied approximately 43% of the skills reported by all female respondents. The magnitude of this response is subject to two interpretations: one, that this percentage is a realistic representation of the female skills or, two, that the question (Question 3) was leading in nature since sewing was used as a sample response. The purpose of

TABLE IV-5
SKILLS BY PERCENTAGE*

Occupational Classification	Manhattan	Junction City	Total
Professional, technical, and managerial	15.9	12.6	15.1
Clerical and sales	22.5	22.6	22.4
Service	5.6	6.9	5.9
Farm, forestry, fishing	2.0	.4	1.7
Processing	1.1	.0	.8
Machine trades	4.1	7.8	5.1
Bench work	31.7	28.2	30.8
Structural work	15.8	19.0	16.6
Miscellaneous	<u>1.3</u>	<u>2.5</u>	<u>1.5</u>
Total	100.0	100.0	100.0

*Calculated on usable answers

these statements is not to deter one from the fact that female respondents used sewing as a response, but their purpose is that of pointing out a factor which may have affected the chosen responses.

The clerical and sales category encompassed the next most frequently reported female skills. The clerical divisions of typing and shorthand were the major contributors to the size of this category. This response was expected since typing can be considered to be a "feminine" skill and 30% of the females listed typing as part of their previous employment experience.

Section D: Sex

The employment skills of the sexes differ greatly. Differences in employment status, educational level, and income appear as well. These last differences are the ones which will be discussed in this section.

Employment Status

Of the male respondents in the survey, only 2.7% were looking for work, either part or full time. Females were not as fortunate - 9.1% were looking for some type of employment. This is an example of unemployment which would not necessarily be available through the Bureau of the Census, because some of these women may not be considered, by the Bureau of the Census standards, to be in the labor force. Junction City has a slightly higher percentage of females "looking for work" than Manhattan - 11.8%, compared with 8.1% for Manhattan. However, both figures were considerably above the national female unemployment rate of 5.5%.¹¹ The higher than average unemployment rate of the female population represents a latent working force which could, if utilized, be an asset to the community.

¹¹U. S. Dept. of Labor, Manpower Report of the President, U. S. Government Printing Office, Washington D.C., 1966, pg. 169

TABLE 17-6
LOOKING FOR WORK

City	Male	Female	Total
Manhattan	1.7%	8.1%	5.5%
Junction City	4.9%	11.3%	8.6%
Total	2.7%	9.1%	6.4%

Education

Nationally, a higher percentage of females has completed high school than males. ^{12a} This fact was also true in the survey area, but in the survey area a larger than national average percentage of both men and women completed their high school education. The survey revealed that almost 30% more of the population of Riley County and 20% more of the population of Geary County completed high school than would have been expected using the national average for completion of high school as the norm. Nationally 60.5% of the population attained an educational level of 12th grade or greater. In the complete survey area 85.7% of the population had completed high school. These results serve to indicate that relative high educational emphasis was prevalent in the survey area.

^{12a} Ibid. pg. 189

TABLE IV-7
MEAN EDUCATIONAL LEVEL

City	Male	Female	Total
Manhattan	14.7	13.5	14.0
Junction City	12.3	12.2	12.2
Total	14.1	13.1	13.4

TABLE IV-8
COMPLETED HIGH SCHOOL (PERCENTAGE)

City	Male	Female	Total
Manhattan	88.4	91.0	89.9
Junction City	75.1	78.9	76.6
Total	84.2	87.0	85.7

TABLE IV-9
EDUCATION: 1965 NATIONAL AVERAGES BY PERCENTAGE*

Education	Male	Female	Total
Four years of high school or more	58.7	63.6	60.5
One-three years of college	11.7	11.6	11.6
Four years of college or more	18.0	11.2	15.6
Median education completed (Years)	12.3	12.3	12.3

*United States Department of Labor, Manpower Report of the President And a Report on Manpower Requirements, Resources, Utilization, and Training (Washington: United States Department of Labor, 1966), p. 190.

However, this might be a misrepresentation of the actual case. The 1967 County and City Data Book reported that only 53.5% of Geary and 64.4% of Riley County residents had an educational level of twelfth grade or higher. Also, there was a significant difference between the average (mean) years of education in the Manhattan area and the national and state median years of education. There was even a difference between the median educational level of Riley County as reported by the City and County Data Book, (12.5 yrs.), and the results of the survey (14.1 yrs.)¹³ These differences may have been partially a result of respondent bias - the higher the education the more likely it is that the respondent will return the questionnaire.¹⁴ Even so, with the sample results stratified with a cutoff point at age sixty, there was a variation in basic population from which the percentages were derived. The older the age group in Riley and Geary County, the lower the general level of education, a fact revealed by a previous study performed by the Manhattan Employment Service.¹⁵ Therefore, it was conceivable that the survey depicted accurately the educational status of the workers of employable age.

Income

It appears that the females were an underprivileged group where income was concerned. The average median income for females in the survey area was only 50% of the male median income - male income for the area totaled \$5,000 compared with \$2,500 for females. This difference is not solely dependent upon the wage earning power of the females. Many of the females were not, at

¹³Bureau of Census, County and City Data Book, 1967, a Statistical Abstract Supplement, U. S. Government Printing Office, 1967, pp. 122-136.

¹⁴Clifford L. Eubanks, "An Investigation of Some Problems and Procedures in the Use of the Mail Survey in Marketing Research." Unpublished Ph.D. dissertation, University of Arkansas, 1967, p. 85.

¹⁵Manhattan Employment Study, June 1, 1964, p. 1.

TABLE IV-10
MEDIAN INCOME

City	Male	Female	Total
Manhattan	5,000	1,800	3,500
Junction City	5,000	3,300	4,400
Total	5,000	2,500	

the time of the survey, employed or in search of employment. Much of the variation of the median income of the female population between the two communities was a result of this situation. A large segment of the Manhattan females were in the unemployed homemaker classification. By comparison the Junction City female unemployed homemakers constituted a smaller percentage of the female respondents. When these groups were removed from the calculations the average median income for the female respondents rose to \$3,000, three-fifths as much earned income as the male respondents. As a whole, the females were paid less for their services than the males, even though there were some females in the "over \$10,000" income classification. The females in the "over \$10,000" category constituted only 2.1% of the female respondents. Therefore, not all of the females were in the lower income brackets, but a larger percentage of females than of males was in these brackets.

Section E: Income

In the analysis of the survey with respect to incomes, a difference in the mean (average) income of the male respondents of Junction City and Manhattan became noticeable. Average annual income of Manhattan males was \$1,000 higher than for Junction City. Much of the difference was a result

TABLE IV-11

MEAN INCOME

City	Male	Female	Total
Manhattan	7,535	2,645	4,751
Junction City	6,497	3,108	4,636

of the higher wage scale at Kansas State University than was prevalent in the complete Manhattan-Junction City survey area. When the median incomes, as opposed to mean incomes, were observed, the annual income for both Manhattan and Junction City male respondents was \$5,000. This result meant that the same proportion of the respondents in both counties made above \$5,000, as those that made below that amount. The apparent difference in the male annual incomes was not as large or significant as it first appeared.

The results of the survey correlate very closely with the official 1960 median incomes. The published incomes for 1960 were \$4,746 and \$4,278 for Riley and Geary counties, respectively, whereas the results of the survey indicated that the average incomes for Riley and Geary counties were \$4,751 and \$4,636, respectively.

Characteristics other than the aggregate survey area incomes were also analyzed in an attempt to discover other relationships involving income. In some respects, as the level of income changed, other characteristics of the population also changed. The presentation of the following factors should not imply a cause and effect relationship. There are variations in relationships, but the "why's" are not discussed because of lack of definitive data.

Dependents

Except in the lower income category, in which the number of dependents was higher than would be expected from the trend of the dependent relationship, there was a general increase in dependents as the income rose. (Table IV-12). The average number of dependents was slightly less in Manhattan than it was in Junction City, 3.02 per respondent in Riley County and 3.27 per respondent in Geary County. The complete survey area dependent rate of 3.17 per respondent was slightly higher than the national average of 2.9.¹⁶ The number of dependents registered on the survey may vary from the Bureau of the Census figures because there appeared to be some confusion about who should claim the dependents. This confusion was especially conspicuous when coding the questionnaires of the "working wives."

Age

Both Manhattan and Junction City were similar in the income to age comparisons, except that the average age for almost each income classification was slightly lower in the Manhattan area. The variation in average age was slight but constant, with one notable exception. This exception occurred in the \$2,000 income range, where the respondents in Junction City averaged eight years older than the corresponding group in Manhattan. The difference in the average age for the income classifications averaged out to be only 3.1 years, which also included the "exception." As indicated from Table IV-13, as the income classifications rose, the average age for the respondents also increased.

¹⁶ Internal Revenue Service, Statistics of Income, Individual Income Tax Returns, 1964, U. S. Government Printing Office, Washington D.C., 1967, Pg. 103.

TABLE IV-12
AVERAGE (MEAN) NUMBER OF DEPENDENTS
BY INCOME CLASSIFICATION

Income (Dollars)	Manhattan	Junction City
0- 499	3.44	3.04
500- 1,499	2.63	2.66
1,500- 2,499	2.66	2.36
2,500- 3,499	2.32	2.61
3,500- 4,499	3.00	2.16
4,500- 5,499	2.79	2.61
5,500- 6,999	3.40	3.36
7,000-10,000	3.41	4.00
10,000 and above	4.39	3.94
Total	3.02	3.27

TABLE IV-13
AVERAGE (MEAN) AGE BY INCOME CLASSIFICATION

Income (Dollars)	Manhattan	Junction City
0- 499	34.9	39.1
500- 1,499	31.7	36.6
1,500- 2,499	37.4	45.4
2,500- 3,499	37.6	39.4
3,500- 4,499	39.1	43.4
4,500- 5,499	39.6	42.6
5,500- 6,999	41.8	41.5
7,000-10,000	41.6	43.4
10,000 and above	42.8	45.9

Section I: Age

There are more differences in the segments of the population where age is concerned than in any other category previously mentioned. Education, income, percentage not completing high school, respondents attending college, respondents which have received professional vocational training, and the respondents which have served under some type of apprenticeship training program were the most noticeable variations in the age classifications.

Percentage Not Completing High School

The Junction City and Manhattan areas are comparable in trends with respect to the percentage of "not completing high school," however there was a large difference in the percentages themselves. Junction City's percentages ranged from the low of 14.5% for the 36 to 45 year old age group, to a high of 33.0% for the less than 21 year old age group. Manhattan's highest percentage of non-completion of high school was in the 56 to 60 year old age group which constituted only 16.4% of the respondents. From examination of Tables IV-14, IV-15, it appeared evident that more respondents are dropping out of school before completion of high school in the Junction City area than in the Manhattan area. There was a general trend of an increasing drop-out rate as the age increased.

Education by Age

The most sizeable differences, using age as a variable, occurred in the variation of percentages in each locale, when related to the percentage of respondents that attended college. To be included in this group it was not necessary to finish college, any respondent which attended college for any length of time was included in calculating the percentage.

TABLE IV-14
 MANHATTAN EDUCATION INFORMATION
 BY AGE GROUP
 (PERCENTAGE)

Age Classification (years)	Not Completing High School	Attended College	Attended Vocational School	Apprentice Training
20 or less	4.8	65.8	4.8	.0
21 to 24	1.1	68.0	11.6	1.1
25 to 35	.5	66.1	1.1	.6
36 to 45	1.1	47.7	9.6	4.7
46 to 55	12.6	40.3	13.1	5.4
56 to 60	16.4	55.7	14.7	8.1
Total	5.1	42.3	8.4	3.2
National Average	39.7	27.2	NA	NA

TABLE IV-15
 JUNCTION CITY EDUCATION INFORMATION
 BY AGE GROUP
 (PERCENTAGE)

Age Classification (years)	Not Completing High School	Attended College	Attended Vocational School	Apprentice Training
20 or less	33.0	33.0	1.0	.0
21 to 24	19.0	42.8	19.0	.0
25 to 35	14.7	47.0	5.8	5.8
36 to 45	14.5	19.0	6.3	3.6
46 to 55	29.7	23.1	13.2	4.2
56 to 60	30.0	22.5	5.0	2.5
Total	19.4	27.3	8.9	3.7
National Average	39.7	27.2	NA	NA

Differences in percentage of the respondents attending college ranged from 33.2% for the 56 to 60 year old age group to 19.1% for the 25 to 35 year old age group. In all other age classifications the difference was in this range (Table IV-14, IV-15).

In the other educational fields, apprenticeship and vocational training, the variations between the two counties were not as pronounced. Geary county respondents reported that 19% of the 21 to 24 year old age group had received some vocational training. This compared to Manhattan's 11.6% respondents which had received some type of vocational training. The other age groups are somewhat lower in their participation in vocational training, however this survey illustrated that a substantial portion of the survey area's youth are preparing for the future. It is this this 21 to 24 year old age group which must prepare themselves to compete for employment opportunities in the near future.

Work Force

Of all of the respondents included in the survey, only 76.2% are actively employed. Employed refers to all who responded to employed section of question 5. The remainder of the population are either unemployed, homemakers, or students. (Table IV-16). The actual work force for Junction City constitutes a larger (78.5%) proportion of the population, than does the work force of Manhattan (75.5%). In the Junction City area, 100% of the respondents which were of 20 years or less in age were employed. This was the only age group that did not have any unemployment. Unemployment for the purposes of this study was defined as any respondent looking for work, either full or part time. Other age groups were not as fortunate as the 20 years of age and less group. The next two age groups, which contain ages 21 to 35 inclusive had the highest degree of unemployment. It is this age category which is supposedly the most easily trained, the

TABLE IV-16

WORK BY AGE

Age Classification	Manhattan		Junction City	
	Percent Working	Percent Looking for Work*	Percent Working	Percent Looking for Work*
20 or less	78.0	2.4	100.0	0.0
21 to 24	82.9	1.1	80.9	9.0
25 to 35	65.2	.5	72.0	11.7
36 to 45	75.8	9.4	75.4	8.1
46 to 55	82.0	8.1	84.2	8.3
56 to 60	78.6	3.2	70.0	7.5
Total	75.5	5.6	78.5	8.8

*Includes looking for full or part time work and "other".

fastest to learn and the most desirable aged employee. Yet for the Junction City area, in this age group, unemployment was highest. The unemployment rate for 21 to 24 year olds in Junction City is 11.7%, this rate was 4.7% over the 1965 national average.¹⁷

In the other age groupings Manhattan and Junction City are approximately equal, with about 8.0% unemployment, except for the 56 to 60 age group which registered only 3.2% unemployment.

¹⁷ U. S. Dept. of Labor, Manpower Report of the President, U. S. Government Printing Office, Washington D. C., 1966, pg. 167.

TABLE IV-17
MEAN INCOME BY AGE

Age Classification (years)	Manhattan	Junction City
20 or less	\$1,186	\$1,917
21 to 24	\$2,439	\$3,476
25 to 35	\$4,437	\$4,419
36 to 45	\$5,917	\$4,798
46 to 55	\$5,492	\$5,041
56 to 60	\$6,118	\$4,625

TABLE IV-18
PERCENTAGE OF CHANGE NECESSARY
FOR INCOMES TO
EQUAL NATIONAL AVERAGES

Age Classification (years)	Manhattan	Junction City
18 to 24	3.3%	-9.2%
25 to 35	16.9%	17.4%
36 to 45	5.8%	30.4%
46 to 55	12.7%	22.8%
56 to 60	-6.6%	24.0%

TABLE IV-19
AVERAGE NATIONAL INCOME

Age Classification (years)	Income
18 to 24	\$2,731
25 to 34	5,188
35 to 44	6,259
45 to 55	6,194
56 to 64	5,737
Total	\$5,847

Source:

INCOME DISTRIBUTION IN THE UNITED STATES: Herman P. Miller,
Government Printing Office, Washington, D.C., 1966, pp. 139-140.

Income

In the lower years of earning capacity the less than 24 years of age group, Junction City respondents reported a higher average annual income than the Manhattan respondents in the similar age grouping. However, as the ages continued to increase, the incomes for Manhattan rose continually above those in similar age classifications in the Junction City area. This comparison appears favorable to Manhattan area. When Table IV-19, which contains the national average, was compared to the Manhattan and Junction City areas, the income picture is not as optimistic. The Manhattan area exceeds the national average in only one age group, the 56 to 60 year old respondents. The Junction City area likewise only exceeded the national average in one age group. This age group was at the younger end of the age spectrum, the age 24 and less.

It was interesting to note that in each of the segments of the survey the 25 to 35 year old respondents were earning incomes on the average of 17% less than the average of others their age in the United States. Junction City's age group which had the largest degree of "underemployment" was in the 35 to 45 year old age classification.¹⁸ Underemployment for the purposes of this study was defined as: "The utilization of labor for large numbers of persons in such manner that the level of earnings attributable to labor services are below the level obtaining for large numbers of persons of comparable income earning capacities and economically relevant values and tastes in some sector, region or economy (taken as a norm) with which the study population is effectively

¹⁸ R. B. Glasgow, E. L. Baum, Considerations for Planning Economic Development of Rural Areas, Economic Research Service, United States Department of Agriculture, 1963, p. 9.

economically integrated."¹⁹ In this study the United States, age and income statistics served as the norm, for comparative analysis. These years, age 35 to 45, are supposedly the most productive years of a person's life, yet this age group on the average had incomes 30% below the national average for that income group. When the complete income picture is analyzed it appears that there is a relatively high degree of economic underemployment.

The large majority of respondents of this study are between the ages of 24 to 56 inclusive. This scope of ages has the largest deviation from the national average per age group with respect to incomes. The low wage scale, relative to the rest of the nation, coupled with the approximately normal distribution of occupational skills on the experience index indicate that there is an ample supply of available and usable manpower. If the respondents to this survey were used at a level closer to their potential the degree of underemployment would undoubtedly diminish.

¹⁹ Ibid.

CHAPTER V

SUMMARY AND CONCLUSIONS

The final sample for the mail questionnaire was sent to 20% of the employable population. The total usable response was approximately 20% of the original sample, for an effective coverage of 4% of the population of Riley and Geary counties. This 20% return was expected, based on similar surveys of this type. It was assumed for the purposes of this study that there was no question which was offensive to the potential respondents. Therefore, no singular fault of the questionnaire was responsible for the remaining questionnaires not to be returned. Under this assumption it was valid to also assume that the remaining 80% of the original sample did not vary significantly with respect to characteristics from the 20% of the sample which responded to the questionnaire. Using this assumption in conjunction with the statistical test, the sample was considered representative of the complete population of the survey area.

From the return rate of the survey questionnaires it was concluded that the type of mailing, bulk rate versus first class, had little or no effect on the aggregate response. Approximately the same percentage of returns, 23.2% for Junction City and 23.1% for Manhattan, were received from both communities. The only significant difference in techniques of application of the survey was the use of the Junction City Economic Development Council stationery and first class mailing for the Geary county survey. The successful rate of response received for the study, was accredited to the concentrated news coverage of the survey and cooperation of civic leaders in the communities.

Location

Riley and Geary counties are located in the northwest corner of the Kansas Industrial Triangle. This triangle of industrial and financial development contains approximately 80% of Kansas's industrial capacities. However, the survey area is not located in an area of concentrated population. Most products produced on a large scale would not be designed for consumption or use by the population in the immediate area. Therefore, any products manufactured in the survey area must be highly transportable. Adequate transportation, either by truck, train, or air, is available for most types of industries in the survey area.

Summary

Potential for a semi-industrial labor supply was available in the survey area. Of the two basic segments of the survey area, the Junction City-Geary County area appeared to have more employable characteristics of industrial potential. The Manhattan-Riley County survey area was more technical and research orientated. The combination of the industrial potential of Geary county and the scientific, research capabilities of the Riley County area, should provide a sound base of employable labor for many types of industries. At the time of the survey, the potential labor supply was not being fully utilized. In the occupational divisions of this thesis, data were presented concerning employment, past, present, and possible. Only in the possible employment (skills) realm did the survey area compare favorably with the national occupational averages. For example, nationally 44.5% of the population was employed in white collar occupations. The Manhattan area reported 59.8% and the Junction City area reported 52.3% of the respondents were employed in white collar occupations. The experience index revealed a larger disparity with the national occupational averages,

with 69.8% and 61.1% for Riley and Geary counties respectively, employed at some time in the white collar occupations. Much of the abundance of white collar occupations was at the expense of the blue collar occupations.

Blue collar skills include the occupations: Processing occupations, machine trades, benchwork occupations, and structural occupations. Nationally, the blue collar workers accounted for 36.7% of the population employed in all occupational categories. For the survey area, the blue collar workers, taken as a percent of the total sample, was remarkably lower, only 7% of the population. This rate is almost 30% below the expected quantity of blue collar workers if the national averages were used as a norm. The experience index presented a more favorable picture of the occupational status. Previous blue collar work experience was indicated by 13.6% of the respondents. This amount was almost twice that reported on the occupational index and still less than half of the national average for blue collar workers.

Educationally the survey area ranks in the upper portion of the nation. The mean educational level reported for the total survey area was 13.4 years of education. This relatively high level, compared with the United States average of 12.3 years if attributable in part to the percentage of respondents which finish high school. The national average of the population completing high school is only 60.5%, whereas the survey area reported that 85.7% of the respondents completed high school. High educational standards, such as these are an indicator of the quality of the people in the labor force, which should not be overlooked.

TABLE V-1
 EMPLOYED: ANNUAL AVERAGE FOR NATION*
 PERCENTAGE DISTRIBUTION

Occupational Classification	Male	Female	Total
Professional, technical, and kindred workers	11.9	13.0	12.3
Managers, officials, and proprietors, except farm	13.2	4.4	10.2
Clerical and sales	13.0	38.7	22.0
Service	7.0	24.1	12.9
Farm, forestry, fishing	7.4	3.2	5.9
Others	47.4	16.5	36.7

*United States Department of Labor, Manpower Report of the President And a Report on Manpower Requirements, Resources, Utilization, and Training (Washington: United States Department of Labor, 1966), p. 165.

Two major factors which afflict the survey area are unemployment and underemployment. Of these two factors, unemployment is the easiest to identify and recognize. Unemployment constitutes only 2.7% of the male respondents of the survey area. This level approximates the normal level of unemployment which would be expected from interim layoffs of changes in places of employment. (frictional unemployment).

The female respondents suffered from a considerably larger degree of unemployment. Of all the female respondents in the survey area, 9.1% were in search of some type of employment. This employment rate was 3.9% over the national unemployment rate for females. Unemployment, especially of this magnitude, represents a waste of resources for a community.

Underemployment, as previously defined, is a comparative evaluation. Underemployment contrasts the average income of Geary and Riley county respondents with incomes of comparable age groups in the United States. The average incomes for some age groups in the survey area were as much as 30% below the national average. Of the 10 possible age groups which includes both Geary and Riley counties, only two groups lead the national average. Even though the survey area has a high level of educational training and a normal level of work experience, the respondents are being paid less for their services than similar age groups, on the average, in other parts of the nation. Many of the respondents were capable of performing satisfactorily in skills above the ones in which they presently are employed. In general, there appeared a deficiency of proper employment opportunities in relation to the available workforce.

It would be difficult to estimate an exact size of the employable labor force because of differing skill requirements of potential employees.

The results indicate that Geary and Riley counties potentially contain from 2,500 to 4,000 part and full time employees in the light industrial to scientific research industries. Much of this labor force is experienced in compatible skills. Because of the very high educational level, acquisition of exact skills requirements through training seems quite possible.

The resulting increase in total incomes through increased employment would have a most desirable effect upon the communities. It is concluded that the labor force is not a hinderance to further industrialization of these counties - rather it is felt that the labor force is a very strong feature in attracting new industry or expanding the industrial base of these communities.

The location of the respondent was, under the questionnaire used for this thesis, limited to the complete county. Through the color coding of the questionnaires it was possible to determine in which county the respondent resided. The questionnaire did not reveal the distance or time it would take a respondent to get to any certain location in the work area. This fact can be useful for a more complete definition of the characteristics of the employable population of the survey area. Additional information, which would more nearly approximate the location of the respondent in the county, could add a new and important dimension to future studies on Employable Occupational Skills.

It might also be useful to examine the willingness or need for vocational training, especially for those who are either unemployed or underemployed. This information would be helpful in serving as guidelines in the establishment of alternation in scope of local vocational-technical schools.

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APPENDIX A.

TABLES

TABLE A-1
RETURN OF QUESTIONNAIRES

Date	Manhattan		Junction City	
	Quantity	Cumulative Per Cent	Quantity	Cumulative Per Cent
August 7	253	26.0	165	34.3
August 8	224	49.0	94	53.8
August 9	126	62.0	51	64.4
August 10	85	70.7	30	70.7
August 11	64	77.2	35	77.9
August 12	61	83.4	13	80.7
August 14	45	88.0	27	86.3
August 15	50	93.1	28	92.2
August 16	33	96.5	18	95.9
August 17	<u>34</u>	100.0	<u>20</u>	100.0
Total	975		481	

TABLE A-2
 OCCUPATIONS
 (ACTUAL COUNT)

Occupation Classification	Manhattan	Junction City	Area
Professional, technical, and managerial	333	95	428
Clerical and sales	168	101	269
Service	60	52	112
Farm, forestry, fishing	18	6	24
Processing	6	4	10
Machine trades	13	6	19
Bench work	10	8	18
Structural work	28	12	40
Miscellaneous	13	11	24
Homemaker	180	61	241
N/A	11	19	30

TABLE A-3
PROFESSIONAL, TECHNICAL, AND MANAGERIAL OCCUPATIONS

Occupational Divisions	Manhattan	Junction City	Total
Architecture and engineering	12	3	15
Mathematics and physical sciences	3	0	3
Life sciences	15	1	16
Social sciences	4	0	4
Medicine and health	27	9	36
Education	163	34	197
Museum and library	4	3	7
Law and jurisprudence	5	2	7
Religion and theology	0	0	0
Writing	1	0	1
Art	5	0	5
Entertainment	3	1	4
Administrative specializations	23	9	32
Civil service, n.e.c.	2	5	7
Managers and officials, n.e.c.	45	22	67
Miscellaneous	<u>21</u>	<u>6</u>	<u>27</u>
Total	333	95	428

TABLE A-4
CLERICAL AND SALES

Occupational Divisions	Manhattan	Junction City	Total
Stenography, typing, filing	84	28	112
Computing and account-recording	28	22	50
Material and production recording	6	10	16
Information and message distribution	11	13	24
Miscellaneous clerical	9	2	11
Salesmen, services	10	6	16
Salesmen, commodities	8	6	14
Merchandising occupations, except salesmen	<u>12</u>	<u>14</u>	<u>26</u>
Total	168	101	269

TABLE A-5
SERVICE OCCUPATIONS

Occupational Divisions	Manhattan	Junction City	Total
Domestic service	4	1	5
Food and beverage preparation and service	16	13	29
Lodging and related services	0	1	1
Barbering, cosmetology, and related services	7	4	11
Amusement and recreation services	0	0	0
Miscellaneous personal service	8	3	11
Apparel and furnishings service	3	4	7
Protective service	13	22	35
Building and related service	<u>9</u>	<u>4</u>	<u>13</u>
Total	60	52	112

TABLE A-6
 FARMING, FISHERY, FORESTRY, AND RELATED OCCUPATIONS

Occupational Divisions	Manhattan	Junction City	Total
Plant farming	2	0	2
Animal farming	1	1	2
Miscellaneous farming and related	12	4	16
Fishery and related	0	0	0
Forestry	0	0	0
Hunting, trapping, and related	0	0	0
Agricultural service	<u>3</u>	<u>1</u>	<u>4</u>
Total	18	6	24

TABLE A-7
PROCESSING OCCUPATIONS

Occupational Divisions	Manhattan	Junction City	Total
Processing of metal	0	0	0
Ore refining and foundry	0	0	0
Processing of food, tobacco, and related materials	4	3	7
Processing of petroleum, coal, natural and manufactured gas, and related products	0	0	0
Processing of chemicals, plastics, synthetics, rubber, paint, and related products	0	0	0
Processing of wood and wood products	0	0	0
Processing of stone, clay, glass, and related products	0	0	0
Processing of leather, textiles, and related products	1	0	1
Processing, n.e.c.	<u>1</u>	<u>1</u>	<u>2</u>
Total	6	4	10

TABLE A-8
MACHINE TRADES

Occupational Divisions	Manhattan	Junction City	Total
Metal machining	1	0	1
Metalworking	1	0	1
Mechanics and machinery repairmen	10	5	15
Paperworking	0	0	0
Printing	1	1	2
Wood machining	0	0	0
Machining stone, clay, glass, and related occupations	0	0	0
Textiles	0	0	0
Machine trades, n.e.c.	<u>0</u>	<u>0</u>	<u>0</u>
Total	13	6	19

TABLE A-9
BENCH WORK OCCUPATIONS

Occupational Divisions	Manhattan	Junction City	Total
Fabrication, assembly, and repair of metal products, n.e.c.	0	0	0
Fabrication and repair of scientific and medical apparatus, photographic and optical goods, watches and clocks, and related products	2	0	2
Assembly and repair of electrical equipment	4	4	8
Fabrication and repair of products made from assorted materials	0	0	0
Painting, decorating, and related	2	1	3
Fabrication and repair of plastics, synthetics, rubber, and related products	0	0	0
Fabrication and repair of wood products	0	1	1
Fabrication and repair of sand, stone, clay, and glass products	1	0	1
Fabrication and repair of textiles, leather, and related products	1	2	3
Bench work, n.e.c.	<u>0</u>	<u>0</u>	<u>0</u>
Total	10	8	18

TABLE A-10
STRUCTURAL OCCUPATIONS

Occupational Divisions	Manhattan	Junction City	Total
Metal fabricating, n.e.c	1	0	1
Welders, flame cutters, and related	0	0	0
Electrical assembling, installing and wiring	5	3	8
Painting, plastering, waterproofing cementing, and related	3	0	3
Excavating, grading, paving, and related	4	3	7
Construction, n.e.c.	11	5	16
Structural work, n.e.c.	<u>4</u>	<u>1</u>	<u>5</u>
Total	28	12	40

TABLE A-11
MISCELLANEOUS OCCUPATIONS

Occupational Divisions	Manhattan	Junction City	Total
Motor freight	5	2	7
Transportation, n.e.c.	1	5	6
Packaging and materials handling	2	1	3
Extraction of minerals	0	0	0
Logging	0	0	0
Production and distribution of utilities	5	2	7
Amusement, recreation, and motion picture, n.e.c.	0	1	1
Graphic art work	0	0	0
Subtotal	13	11	24
Housewife	180	61	241
Unemployed and non-response	11	19	30
Total	204	91	565

TABLE A-12
EXPERIENCE
(ACTUAL COUNT)

Occupational Classification	Manhattan	Junction City	Total
Professional, technical, and managerial	393	96	489
Clerical and sales	377	172	549
Service	106	61	167
Farm, forestry, fishing	48	13	61
Processing	7	7	14
Machine trades	40	25	65
Bench work	25	21	46
Structural work	66	17	83
Miscellaneous	32	26	58
Non-response	581	308	899
Total	1,675	746	2,421
Total usable responses	1,094	438	1,532

TABLE A-13
 SKILLS
 PERCENTAGE BY SEX*

Occupation Classification	Manhattan		Junction City	
	Male	Female	Male	Female
Professional, technical, and managerial	19.9	13.6	13.0	12.3
Clerical and sales	8.4	30.7	6.0	35.4
Service	3.6	6.8	10.0	7.7
Farm, forestry, fishing	4.0	.9	.0	.4
Processing	1.4	.9	.0	.0
Machine trades	10.5	.4	17.0	.8
Bench work	8.7	45.2	9.0	42.3
Structural work	41.3	.9	42.0	1.5
Miscellaneous	<u>2.2</u>	<u>.6</u>	<u>6.0</u>	<u>.0</u>
Total	100.0	100.0	100.0	100.0

TABLE A-14
SKILLS
(ACTUAL COUNT)

Occupation Classification	Manhattan	Junction City	Total
Professional, technical and managerial	119	29	148
Clerical and sales	168	52	220
Service	42	16	58
Farm, forestry, fishing	15	1	16
Processing	8	0	8
Machine trades	31	18	49
Bench work	237	65	302
Structural work	118	44	162
Miscellaneous	9	6	15
Non-response	933	519	1,452
Total	1,680	750	2,430
Total usable responses	747	231	978

TABLE A-15
 TWO MOST FREQUENTLY MENTIONED OCCUPATIONS
 IN EACH INCOME GROUP IN MANHATTAN

Income (Dollars)	First	Second
0- 499	Homemaking	Education
500- 1,499	Education	Clerical
1,500- 2,499	Clerical	Education
2,500- 3,499	Clerical	Education
3,500- 4,499	Clerical	Education
4,500- 5,499	Education	Clerical
5,500- 6,999	Education	Administrative specialties
7,000-10,000	Education	Officials, n.e.c.
10,000 and above	Education	Officials, n.e.c.

TABLE A-16
 TWO MOST FREQUENTLY MENTIONED OCCUPATIONS
 IN EACH INCOME GROUP IN JUNCTION CITY

Income (Dollars)	First	Second
0- 499	Homemaking	Merchandising, n.e.c.
500- 1,499	Homemaking	Food and beverage service
1,500- 2,499	Clerical	Food and beverage service
2,500- 3,499	Computing and account-recording	Merchandising, n.e.c.
3,500- 4,499	Clerical	Computing and account-recording
4,500- 5,499	Education	Clerical
5,500- 6,999	Education	Officials, n.e.c.
7,000-10,000	Education	Officials, n.e.c.
10,000 and above	Officials, n.e.c.	Professional, n.e.c.

TABLE A-17
PERCENT OF RESPONDENTS MARRIED

Age Classification (years)	Manhattan	Junction City
20 or less	25.0	22.0
21 to 24	74.5	71.4
25 to 35	94.5	83.8
36 to 45	93.1	94.5
46 to 55	84.9	91.7
56 to 60	75.4	90.0

APPENDIX B.

LETTER AND QUESTIONNAIRE

KANSAS STATE UNIVERSITY
Manhattan, Kansas 66504

College of Commerce
Calvin Hall

July 18, 1967

Dear Citizen:

We are engaged in an important survey of the employment skills of the Manhattan-Junction City Area. We believe this information will be a major factor in our continuing economic growth, which will be of benefit to the whole community.

You represent a part of the sample of residents in this area. It is important that you complete the enclosed questionnaire. Please note that only the person to which the letter is addressed should respond. All answers are confidential, and in no way will your name be associated with the survey.

We are confident that this survey will provide information vital for the economic security of this area. Your cooperation in being a part of this survey is greatly appreciated. The success of the survey depends on every questionnaire being returned.

Very truly yours,

Dean Allmon

DA:lf

Enclosure

KANSAS STATE UNIVERSITY

Manhattan, Kansas 66504

College of Commerce
Calvin Hall

EMPLOYMENT SKILLS SURVEY

1. Please list your present occupation and the length of time you have been engaged in your present occupation. (PLEASE BE SPECIFIC.)

OccupationTime

2. Please list your most significant job experiences, length of experience, and the length of time since you have actually done this type of work. (Examples: Plumber, Metalsmith, Seamstress, Typist, etc.)

ExperienceLength (yrs)
of experienceYears since
doing the job

3. Please list any Personal Skills which you have and the length of time since acquiring the skill. (Examples: soldering, carpentry, sewing, etc.)

SkillsTime

4. Years of education completed? (Please check closest item in each column.)

<u>College</u>			<u>Vocational</u>	<u>Apprenticeship</u>
<u> </u> 0	<u> </u> 10	<u> </u> 0	<u> </u> 0-6 Mos.	<u> </u> 0
<u> </u> 1	<u> </u> 11	<u> </u> 1	<u> </u> 1	<u> </u> 1
<u> </u> 2	<u> </u> 12	<u> </u> 2 Years	<u> </u> 2 Years	<u> </u> 2 Years
<u> </u> 3		<u> </u> 3	<u> </u> 3	<u> </u> 3
<u> </u> 4		<u> </u> 4	<u> </u> 4	<u> </u> 4
<u> </u> 5	Grades	<u> </u> 5	<u> </u> More	<u> </u> More
<u> </u> 6	Completed	<u> </u> 6		
<u> </u> 7		<u> </u> More		
<u> </u> 8				
<u> </u> 9				

Highest Degree Conferred _____

5. Present employment status? (Please check appropriate boxes.)

Employed

 full time

 part time

 other (specify) _____

Unemployed

 looking for full time work

 looking for part time work

 not looking for work

 other (specify) _____

 Retired

 Housewife

 Student

6. Age? _____

7. Sex? (check one) Male _____ Female _____

8. Marital Status? (check one)

<u> </u> Single	<u> </u> Separated
<u> </u> Divorced	<u> </u> Widowed
<u> </u> Married	

9. Number of Dependents? (Including Yourself) _____

10. Please check the box which is closest to the Gross Taxable Income which you had last year. (This does not mean family income which includes income from more than one family member.)

<u> </u> 0- 499	<u> </u> 4,500- 5,499
<u> </u> 500- 1,499	<u> </u> 5,500- 6,999
<u> </u> 1,500- 2,499	<u> </u> 7,000-10,000
<u> </u> 2,500- 3,499	<u> </u> 10,000 and above
<u> </u> 3,500- 4,499	

APPENDIX C.

PROCEDURE

Procedure for Coding the Questionnaire

The following procedure was developed to make the questionnaire-coding process as effortless as possible. A computer program was devised enabling data to be encoded into a manageable form. Facilitating analysis of results, the methodology behind coding the questionnaire is explained in this section.

The materials necessary to code the questionnaire are (1) a dictionary of occupational titles and (2) a coding sheet form. The three-digit classifications of the Dictionary of Occupational Titles DOT was used for defining the occupation, experience, and skill classifications. The coding sheet form is a form used to prepare the data so that it may be punched on computer cards. These coding sheets usually are divided into eighty spaces, one space for every column on a computer card.

The coding procedure allocated three digits on the coding sheet form for every individual answer on the questionnaire. (One question may have more than one answer.) Each answer had a number which ranged from 1 to 999. Minimizing coding and key punch errors, each number was expanded to fill its three-digit allocation. If "age," for example, were 35, this was coded 035. When the questionnaire was completely coded and transcribed to the coding sheet, there were no vacant spaces on the coding sheet form before column 79.

The computer programs developed are Program Deck I and Program Deck II (Appendix F). Program Deck I utilizes the two-digit, DOT (Dictionary of Occupational Titles), classifications for the questions involving occupations, experience, and skills. The other questions-- education, employment, age, marital status, dependents, sex, and income--

were also presented in the output of this program. Program Deck II output consisted of a listing of the three-digit DOT classifications for the questions concerning occupations, job experience, and skills. This program output did not contain information concerning the other aspects of the questionnaire.

Question 1: Occupation (1 to 6 inclusive)

The occupation number, which was placed in the first three columns of the coding sheet, was located in the Dictionary of Occupational Titles in the three-digit category. For example, if the number were twenty-nine, a zero was placed in column one so that it was read 029. The length of time was coded utilizing the second three-digit (columns four to six inclusive), section. All coded information was right-hand justified. If the number of years of service were two, then the number was transcribed 002.

Question 2: Experience (7 to 24 inclusive)

In question two only the first two responses were used. (There was room for four on the questionnaire.) The others were omitted under the assumption that the most important job experiences to the individual were placed first on the list. The occupational categories in the DOT were used in these classifications (they were also used to classify skills). The first work experience listed was put into columns seven to nine, inclusive. Length of experience was placed in columns ten to twelve, inclusive, and the "Time Since Worked" response was placed in columns thirteen, fourteen, and fifteen. The process was then repeated for part "b" of the question. All spaces up to and including column twenty-four were now utilized.

Question 3: Skills (25 to 36 inclusive)

Question three was coded in a manner identical to question one except that two responses were used.

Question 4: Education (37 to 48 inclusive)

Question four consisted of four parts: the high school, college, vocational, and apprenticeship categories, which were each treated separately. The list of elementary and high school education was filled out or marked with the coded number as in example (C-1). Each row of columns in this question was also marked or coded in accordance with the code in example (C-1). "Degrees Conferred" was the only answer which has been excluded in the questionnaire. "Degrees Conferred" was placed in columns seventy-three through seventy-six. The existing computer program would not read this item; therefore, to perform any calculation or computation on this item a card sorter or IBM 360 computer or any computer with 80,000 bit storage should be used on large response mailings. For smaller mailings or samples a simple card count may be sufficient.

Question 5: Employment (49 to 57 inclusive)

For coding purposes this question was divided into three parts. The first, "Employed," used a code number which could go as high as five. This division was also coded in accordance with (Example C). The "Unemployed" and the "Retired," "Housewife," and "Student" sections were also coded in accordance with the above example.

Question 6: Age (58, 59, 60)

The age was written in as a three digit number with a zero preceding it (such as 034 rather than 34).

Question 7: Sex (61, 62, 63)

This question allowed for only three possible responses--001 for males, 002 for females, and 003 for those individuals which did not respond or were not otherwise identifiable.

Question 8: Marital Status (64, 65, 66)

The replies for this part of the questionnaire were coded as in example (C-1). If there was no response on this question, then the number 006 was used.

Question 9: Dependents (67, 68, 69)

The maximum number of dependents which were used in this question was nine. Number "ten" was used for non-responses.

Question 10: Income (70, 71, 72)

Question ten was coded in accordance with example (C-1). When one had finished with the coding sheet, each column on the row was completely filled out up to and including column seventy-two.

Highest Degree Conferred

Highest Degree Conferred was placed in columns seventy-three through seventy-five. This part of question four required the use of judgment in the coding procedure. If a respondent had finished the twelfth grade, but had not responded to this section of the question, it was assumed that the respondent had received his high school diploma. These answers were the only responses which were left-hand justified, i.e., the coder made the responses start in column 73. A Master of Science degree was recorded "MS0," a zero filling the vacant space. Degree Conferred was not included in the computer programs, and it must be separated either manually or with a sorting machine.

Location (76, 77, 78)

The location defined the county from which the response was mailed. Riley County, assigned number 001, and Geary County, given number 002, were not differentiated in the program. If separate analyses of areas were to be made, the same procedure for sorting must be used as with the Highest Degree Conferred response.

Column 79

A "2" was present on some computer data cards. This number was not used in the survey or analysis. It referred to the pink-colored questionnaires which were received from the Manhattan area.

EXAMPLE C-1

KANSAS STATE UNIVERSITY

Manhattan, Kansas 66504

College of Commerce
Calvin Hall

EMPLOYMENT SKILLS SURVEY

1. Please list your present occupation and the length of time you have been engaged in your present occupation. (PLEASE BE SPECIFIC.)

OccupationTime

2. Please list your most significant job experiences, length of experience, and the length of time since you have actually done this type of work. (Examples: Plumber, Metalsmith, Seamstress, Typist, etc.)

ExperienceLength (yrs)
of experienceYears since
doing the job

3. Please list any Personal Skills which you have and the length of time since acquiring the skill. (Examples: soldering, carpentry, sewing, etc.)

SkillsTime

4. Years of education completed? (Please check closest item in each column.)

		<u>College</u>		<u>Vocational</u>		<u>Apprenticeship</u>
<u>(13)</u>	0	<u>(10)</u> 10	<u>(8)</u> 0	<u>(6)</u> 0-6 Mos.		<u>(6)</u> 0
<u>(1)</u>	1	<u>(11)</u> 11	<u>(1)</u> 1	<u>(1)</u> 1		<u>(1)</u> 1
<u>(2)</u>	2	<u>(12)</u> 12	<u>(2)</u> 2 Years	<u>(2)</u> 2 Years		<u>(2)</u> 2 Years
<u>(3)</u>	3	<u>(14)</u> NR*	<u>(3)</u> 3	<u>(3)</u> 3		<u>(3)</u> 3
<u>(4)</u>	4		<u>(4)</u> 4	<u>(4)</u> 4		<u>(4)</u> 4
<u>(5)</u>	5	Grades	<u>(5)</u> 5	<u>(5)</u> More		<u>(5)</u> More
<u>(6)</u>	6	Completed	<u>(6)</u> 6	<u>(7)</u> NR		<u>(7)</u> NR
<u>(7)</u>	7		<u>(7)</u> More			
<u>(8)</u>	8		<u>(9)</u> NR			
<u>(9)</u>	9					

Highest Degree Conferred _____

5. Present employment status? (Please check appropriate boxes.)

Employed

(1) full time(2) part time(3) other (specify) _____(4) NR

Unemployed

(1) looking for full time work(2) looking for part time work(3) not looking for work(4) other (specify) _____(5) NR(1) Retired(2) Housewife(3) Student(4) NR

6. Age? _____

7. Sex? (check one) Male _____ Female _____

8. Marital Status? (check one)

(1) Single(2) Divorced(3) Married(4) Separated(5) Widowed(6) NR9. Number of Dependents? (Including Yourself) _____ (0) NR

10. Please check the box which is closest to the Gross Taxable Income which you had last year. (This does not mean family income which includes income from more than one family member.)

<u>(1)</u>	0-	499	<u>(6)</u>	4,500-	5,499
<u>(2)</u>	500-	1,499	<u>(7)</u>	5,500-	6,999
<u>(3)</u>	1,500-	2,499	<u>(8)</u>	7,000-	10,000
<u>(4)</u>	2,500-	3,499	<u>(9)</u>	10,000	and above
<u>(5)</u>	3,500-	4,499	<u>(10)</u>	NR	

APPENDIX D.
OCCUPATIONAL CATEGORIES

OCCUPATIONAL CATEGORIES, DIVISIONS AND GROUPS

TWO-DIGIT OCCUPATIONAL DIVISIONS

PROFESSIONAL, TECHNICAL, AND MANAGERIAL OCCUPATIONS

- 00 Architecture and engineering
- 01
- 02 Mathematics and physical science
- 04 Life sciences
- 05 Social sciences
- 07 Medicine and health
- 09 Education
- 10 Museum, library, and archival
sciences
- 11 Law and jurisprudence
- 12 Religion and theology
- 13 Writing
- 14 Art
- 15 Entertainment and recreation
- 16 Administrative specializations
- 17 Civil service, n.e.c.
- 18 Managers and officials, n.e.c.
- 19 Miscellaneous professional, technical,
and managerial occupations

CLERICAL AND SALES OCCUPATIONS

- 20 Stenography, typing, filing, and
related occupations
- 21 Computing and account-recording
- 22 Material and production recording
- 23 Information and message distribution
- 24 Miscellaneous clerical
- 25 Salesmen, services
- 26
- 27 Salesmen and salespersons, commodities
- 28
- 29 Merchandising occupations, except
salesmen

SERVICE OCCUPATIONS

- 30 Domestic service
- 31 Food and beverage preparation and
service
- 32 Lodging and related service
- 33 Barbering, cosmetology, and related
service
- 34 Amusement and recreation service
- 35 Miscellaneous personal service

- 36 Apparel and furnishings service
- 37 Protective service
- 38 Building and related service

FARMING, FISHERY, FORESTRY, AND RELATED OCCUPATIONS

- 40 Plant farming
- 41 Animal farming
- 42 Miscellaneous farming, and related
- 43 Fishery and related
- 44 Forestry occupations
- 45 Hunting, trapping, and related
- 46 Agricultural service

PROCESSING OCCUPATIONS

- 50 Processing of metal
- 51 Ore refining and foundry
- 52 Food, tobacco, and related
- 53 Paper and related materials
- 54 Petroleum, coal, natural, and
manufactured gas, and related
- 55 Chemicals, plastics, synthetics,
rubber
- 56 Wood and wood products
- 57 Stone, clay, glass, and related
- 58 Leather, textiles, and related
- 59 Processing occupations, n.e.c.

MACHINE TRADES OCCUPATIONS

- 60 Metal machining
- 61 Metalworking occupations, n.e.c.
- 62 Mechanics and machinery repairmen
- 63
- 64 Paperworking
- 65 Printing
- 66 Wood machining
- 67 Machining stone, clay, glass, and
related materials
- 68 Textile
- 69 Machine trades occupations, n.e.c.

BENCH WORK OCCUPATIONS

- 70 Fabrication, assembly, and repair of
metal products, n.e.c.

- 71 Fabrication and repair of scientific and medical apparatus, photographic and optical goods, watches, clocks, and related
- 72 Assembly and repair of electrical equipment
- 73 Fabrication and repair of products made from assorted materials
- 74 Painting, decorating, and related
- 75 Fabrication and repair of plastics, synthetics, rubber, and related
- 76 Fabrication and repair of wood products
- 77 Fabrication and repair of sand, stone, clay, glass products
- 78 Fabrication and repair of textile, leather, and related products
- 79 Bench work occupations, n.e.c.

STRUCTURAL WORK OCCUPATIONS

- 80 Occupations in metal fabricating, n.e.c.
- 81 Welders, flame cutters, and related occupations
- 82 Electrical assembling, installing, and repairing
- 84 Painting, plastering, waterproofing, cementing, and related occupations
- 85 Excavating, grading, paving, and related
- 86 Construction occupations, n.e.c.
- 89 Structured work occupations, n.e.c.

MISCELLANEOUS OCCUPATIONS

- 90 Motor freight
- 91 Transportation occupations, n.e.c.
- 92 Packaging and materials handling occupations
- 93 Extracting of materials
- 94 Logging
- 95 Production and distribution of utilities
- 96 Amusement, recreation, and motion picture occupations, n.e.c.
- 97 Graphic art work
- 98 Housewife
- 99 Unemployed and non-response

PROFESSIONAL, TECHNICAL, AND MANAGERIAL OCCUPATIONS

THREE-DIGIT OCCUPATIONAL GROUPS

00 OCCUPATIONS IN ARCHITECTURE AND ENGINEERING
01

- 001 Architectural occupations
- 002 Aeronautical engineering occupations
- 003 Electrical engineering occupations
- 005 Civil engineering occupations
- 006 Ceramic engineering occupations
- 007 Mechanical engineering occupations
- 008 Chemical engineering occupations
- 010 Mining and petroleum engineering occupations
- 011 Metallurgy and metallurgical engineering occupations
- 012 Industrial engineering occupations
- 013 Agricultural engineering occupations
- 014 Marine engineering occupations
- 015 Nuclear engineering occupations
- 017 Craftsmen, n.e.c.
- 018 Surveyors, n.e.c.
- 019 Occupations in architecture and engineering, n.e.c.

02 OCCUPATIONS IN MATHEMATICS AND PHYSICAL SCIENCES

- 020 Occupations in mathematics
- 021 Occupations in astronomy
- 022 Occupations in chemistry
- 023 Occupations in physics
- 024 Occupations in geology
- 025 Occupations in meteorology
- 029 Occupations in mathematics and physical sciences, n.e.c.

04 OCCUPATIONS IN LIFE SCIENCES

- 040 Occupations in agricultural sciences
- 041 Occupations in biological sciences
- 045 Occupations in psychology
- 049 Occupations in life sciences, n.e.c.

05 OCCUPATIONS IN SOCIAL SCIENCES

- 050 Occupations in economics
- 051 Occupations in political science
- 052 Occupations in history
- 054 Occupations in sociology
- 055 Occupations in anthropology
- 059 Occupations in social sciences, n.e.c.

14 OCCUPATIONS IN ART

- 141 Commercial artists
- 142 Designers
- 143 Occupations in photography
- 144 Painters and related occupations
- 148 Sculptors and related occupations
- 149 Occupations in art, n.e.c.

15 OCCUPATIONS IN ENTERTAINMENT AND RECREATION

- 150 Occupations in dramatics
- 151 Occupations in dancing
- 152 Occupations in music
- 153 Occupations in athletics and sports
- 159 Occupations in entertainment and recreation, n.e.c.

16 OCCUPATIONS IN ADMINISTRATIVE SPECIALIZATIONS

- 160 Accountants and auditors
- 161 Budget and management analysis occupations
- 162 Purchasing management occupations
- 163 Sales and distribution management occupations
- 164 Advertising management occupations
- 165 Public relations management occupations
- 166 Personnel and training administration occupations
- 168 Inspectors and investigators, managerial and public service
- 169 Occupations in administrative specializations, n.e.c.

171 Civil service, n.e.c.

18 MANAGERS AND OFFICIALS, N. E. C.

- 180 Agriculture, forestry, and fishing industry managers and officials
- 181 Mining industry managers and officials
- 182 Construction industry managers and officials
- 183 Manufacturing industry managers and officials
- 184 Transportation, communication, and utilities industry managers and officials
- 185 Wholesale and retail trade managers and officials
- 186 Finance, insurance, and real estate managers and officials
- 187 Service industry managers and officials
- 188 Public administration managers and officials
- 189 Miscellaneous managers and officials, n.e.c.

07 OCCUPATIONS IN MEDICINE AND HEALTH

- 070 Physicians and surgeons
- 071 Osteopaths
- 072 Dentists
- 073 Veterinarians
- 074 Pharmacists
- 075 Registered nurses
- 077 Dietitians
- 078 Occupations in medical and dental technology
- 079 Occupations in medicine and health, n.e.c.

09 OCCUPATIONS IN EDUCATION

- 090 Occupations in college and university education
- 091 Occupations in secondary school education
- 092 Occupations in primary school and kindergarten education
- 094 Occupations in education of the handicapped
- 096 Home economists and farm advisers
- 097 Occupations in vocational education, n.e.c.
- 098 Students
- 099 Occupations in education, n.e.c.

10 OCCUPATIONS IN MUSEUM, LIBRARY, AND ARCHIVAL SCIENCES

- 100 Librarians
- 101 Archivists
- 102 Museum curators and related occupations
- 109 Occupations in museum, library, and archival sciences, n.e.c.

11 OCCUPATIONS IN LAW AND JURISPRUDENCE

- 110 Lawyers
- 111 Judges
- 119 Occupations in law and jurisprudence, n.e.c.

12 OCCUPATIONS IN RELIGION AND THEOLOGY

- 120 Clergymen
- 129 Occupations in religion and theology, n.e.c.

13 OCCUPATIONS IN WRITING

- 130 Freelance writers
- 131 Writers and editors, motion pictures, radio, and television
- 132 Writers and editors, publications
- 137 Interpreters and translators
- 139 Occupations in writing, n.e.c.

19 MISCELLANEOUS PROFESSIONAL, TECHNICAL, AND MANAGERIAL OCCUPATIONS

- 191 Agents and appraisers, n.e.c.
- 193 Radio operators
- 194 Sound recording, transcribing, and reproduction occupations
- 195 Occupations in social and welfare work
- 196 Airplane pilots and navigators
- 197 Ship captains, mates, pilots, and engineers
- 198 Railroad conductors
- 199 Miscellaneous professional, technical, and managerial occupations, n.e.c.

CLERICAL AND SALES OCCUPATIONS

20 STENOGRAPHY, TYPING, FILING, AND RELATED OCCUPATIONS

- 201 Secretaries
- 202 Stenographers
- 203 Typists
- 204 Correspondence clerks
- 205 Personnel clerks
- 206 File clerks
- 207 Duplicating-machine operators
- 208 Miscellaneous office machine operators
- 209 Stenography, typing, filing, and related occupations, n.e.c.

21 COMPUTING AND ACCOUNT-RECORDING OCCUPATIONS

- 210 Bookkeepers
- 211 Cashiers
- 212 Tellers
- 213 Automatic data-processing-equipment operators
- 214 Billing-machine operators
- 215 Bookkeeping-machine operators
- 216 Computing-machine operators
- 217 Account-recording-machine operators, n.e.c.
- 219 Computing and account-recording occupations, n.e.c.

22 MATERIAL AND PRODUCTION RECORDING OCCUPATIONS

- 221 Production clerks
- 222 Shipping and receiving clerks
- 223 Stock clerks and related occupations
- 224 Weighers
- 229 Material and production recording occupations, n.e.c.

23 INFORMATION AND MESSAGE DISTRIBUTION OCCUPATIONS

- 230 Messengers, errand boys, and office boys and girls
- 231 Mail clerks
- 232 Post office clerks
- 233 Mail carriers
- 234 Mail-preparing- and mail-handling-machine operators
- 235 Telephone operators
- 236 Telegraph operators
- 237 Receptionists and information clerks
- 239 Information and message distribution occupations, n.e.c.

24 MISCELLANEOUS CLERICAL OCCUPATIONS

- 240 Collectors
- 241 Adjusters
- 242 Hotel clerks, n.e.c.
- 243 Direct service clerks, n.e.c.
- 249 Miscellaneous clerical occupations, n.e.c.

25 SALESMEN, SERVICES

- 250 Salesmen, real estate and insurance
- 251 Salesmen, securities
- 252 Salesmen, business and financial services
- 253 Salesmen, radio and television broadcasting services
- 254 Salesmen, hotel services
- 255 Salesmen, transportation services
- 256 Salesmen, maintenance and repair services
- 257 Salesmen, utilities
- 258 Salesmen, printing and advertising
- 259 Salesmen, services, n.e.c.

26

27 SALESMEN AND SALESPERSONS, COMMODITIES

28

- 260 Salesmen and salespersons, horticultural and nursery products
- 261 Salesmen and salespersons, agricultural products, n.e.c.
- 262 Salesmen and salespersons, foodstuffs, beverages, and tobacco
- 263 Salesmen and salespersons, textiles, textile products, and apparel
- 264 Salesmen and salespersons, leather and leather products
- 265 Salesmen and salespersons, paper and paper products
- 266 Salesmen and salespersons, chemicals and drug preparations
- 267 Salesmen and salespersons, fuel and petroleum products
- 268 Salesmen and salespersons, plastics products
- 270 Salesmen and salespersons, rubber products
- 271 Salesmen and salespersons, stone, clay, and glass products
- 273 Salesmen and salespersons, metal and metal products
- 274 Salesmen and salespersons, housefurnishings
- 275 Salesmen and salespersons, hotel and restaurant equipment and supplies

- 276 Salesmen and salespersons, hotel and restaurant equipment and supplies
- 277 Salesmen and salespersons, farm and garden equipment and supplies
- 278 Salesmen and salespersons, household appliances and electrical machinery, equipment, and supplies
- 280 Salesmen and salespersons, transportation equipment
- 281 Salesmen and salespersons, business and commercial machines, equipment, and supplies
- 282 Salesmen and salespersons, medical and dental equipment, supplies, and appliances
- 283 Salesmen and salespersons, jewelry and silverware
- 284 Salesmen and salespersons, scientific apparatus
- 285 Salesmen and salespersons, photographic equipment and supplies
- 286 Salesmen and salespersons, amusement and sporting goods
- 287 Salesmen and salespersons, music and musical instruments
- 289 Salesmen and salespersons, commodities, n.e.c.

29 MERCHANDISING OCCUPATIONS, EXCEPT SALESMEN

- 290 Sales clerks
- 291 Peddlers
- 292 Routemen
- 293 Canvassers and solicitors
- 294 Auctioneers
- 296 Shoppers
- 297 Demonstrators and models
- 298 Display men and window trimmers
- 299 Merchandising occupations, except salesmen, n.e.c.

SERVICE OCCUPATIONS

30 DOMESTIC SERVICE OCCUPATIONS

- 301 Day workers
- 302 Laundresses, private family
- 303 Housekeepers, private family
- 304 Housemen and yardmen
- 305 Cooks, domestic
- 306 Maids, domestic
- 307 Nursemaids
- 308 Domestic service occupations, n.e.c.

31 FOOD AND BEVERAGE PREPARATION AND SERVICE OCCUPATIONS

- 310 Hostesses and stewards, food and beverage service, except ship stewards
- 311 Waiters, waitresses, and related food serving occupations
- 312 Bartenders
- 313 Chefs and cooks, large hotels and restaurants
- 314 Chefs and cooks, small hotels and restaurants

- 315 Miscellaneous cooks, except domestic
- 316 Meatcutters, except in slaughtering and packing houses
- 317 Miscellaneous food and beverage preparation occupations
- 318 Kitchen workers, n.e.c.
- 319 Food and beverage preparation and service occupations, n.e.c.

32 LODGING AND RELATED SERVICE OCCUPATIONS

- 320 Boardinghouse and lodginghouse keepers
- 321 Housekeepers, hotels and institutions
- 323 Maids and housemen, hotels, restaurants, and related establishments
- 324 Bellmen and related occupations
- 329 Lodging and related service occupations, n.e.c.

33 BARBERING, COSMETOLOGY, AND RELATED SERVICE OCCUPATIONS

- 330 Barbers
- 331 Manicurists
- 332 Hairdressers and cosmetologists
- 333 Make-up occupations
- 334 Masseurs and related occupations
- 335 Bath attendants
- 338 Embalmers and related occupations
- 339 Barbering, cosmetology, and related service occupations

34 AMUSEMENT AND RECREATION SERVICE OCCUPATIONS

- 340 Attendants, bowling alley and billiard parlor
- 341 Attendants, golf course, tennis court, skating rink, and related facilities
- 343 Gambling hall attendants
- 344 Ushers
- 346 Wardrobe and dressing-room attendants
- 349 Amusement and recreation service occupations, n.e.c.

35 MISCELLANEOUS PERSONAL SERVICE OCCUPATIONS

- 350 Ship stewards and related occupations
- 351 Pullman porters and train attendants
- 352 Hostesses and stewards, n.e.c.
- 353 Guides, except hunting and fishing
- 354 Unlicensed midwives and practical nurses
- 355 Attendants, hospitals, morgues, and related health services
- 356 Occupations in animal care, n.e.c.
- 357 Baggage porters
- 358 Checkroom, locker room, and restroom attendants
- 359 Miscellaneous personal service occupations, n.e.c.

36 APPAREL AND FURNISHINGS SERVICE OCCUPATIONS

- 361 Laundering occupations
- 362 Dry cleaning occupations
- 363 Pressing occupations
- 364 Dyeing and related occupations
- 365 Shoe and luggage repairmen and related occupations
- 366 Bootblacks and related occupations
- 369 Apparel and furnishings service occupations, n.e.c.

37 PROTECTIVE SERVICE OCCUPATIONS

- 371 Crossing watchmen and bridge tenders
- 372 Guards and watchmen, except crossing watchmen
- 373 Firemen, fire department
- 375 Policemen and detectives, public service
- 376 Policemen and detectives, except in public service
- 377 Sheriffs and bailiffs
- 378 Soldiers, sailors, marines, airmen, and coast guardsmen, n.e.c.
- 379 Protective service occupations, n.e.c.

38 BUILDING AND RELATED SERVICE OCCUPATIONS

- 381 Porters and cleaners
- 382 Janitors
- 388 Elevator operators
- 389 Building and related service occupations, n.e.c.

FARMING, FISHERY, FORESTRY, AND RELATED OCCUPATIONS

40 PLANT FARMING OCCUPATIONS

- 401 Grain farming occupations
- 402 Cotton farming occupations
- 403 Vegetable farming occupations
- 404 Fruit and nut farming occupations
- 405 Crop specialty farming occupations
- 406 Horticultural specialty occupations
- 407 Gardening and groundskeeping occupations
- 409 Plant farming occupations, n.e.c.

41 ANIMAL FARMING OCCUPATIONS

- 411 Dairy farming occupations
- 412 Poultry farming occupations
- 413 Livestock farming occupations
- 419 Animal farming occupations, n.e.c.

42 MISCELLANEOUS FARMING AND RELATED OCCUPATIONS

- 421 General farming occupations
- 422 Farm irrigation workers
- 423 Farm couples
- 424 Farm machinery operators, n.e.c.
- 429 Miscellaneous farming and related occupations, n.e.c.

43 FISHERY AND RELATED OCCUPATIONS

- 431 Net, seine, and trap fishermen
- 432 Line fishermen
- 433 Fishermen, miscellaneous gear
- 435 Whaling occupations
- 436 Marine life cultivation and related occupations
- 437 Sponge and seaweed gatherers
- 439 Fishery and related occupations, n.e.c.

44 FORESTRY OCCUPATIONS

- 441 Forest conservation occupations
- 442 Occupations in production of forest products, except logging
- 449 Forestry occupations, n.e.c.

45 HUNTING, TRAPPING, AND RELATED OCCUPATIONS

- 451 Hunting and trapping occupations
- 452 Hunting and fishing guides

46 AGRICULTURAL SERVICE OCCUPATIONS

- 461 Cotton ginning and compressing occupations
- 465 Blight and pest control and bindweed eradication occupations
- 466 Animal caretaking occupations
- 467 Animal husbandry service occupations
- 469 Agricultural service occupations, n.e.c.

PROCESSING OCCUPATIONS

50 OCCUPATIONS IN PROCESSING OF METAL

- 500 Electroplating occupations
- 501 Dip plating occupations
- 502 Melting, pouring, casting, and related occupations
- 503 Pickling, cleaning, degreasing, and related occupations
- 504 Heat-treating occupations

- 505 Metal spraying, coating, and related occupations
- 509 Occupations in processing of metal, n.e.c.

51 ORE REFINING AND FOUNDRY OCCUPATIONS

- 510 Mixing and related occupations
- 511 Separating, filtering, and related occupations
- 512 Melting occupations
- 513 Roasting occupations
- 514 Pouring and casting occupations
- 515 Crushing and grinding occupations
- 518 Molders, coremakers, and related occupations
- 519 Ore refining and foundry occupations, n.e.c.

52 OCCUPATIONS IN PROCESSING OF FOOD, TOBACCO, AND RELATED PRODUCTS

- 520 Mixing, compounding, blending, kneading, shaping, and related occupations
- 521 Separating, crushing, milling, chopping, grinding, and related occupations
- 522 Culturing, melting, fermenting, distilling, saturating, pickling, aging, and related occupations
- 523 Heating, rendering, melting, drying, cooling, freezing, and related occupations
- 524 Coating, icing, decorating, and related occupations
- 525 Slaughtering, breaking, curing, and related occupations
- 526 Cooking and baking occupations, n.e.c.
- 529 Occupations in processing of food, tobacco, and related products, n.e.c.

53 OCCUPATIONS IN PROCESSING OF PAPER AND RELATED MATERIALS

- 530 Grinding, beating, and mixing occupations
- 532 Cooking and drying occupations
- 533 Cooling, bleaching, screening, washing, and related occupations
- 534 Calendering, sizing, coating, and related work
- 535 Forming occupations, n.e.c.
- 539 Occupations in processing of paper and related materials, n.e.c.

54 OCCUPATIONS IN PROCESSING OF PETROLEUM, COAL, NATURAL AND MANUFACTURED GAS, AND RELATED PRODUCTS

- 540 Mixing and blending occupations
- 541 Filtering, straining, and separating occupations
- 542 Distilling, subliming, and carbonizing occupations
- 543 Drying, heating, and melting occupations
- 544 Grinding and crushing occupations
- 546 Reacting occupations, n.e.c.
- 549 Occupations in processing of petroleum, coal, natural and manufactured gas, and related products, n.e.c.

55 OCCUPATIONS IN PROCESSING OF CHEMICALS, PLASTICS, SYNTHETICS, RUBBER,
PAINT, AND RELATED PRODUCTS

- 550 Mixing and blending occupations
- 551 Filtering, straining, and separating occupations
- 552 Distilling occupations
- 553 Heating, baking, drying, seasoning, melting, and heat treating
- 554 Coating, calendering, laminating, and finishing occupations
- 555 Grinding and crushing occupations
- 556 Casting and molding occupations, n.e.c.
- 557 Extruding occupations
- 558 Reacting occupations, n.e.c.
- 559 Occupations in processing of chemicals, plastics, synthetics, rubber,
paint, and related products, n.e.c.

56 OCCUPATIONS IN PROCESSING OF WOOD AND WOOD PRODUCTS

- 560 Mixing and related occupations
- 561 Wood preserving and related occupations
- 562 Saturating, coating, and related occupations, n.e.c.
- 563 Drying, seasoning, and related occupations
- 569 Occupations in processing of wood and wood products, n.e.c.

57 OCCUPATIONS IN PROCESSING OF STONE, CLAY, GLASS, AND RELATED PRODUCTS

- 570 Crushing, grinding, and mixing occupations
- 571 Separating occupations
- 572 Melting occupations
- 573 Baking, drying, and heat-treating occupations
- 574 Impregnating, coating, and glazing occupations
- 575 Forming occupations
- 579 Occupations in processing of stone, clay, glass, and related products,
n.e.c.

58 OCCUPATIONS IN PROCESSING OF LEATHER, TEXTILES, AND RELATED PRODUCTS

- 580 Shaping, blocking, stretching, and tentering occupations
- 581 Separating, filtering, and drying occupations
- 582 Washing, steaming, and saturating occupations
- 583 Ironing, pressing, glazing, staking, calendering, and embossing
occupations
- 584 Mercerizing, coating, and laminating occupations
- 585 Singeing, cutting, shearing, shaving, and napping occupations
- 586 Felting and fulling occupations
- 587 Brushing and shrinking occupations
- 589 Occupations in processing of leather, textiles, and related products,
n.e.c.

59 PROCESSING OCCUPATIONS, N.E.C.

- 590 Occupations in processing products from assorted materials
- 599 Miscellaneous processing occupations, n.e.c.

MACHINE TRADES OCCUPATIONS

60 METAL MACHINING OCCUPATIONS

- 600 Machinists and related occupations
- 601 Toolmakers and related occupations
- 602 Gear machining occupations
- 603 Abrading occupations
- 604 Turning occupations
- 605 Milling and planing occupations
- 606 Boring occupations
- 607 Sawing occupations
- 609 Metal machining occupations, n.e.c.

61 METALWORKING OCCUPATIONS, N.E.C.

- 610 Hammer forging occupations
- 611 Press forging occupations
- 612 Forging occupations, n.e.c.
- 613 Sheet and bar rolling occupations
- 614 Extruding and drawing occupations
- 615 Punching and shearing occupations
- 616 Fabricating machine occupations
- 617 Forming occupations, n.e.c.
- 619 Miscellaneous metalworking occupations, n.e.c.

62 MECHANICS AND MACHINERY REPAIRMEN

- 621 Aircraft mechanics and repairmen
- 622 Rail equipment mechanics and repairmen
- 623 Marine mechanics and repairmen
- 624 Farm mechanics and repairmen
- 625 Engine, power transmission, and related mechanics
- 626 Metalworking machinery mechanics
- 627 Printing and publishing mechanics and repairmen
- 628 Textile machinery and equipment mechanics and repairmen
- 629 Special industry machinery mechanics
- 630 General industry mechanics and repairmen
- 631 Powerplant mechanics and repairmen
- 632 Ordnance and accessories mechanics and repairmen
- 633 Business and commercial machine repairmen
- 637 Utilities service mechanics and repairmen
- 638 Miscellaneous occupations in machine installation and repair
- 639 Mechanics and machinery repairmen, n.e.c.

64 PAPERWORKING OCCUPATIONS

- 640 Paper cutting, winding, and related occupations
- 641 Folding, creasing, scoring, and gluing occupations
- 642 Paper sewing occupations
- 643 Corrugating occupations
- 644 Fastening occupations, n.e.c.
- 649 Paperworking occupations, n.e.c.

65 PRINTING OCCUPATIONS

- 650 Typesetters and composers
- 651 Printing press occupations
- 652 Printing machine occupations
- 653 Bookbinders and related occupations
- 654 Typecasters and related occupations
- 659 Printing occupations, n.e.c.

66 WOOD MACHINING OCCUPATIONS

- 660 Cabinetmakers
- 661 Patternmakers
- 662 Sanding occupations
- 663 Shearing and shaving occupations
- 664 Turning occupations
- 665 Milling and planing occupations
- 666 Boring occupations
- 667 Sawing occupations
- 668 Chipping occupations
- 669 Wood machining occupations, n.e.c.

67 OCCUPATIONS IN MACHINING STONE, CLAY, GLASS, AND RELATED MATERIALS

- 670 Stonecutters and related occupations
- 673 Abrading occupations
- 674 Turning occupations
- 675 Planing and shaping occupations, n.e.c.
- 676 Boring and punching occupations
- 677 Chipping, cutting, sawing, and related occupations
- 679 Occupations in machining stone, clay, glass, and related materials, n.e.c.

68 TEXTILE OCCUPATIONS

- 680 Carding, combing, drawing, and related occupations
- 681 Twisting, beaming, warping, and related occupations
- 682 Spinning occupations
- 683 Weavers and related occupations

- 684 Hosiery knitting occupations
- 685 Knitting occupations, except hosiery
- 686 Punching, cutting, forming, and related occupations
- 689 Textile occupations, n.e.c.

69 MACHINE TRADES OCCUPATIONS, N.E.C.

- 690 Plastics, synthetics, rubber, and leather working occupations
- 691 Occupations in fabrication of insulated wire and cable
- 692 Occupations in fabrication of products from assorted materials
- 693 Modelmakers, patternmakers, and related occupations
- 694 Occupations in fabrication of ordnance, ammunition, and related products, n.e.c.
- 699 Miscellaneous machine trades occupations, n.e.c.

BENCH WORK OCCUPATIONS

70 OCCUPATIONS IN FABRICATION, ASSEMBLY, AND REPAIR OF METAL PRODUCTS, N.E.C.

- 700 Occupations in fabrication, assembly, and repair of jewelry, silverware, and related products
- 701 Occupations in fabrication, assembly, and repair of tools and related products
- 703 Occupations in assembly and repair of sheet-metal products, n.e.c.
- 704 Engravers, etchers, and related occupations
- 705 Filing, grinding, buffing, cleaning, and polishing occupations, n.e.c.
- 706 Metal unit assemblers and adjusters, n.e.c.
- 709 Miscellaneous occupations in fabrication, assembly, and repair of metal products, n.e.c.

71 OCCUPATIONS IN FABRICATION AND REPAIR OF SCIENTIFIC AND MEDICAL APPARATUS, PHOTOGRAPHIC AND OPTICAL GOODS, WATCHES AND CLOCKS, AND RELATED PRODUCTS

- 710 Occupations in fabrication and repair of instruments for measuring, controlling, and indicating physical characteristics
- 711 Occupations in fabrication and repair of optical instruments and lenses
- 712 Occupations in fabrication and repair of surgical, medical, and dental instruments and supplies
- 713 Occupations in fabrication and repair of ophthalmic goods
- 714 Occupations in fabrication and repair of photographic equipment and supplies
- 715 Occupations in fabrication and repair of watches, clocks, and parts
- 716 Occupations in fabrication and repair of engineering and scientific instruments and equipment, n.e.c.
- 719 Occupations in fabrication and repair of scientific and medical apparatus, photographic and optical goods, watches and clocks, and related products, n.e.c.

72 OCCUPATIONS IN ASSEMBLY AND REPAIR OF ELECTRICAL EQUIPMENT

- 720 Occupations in assembly and repair of radio and television receiving sets and phonographs
- 721 Occupations in assembly and repair of motors, generators, and related products
- 722 Occupations in assembly and repair of communications equipment
- 723 Occupations in assembly and repair of electrical appliances and fixtures
- 724 Occupations in winding and assembling coils, magnets, armatures, and related products
- 725 Occupations in assembly of light bulbs and electronic tubes
- 726 Occupations in assembly and repair of electronic components and accessories, n.e.c.
- 727 Occupations in assembly of storage batteries
- 728 Occupations in fabrication of electrical wire and cable
- 729 Occupations in assembly and repair of electrical equipment, n.e.c.

73 OCCUPATIONS IN FABRICATION AND REPAIR OF PRODUCTS MADE FROM ASSORTED MATERIALS

- 730 Occupations in fabrication and repair of musical instruments and parts
- 731 Occupations in fabrication and repair of games and toys
- 732 Occupations in fabrication and repair of sporting goods
- 733 Occupations in fabrication and repair of pens, pencils, and office and artists' materials, n.e.c.
- 734 Occupations in fabrication and repair of notions
- 735 Occupations in fabrication and repair of jewelry, n.e.c.
- 736 Occupations in fabrication and repair of ordnance and accessories
- 737 Occupations in fabrication of ammunition, fireworks, explosives, and related products
- 739 Occupations in fabrication and repair of products made from assorted materials, n.e.c.

74 PAINTING, DECORATING, AND RELATED OCCUPATIONS

- 740 Painters, brush
- 741 Painters, spray
- 742 Staining, waxing, and related occupations
- 749 Painting, decorating, and related occupations, n.e.c.

75 OCCUPATIONS IN FABRICATION AND REPAIR OF PLASTICS, SYNTHETICS, RUBBER, AND RELATED PRODUCTS

- 750 Occupations in fabrication and repair of tires, tubes, tire treads, and related products
- 751 Laying out and cutting occupations, n.e.c.
- 752 Fitting, shaping, cementing, finishing, and related occupations, n.e.c.

- 753 Occupations in fabrication and repair of rubber and plastic footwear
- 754 Occupations in fabrication and repair of miscellaneous plastics products
- 759 Occupations in fabrication and repair of plastics, synthetics, rubber, and related products, n.e.c.

76 OCCUPATIONS IN FABRICATION AND REPAIR OF WOOD PRODUCTS

- 760 Bench carpenters and related occupations
- 761 Occupations in laying out, cutting, carving, shaping, and sanding wood products, n.e.c.
- 762 Occupations in assembling wood products, n.e.c.
- 763 Occupations in fabrication and repair of furniture, n.e.c.
- 764 Cooperage occupations
- 769 Occupations in fabrication and repair of wood products, n.e.c.

77 OCCUPATIONS IN FABRICATION AND REPAIR OF SAND, STONE, CLAY, AND GLASS PRODUCTS

- 770 Occupations in fabrication and repair of jewelry, ornaments, and related products
- 771 Stone cutters and carvers
- 772 Glass blowing, pressing, shaping, and related occupations, n.e.c.
- 773 Occupations in coloring and decorating brick, tile, and related products
- 774 Occupations in fabrication and repair of pottery and porcelain ware
- 775 Grinding, filing, polishing, frosting, etching, cleaning, and related occupations, n.e.c.
- 776 Occupations in fabrication and repair of asbestos and polishing products, abrasives, and related materials
- 777 Modelmakers, patternmakers, moldmakers, and related occupations
- 779 Occupations in fabrication and repair of sand, stone, clay, and glass products, n.e.c.

78 OCCUPATIONS IN FABRICATION AND REPAIR OF TEXTILE, LEATHER, AND RELATED PRODUCTS

- 780 Occupations in upholstering and in fabrication and repair of mattresses and bedsprings
- 781 Laying out, marking, cutting, and punching occupations, n.e.c.
- 782 Hand sewers, menders, embroiders, knitters, and related occupations, n.e.c.
- 783 Fur working occupations
- 784 Occupations in fabrication and repair of hats, caps, gloves, and related products
- 785 Tailors and dressmakers
- 786 Sewing machine operators, garment
- 787 Sewing machine operators, nongarment
- 788 Occupations in fabrication and repair of footwear
- 789 Occupations in fabrication and repair of textile, leather, and related products, n.e.c.

79 BENCH WORK OCCUPATIONS, N.E.C.

- 790 Occupations in preparation of food, tobacco, and related products, n.e.c.
- 794 Occupations in fabrication of paper products, n.e.c.
- 799 Miscellaneous bench work occupations, n.e.c.

STRUCTURAL WORK OCCUPATIONS

80 OCCUPATIONS IN METAL FABRICATING, N.E.C.

- 800 Riveters
- 801 Fitting, bolting, screwing, and related occupations
- 804 Tinsmiths, coppersmiths, and sheet metal workers
- 805 Boilermakers
- 806 Transportation equipment assemblers and related occupations
- 807 Bodymen, transportation equipment
- 809 Miscellaneous occupations in metal fabricating, n.e.c.

81 WELDERS, FLAME CUTTERS, AND RELATED OCCUPATIONS

- 810 Arc welders
- 811 Gas welders
- 812 Combination arc welders and gas welders
- 813 Resistance welders
- 814 Brazing, braze-welding, and soldering occupations
- 815 Lead burning occupations
- 816 Flame cutters and arc cutters
- 819 Welders, flame cutters, and related occupations, n.e.c.

82 ELECTRICAL ASSEMBLING, INSTALLING, AND REPAIRING OCCUPATIONS

- 820 Occupations in assembly, installation, and repair of generators, motors, accessories, and related powerplant equipment
- 821 Occupations in assembly, installation, and repair of transmission and distribution lines and circuits
- 822 Occupations in assembly, installation, and repair of wire communication, detection, and signaling equipment
- 823 Occupations in assembly, installation, and repair of electronic communication detection, and signaling equipment
- 824 Occupations in assembly, installation, and repair of lighting equipment and building wiring, n.e.c.
- 825 Occupations in assembly, installation, and repair of transportation and materials handling equipment, n.e.c.
- 826 Occupations in assembly, installation, and repair of industrial apparatus, n.e.c.
- 827 Occupations in assembly, installation, and repair of large household appliances and similar commercial and industrial equipment
- 828 Occupations in fabrication, installation, and repair of electrical and electronic products, n.e.c.

829 Occupations in assembly, installation, and repair of electrical products, n.e.c.

84 PAINTING, PLASTERING, WATERPROOFING, CEMENTING, AND RELATED OCCUPATIONS

840 Construction and maintenance painters and related occupations
841 Paperhangers
842 Plasterers and related occupations
843 Waterproofing and related occupations
844 Cement and concrete finishing and related occupations
845 Transportation equipment painters and related occupations
849 Painting, plastering, waterproofing, cementing, and related work, n.e.c.

85 EXCAVATING, GRADING, PAVING, AND RELATED OCCUPATIONS

850 Excavating, grading, and related occupations
851 Drainage and related occupations
852 Concrete paving occupations
853 Asphalt paving occupations
859 Excavating, grading, paving, and related occupations, n.e.c.

86 CONSTRUCTION OCCUPATIONS, N.E.C.

860 Carpenters and related occupations
861 Brick and stone masons and tile setters
862 Plumbers, gas fitters, steam fitters, and related occupations
863 Asbestos and insulation workers
864 Floor laying and finishing occupations
865 Glaziers and related occupations
866 Roofers and related occupations
869 Miscellaneous construction occupations, n.e.c.

89 STRUCTURAL WORK OCCUPATIONS, N.E.C.

891 Occupations in structural maintenance, n.e.c.
892 Hoisting and conveying occupations, n.e.c.
899 Miscellaneous structural work occupations, n.e.c.

MISCELLANEOUS OCCUPATIONS

90 MOTOR FREIGHT OCCUPATIONS

900 Concrete-mixing-truck drivers
902 Dump-truck drivers
903 Truck drivers, inflammables
904 Trailer-truck drivers
905 Truck drivers, heavy

- 906 Truck drivers, light
 - 909 Motor freight occupations, n.e.c.
- 91 TRANSPORTATION OCCUPATIONS, N.E.C.
- 910 Railroad transportation occupations
 - 911 Water transportation occupations
 - 912 Air transportation occupations
 - 913 Passenger transportation occupations, n.e.c.
 - 914 Pumping and pipeline transportation occupations
 - 915 Attendants and servicemen, parking lots and service facilities
 - 919 Miscellaneous transportation occupations, n.e.c.
- 92 PACKAGING AND MATERIALS HANDLING OCCUPATIONS
- 920 Packaging occupations
 - 921 Hoisting and conveying occupations
 - 922 Occupations in moving and storing materials, n.e.c.
 - 929 Packaging and materials handling occupations, n.e.c.
- 93 OCCUPATIONS IN EXTRACTION OF MINERALS
- 930 Boring, drilling, cutting, and related occupations
 - 931 Blasting occupations
 - 932 Loading and conveying occupations
 - 933 Crushing occupations
 - 934 Screening and related occupations
 - 939 Occupations in extraction of minerals, n.e.c.
- 94 OCCUPATIONS IN LOGGING
- 940 Timber cutting and related occupations
 - 941 Log inspecting, grading, scaling, and related occupations
 - 942 Log sorting, gathering, storing, and related occupations
 - 949 Occupations in logging, n.e.c.
- 95 OCCUPATIONS IN PRODUCTION AND DISTRIBUTION OF UTILITIES
- 950 Stationary engineers
 - 951 Firemen and related occupations
 - 952 Occupations in generation, transmission, and distribution of electric light and power
 - 953 Occupations in production and distribution of gas
 - 954 Occupations in filtration, purification, and distribution of water
 - 955 Occupations in disposal of refuse and sewage
 - 956 Occupations in distribution of steam
 - 957 Occupations in transmission of communications, n.e.c.
 - 959 Occupations in production and distribution of utilities, n.e.c.

96 AMUSEMENT, RECREATION, AND MOTION PICTURE OCCUPATIONS, N.E.C.

- 960 Motion picture projectionists
- 961 Models and stand-ins, n.e.c.
- 962 Occupations in production of motion pictures, n.e.c.
- 963 Occupations in radio and television production, n.e.c.
- 964 Occupations in theatrical and related entertainment production, n.e.c.
- 969 Miscellaneous amusement, recreation, and motion picture occupations, n.e.c.

97 OCCUPATIONS IN GRAPHIC ART WORK

- 970 Art work occupations, brush, spray, or pen
- 971 Photoengraving occupations
- 972 Lithographers and related occupations
- 973 Hand compositors, typesetters, and related occupations
- 974 Electrotypers and related occupations
- 975 Stereotypers and related occupations
- 976 Darkroom occupations, n.e.c.
- 977 Bookbinders and related occupations
- 979 Occupations in graphic art work, n.e.c.

980 Housewife

99 MISCELLANEOUS

- 995 Unemployed
- 999 Non-response

APPENDIX E.

DATA

DATA--MANHATTAN

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 28000869000130620001009650015659514012001006006001005004031001003003007HSC002
 28003529001705999000001520027860010100800600600200500202900209300800100002
 2800221000307080002024786032613074012008006006002005002041002003000001HSC002
 280015361014024999000000259000999000100800600600100500403000001002000020002
 30603699900000999000009990009990009990000800600600100500205600200300100400002
 311003999000009990000099900099900099900009008006006001005002055002003001000700002
 3110093110096009990000099900099900099900010080060060010050040270020020001000700002
 31100421100400499900000999000999000999000080060060010050040300200300000400002
 315002311019006999000099900099900099900010080060060010050040320020030000100002
 31500331500300099900000315045129025007080060060030002053002003002000200020002
 315008310010000999000078602099900008006006001005002054002003000002000020002
 315004210010239990000078602799900012008006006003000204200200300000300002
 315015315015001500099900009990009990001200800600600100500405300200300100300002
 315002999000099900009990000800600600100500205002003000002000500300002
 3150103150070073150100007820309990001200800600600100500205200200300100300002
 316029990000999000009990009990001200800600600100500405700100300200600002
 316012220001291500200186008999000120080060060010020040300010030060000000002
 31900020800040199990000078600299900012008006006002001002046002003000100002
 320020990000999000009990009990009990000800600600400400205800200300000200002
 32020290001232030020219990009990001200800600600100500404000200300000000002
 320129990000999000009990009990001200800600600100500403800200300100600002
 32007832007000999000009990009990001008006006001005002049002003000000000002
 3203030339903000009990000099900099900008006006003005004054001003000200800002

345006999000002350501099900999000012008060606001005002030002003004003H5C002
35011363025011355011000363025355011008060606060010050040580020020100600002
3550069990000099900009990009990001200806060600100500402600100300406H5C002
361004782002009990000078200436100460700806060600100500404800200300400300002
36100936101000999000009361009990000700806060600100500203700200300600300002
361013999000009990000099900099900014008060606001005004054002003000000500002
3620152900040303620100159990099900099900012608060606001005004052001003003006H5C002
37003999000009990000999000999000080606060010050040490010030000000000002
3700662001000860004010810002811002012008060600200100500403400100300606H5C002
37007159007023292015007999009990001060806060001005004053001003002007000002
370081079004002999000002960029990001200306060600300500305001001002H5C002
375007999000009990000099900099900012008060606001005004056001003002005H5C002
37501137501100099900000860010999000080806060600100500403600100300500700002
37801762001002299900000605001062001201208001066001005004038001003005003H5C002
3780186200070088850002002632012625008012008060606001005004037001003004004H5C002
3780013590010019990000099900099900012008060606001005004020001001001004H5C002
378002999000009990000060000099900012008001006001005004020001001001004H5C002
37802041300802035501600099900099900012008060606001003004035001002003005H5C002
378001001122300203999000999000100800100600300500402300100100100500002
37800771000700099900000999000099900012008060606001005004025001001001006H5C002
378016620016000324004016860004990000120010080606001005004035001003006007H5C002
3780183780180003170180003620022600010080606060009040004038001003005007H5C002
3780093190080009990000086001799900012008060606001005004026001003004007H5C002
3780016940100209100900786001609100912008060606003005001048001003001007H5C002
378021378010009990000016602037502012008060606001005004039001003005007H5C002
3780001660100059990000016602099900012008060606001001037001003004008H5C002
37800416602000620020001660209990001200806060600100100500407001003008008H5C002
37801399900000999000009990009990001400806060600400500401900100100001000002
37900299900000999000009990009990000080806060600100500405900100300406000002
3820029990000099900000999000999000100806060600100500404002005005004000002
392003820040099900000814025999000080806060600100300405700100300200400002
39200618500900699900000999000999000120010060606001005004064001003002005H5C002
392006378020099900009990001200806060600100500405900100300406060600002
411025515003030421017007999000999000080806060600100500405100100300200800002
4210309990000099900000999000001400806060600100500405800100300200500002
421009860000400856200108190004990001200806060600100500402001003004006H5C002

42102116200060255090030218040229990000128033001006001005004053001003003007HSC002
421036421043000413025000819030602999003001280800606001005004053001003003009HSC002
46300522300700985000400599900099900001208006060001005004040001005003006HSC002
523010999000009990000078602099900001208006060004001002038002003006001HSC002
52301052200501099900000620003613062010080060600010050040406001003004080CCS002
52903499900000999000620308410010080060600010050040590010030020060CCS002
5990.53150250029130220.58140209130222-10308006060010050040390010030090040CCS002
6200026200020009990000081901081430100800606000100500405200010030002006HSC002
62002390000204999000009990009990001208006060001005004061001003002005HSC002
62002399900000999000009990009990001208006060001005004061001003002006HSC002
62001999900000999000009990009990001208006060001005004053001003002007HSC002
62001363702000999000009990009990000700800606000100500404600100300708CCS002
6590326510400099900000193030143025012068006060001005004055001003003008HSC002
7200107200230007200010158140149990009990001208006060001005004049001003003005HSC002
72301518900001718900201572301599900001208006060001005004034001003005008HSC002
72301:3010130009990000099900099900001208006060001005004051001003003007HSC002
763021621005021223020157630157690151206080606003005004050001003002006HSC002
78502031700100099900000786020999000004008006060010050020510020030050010030007CCS002
796029786029000999000009990009990001108006060010050040590020010010050007CCS002
8220068050010146700020179150127290208006060001005004033001003006007CCS002
8220019990000099900000999000999000110800606000100500404000100300708HSC002
85001599900000999000009990009990001108006060001005004041001003004007CCS002
8500026200250001890100003150038190609006060001005004037001003005006HSC002
8500129990000099900000860012999000012070060600100500409001003003008HSC002
8600109990000099900000600086001099900001208006060001005004029001003005007HSC002
8620047230040088620048002008140044120800102001005004034001003003007HSC002
86400642102003223003010864006840066-120800606001005004044001003005009HSC002
8650168500140019060160.23820.39990000110800606060010040510010030020040CCS002
86900685000600892006009990009990001208006060001005004025001003002008HSC002
8720001166022002999000009990009990000120800606000100500406001004001003006008HSC002
90600299900000999000009990009990000808060606004001004019001003002002CCS002
906000142100400291500100199900009990001208006060001005004020001001001004HSC002

APPENDIX F.

PROGRAM

PROGRAM DECK I

Each set of data should be followed by a blank card.

DT,ENSTONCLASS(5),UNEMPL(5),EMP(5),C:INC(10),O:DEP(10),CS(10),S4(20)
 1,S42(10),S43(10),S44(10),C2(100),ST2(100),S2(100),S(100),C(100)
 2,A(100),SK1L(100),SK(100),SK1L2(100),SK2(100),AVSK(100),S3(100),
 3ST2(100),C3(100),AS2(100),AST2(100),ST(100),AME(10)
 100 FORMAT(I2,1X,F3.0,I2,1X,2F3.0,I2,1X,2F3.0,I2,1X,F3.0,I2,1X,F3.0,
 27I3,2F3.0,3I3)
 711 FORMAT(1H1,10A4)
 712 FORMAT(10A4)
 701 FORMAT(1H ,F3,4H0 TO,4X,3H49,4X,F7.0)
 702 FORMAT(1H ,3X,6H500 TO,2X,4H1499,4X,F7.0)
 703 FORMAT(1H ,13H1000 TO 2499,4X,F7.0)
 704 FORMAT(1H ,1X,13H2500 TO 3499,4X,F7.0)
 705 FORMAT(1H ,1X,13H3500 TO 4499,4X,F7.0)
 706 FORMAT(1H ,1X,13H4500 TO 5499,4X,F7.0)
 707 FORMAT(1H ,1X,13H5500 TO 6999,4X,F7.0)
 708 FORMAT(1H ,1X,13H7000 TO 10000,4X,F7.0)
 709 FORMAT(1H ,15H10100 AND ABOVE,4X,F7.0)
 710 FORMAT(1H ,15H10100 NOT RESPOND,3X,F7.0)
 156 FORMAT(1H ,34H AVERAGE INCOME FOR ALL RESPONDENTS,F7.0)
 101 FORMAT(14)
 113 FORMAT(1H-,3HMALES,5X,F5.0,3X,7HFE MALES,5X,F6.0,3X,11HND RESPONSE,
 13X,F6.0)
 102 FORMAT(1H1,3X,73H OCCUPATION QTY (AVE TIME)
 103 FORMAT(1H ,4X,13,10X,F6.0,5X,F4.0)
 105 FORMAT(1H ,11X,14,2X,F6.0,10X,14,1X,F6.0,2X,14,2X,F6.0)
 104 FORMAT(1H1,89H EMPLOYED CLASS NUMBER UNEMPL CLASS NUM STATUS
 1 CLASS NUMBER)
 106 FORMAT(1H1,15HACES 20 OR LESS,F10.1)
 114 FORMAT(1H-,14H MARITAL STATUS)
 115 FORMAT(1H1,27H DEPENDENTS CODENUM QTY)
 116 FORMAT(1H-,30H INCOME GROUP NUMBER//
 117 FORMAT(1H1,10X,2PH EDUCATION BY YEARS COMPLETED)
 128 FORMAT(1H0,26HELEMENTARY AND HIGH SCHOOL)
 131 FORMAT(1HC,2X,41HC COLLEGE VOCATION APPRENTICE)
 150 FORMAT(1H1,31H EXPERIENCE QTY AVE AVERAGE YRS)
 153 FORMAT(1H1,6H SKILLS,3X,5H INDEX//)
 107 FORMAT(1H ,12HAGE 21 TO 24,3X,F10.1)
 108 FORMAT(1H ,12HAGE 25 TO 29,3X,F10.1)
 109 FORMAT(1H ,12HAGE 30 TO 34,3X,F10.1)
 110 FORMAT(1H ,12HAGE 35 TO 44,3X,F10.1)
 111 FORMAT(1H ,12HAGE 45 TO 54,3X,F10.1)
 112 FORMAT(1H ,15HAGE 55 OR ABOVE,F10.1)
 118 FORMAT(1H ,22H GRADE NUMBER)
 119 FORMAT(1H ,14,F6.0,7X,14,F6.0,14,F7.0)
 124 FORMAT(1H ,6X,14,6,F7.0)
 125 FORMAT(1H ,15X,14,3X,F6.0)
 126 FORMAT(1H ,15X,14,5X,F6.0)
 144 FORMAT(1H ,44H YEAR NOS YEAR NOS YEAR NOS)
 134 FORMAT(1H ,3X,4H IDOE,5X,OR NUMBER//)
 138 FORMAT(1H ,13,10X,F7.0)
 151 FORMAT(1H ,21X,31H LENGTH SINCE WORKED//)
 152 FORMAT(1H ,3X,15,5X,F6.0,3X,F6.0,10X,F6.0)

154 FORMAT(1H ,6HSKILLS,4X,3HCTY,4X,8HAVE TIME??)

155 FORMAT(1H ,2X,15,F7.0,4X,F6.0)

402 CONTINUE

DD151=1.5
CLASS(I)=0.
UNEX(I)=0.

EXP(I)=0.

15 CONTINUE

RAGE=0.
SAGE1=0.
SAGE2=0.
SAGE3=0.
SAGE4=0.
SAGE5=0.
SAGE6=0.
SAGE7=0.
DDNCT=0.
SFEM=0.
SMALB=0.
DEPD=0.

NUM = 0.
DD161=1,10
QINC(I)=0.
ODREP(I)=0.
QS(I)=0.
S44(I)=0.
S42(I)=0.
S43(I)=0.

16 CONTINUE

DD171=1,20
S4(I)=0.

17 CONTINUE

DD181=1,100
SKIL(I)=0.
SK(I)=0.
SKIL2(I)=0.
SK2(.)=0.
AVSK(I)=0.
SE(I)=0.
ST3(I)=0.
C3(I)=0.
C2(I)=0.
ST2(I)=0.
C2(I)=0.
AS2(I)=0.
AST2(I)=0.
C3(I)=0.
ST2(I)=0.
S1(I)=0.
S2(I)=0.
A(I)=0.

```

C(I)=0.
18 CONTINUE
2 READ(1,100)I,RT1,I,C2,T1,O2T2,TK,EN2,SIN2,KI,TIME,KL,TIM,J,JI,JK,
JL,NI,NL,EM,AGE,SEX,M,N,N.
.F(I+I*KL+IK).10.0)GO TO 4
IF(I.EQ.0)GO TO 45
GO TO 32
45 I=3
82 CONTINUE
S(I)=S(I)+O2T1
C(I)=C(I)+1.
IF(I.EQ.0)GO TO 43
GO TO 22
46 I=3
83 CONTINUE
3 S2(I1)=S2(I1)+O2T1
ST2(I1)=ST2(I1)+O2T2
C2(I1)=C2(I1)+1.
ANUM=ANUM+1.
4 S4(J)=S4(J)+1.
S42(J1)=S42(J1)+1.
S43(JK)=S43(JK)+1.
S44(JL)=S44(JL)+1.
50 EMP(NM)=EMP(NM)+1.
UNEM(NL)=UNEM(NL)+1.
CLASS(LK)=CLASS(LM)+1.
IF(I.EQ.0)GO TO 47
GO TO 84
47 IK=3
84 CONTINUE
S3(IK)=S3(IK)+EN2
ST3(IK)=ST3(IK)+SIN2
C3(IK)=C3(IK)+1.
IF(K1.EQ.0)GO TO 48
GO TO 85
48 KI=3
85 CONTINUE
SKIL(K1)=SKIL(K1)+TIME
SK(KI)=SK(KI)+1.
IF(KL.EQ.0)GO TO 49
GO TO 86
49 KL=3
86 CONTINUE
SKIL2(KL)=SKIL2(KL)+TIM
SK2(KL)=SK2(KL)+1.
IF(AGE.EQ.1.)GO TO 51
GO TO 59
51 PAGE=AGE+1.
GO TO 70
59 IF(AGE.LT.31.)GO TO 50
IF(AGE.LE.34.)GO TO 51
IF(AGE.LE.35.)GO TO 52
IF(AGE.LE.45.)GO TO 53
IF(AGE.LE.55.)GO TO 54
IF(AGE.LE.60.)GO TO 55
IF(AGE.GT.60.)GO TO 56

```

```

451 CONTINUE
30 CONTINUE
WRITE(3,153)
WRITE(3,154)
D0400J=1,100
SK1L(J)=SK1L(J)+SK1L2(J)
SK(J)=SK(J)+SK2(J)
IF(SK(J).EQ.0.) GO TO 403
AVSK(J)=SK1L(J)/SK(J)
403 CONTINUE
400 CONTINUE
AVGRY=AVSK(3)
SKY=SK(3)
WRITE(3,155)CAR,SKY,AVGRY
SK(3)=0.
AVSK(3)=0.
D031J=1,100
IF(SK(J).EQ.0.)GOTO452
WRITE(3,155)J,SK(J),AVSK(J)

452 CONTINUE
31 CONTINUE
999 WRITE(3,150)
WRITE(3,151)
D0401K=1,100
S2(K)=S2(K)+S3(K)
C2(K)=C2(K)+C3(K)
ST(K)=ST2(K)+ST3(K)
IF(C2(K).EQ.0.) GO TO 404
AS2(K)=S2(K)/C2(K)
AST2(K)=ST(K)/C2(K)
404 CONTINUE
401 CONTINUE
C2Y=C2(3)
AS2Y=AS2(3)
AST2Y=AST2(3)
WRITE(3,152)CAT,C2Y,AS2Y,AST2Y
ASP(3)=0.
AST(3)=0.
C2(3)=0.
D032K=1,100
IF(C2(K).EQ.0.)GOTO450
WRITE(3,152)K,C2(K),AS2(K),AST2(K)
450 CONTINUE
32 CONTINUE
WRITE(3,104)
D0207I=1,5
WRITE(3,103)I,IMP(I),I,UNEM(I),I,CLASS(I)
207 CONTINUE
203 WRITE(3,100)A,11

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```

WRITE(3,107)SAGE2
WRITE(3,108)SAGE3
WRITE(3,109)SAGE4
WRITE(3,110)SAGE5
WRITE(3,111)SAGE6
WRITE(3,112)SAGE7
WRITE(3,710)RAGE
204 WRITE(3,113)SMALR,SPERM,DONCT
WRITE(3,114)
WRITE(3,124)(M,OS(M),M=1,6)
WRITE(3,115)
WRITE(3,125)(N,GDEP(N),N=1,10)
WRITE(3,710)DEPO
205 WRITE(3,117)
WRITE(3,118)
WRITE(3,128)
WRITE(3,129)(I,S4(I),I=1,20)
WRITE(3,131)
WRITE(3,144)
DD132J=1,10
WRITE(3,149)J,S42(J),J,S43(J),J,S44(J)
132 CONTINUE
AINC=QINC(1)*250.
BINC=QINC(2)*1000.
CINC=QINC(3)*2000.
DINC=QINC(4)*3000.
EINC=QINC(5)*4000.
FINC=QINC(6)*5000.

GINC=QINC(7)*6250.
HINC=QINC(8)*8500.
RINC=QINC(9)*11000.
TINC=AINC+BINC+CINC+DINC+EINC+FINC+GINC+HINC+RINC
AVEI=TINC/(ANUM-QINC(10))
KTR=700
DD210I=1,10
KTR=KTR+1
210 CONTINUE
WRITE(3,116)
WRITE(3,125)(I,QINC(I),I=1,10)
WRITE(3,156) AVEI
GO TO 402
STOP

```

PROGRAM DECK II

Each set of data should be followed by a blank card.

```

DIMENSION C2(999), ST2(999), S2(999), S(999), C(999), A(999),
15 SK1(999), SK(999), SKIL2(999), SK2(999), AVSK(999), S3(999),
25 ST3(999), C3(999), AS2(999), AST2(999), ST(999)
100 FORMAT(13,F3.0,13,2F3.0,13,2F3.0,13,F3.0,13,F3.0)
101 FORMAT(14)
102 FORMAT(1H1,3X,33H OCCUPATION QTY AVE TIME)
103 FORMAT(1H,4X,15,10X,F6.0,5X,F4.0)
105 FORMAT(1H,11X,14,2X,F6.0,10X,14,1X,F6.0,8X,14,2X,F6.0)
150 FORMAT(1H,10H EXPERIENCE,10X,TH AVERAGE,1X,12H AVERAGE TIME)
153 FORMAT(1H1,6H SKILLS,3X,5H INDEX//)
119 FORMAT(1H,14,F6.0,7X,11,F6.0,6X,14,F7.0)
124 FORMAT(1H,6X,14,6X,F7.0)
125 FORMAT(1H,15X,14,3X,F6.0)
126 FORMAT(1H,16X,14,5X,F6.0)
144 FORMAT(1H,44H YEAR NOS YEAR NOS YEAR NOS)
124 FORMAT(1H,6X,4H CODE,5X,6H NUM ER//)
138 FORMAT(1H,15,10X,F7.0)
151 FORMAT(1H,21X,31H LENGTH SINCE WORKED//)
152 FORMAT(1H,3X,15,5X,F6.0,3X,F6.0,10X,F6.0)
154 FORMAT(1H,6H SKILLS,4X,3H OTY,4X,3H AVE TIME//)
155 FORMAT(1H,2X,15,F7.0,4X,F6.0)
402 CONTINUE
    DU18I=1,999
    SKIL(I)=0.
    SK(I)=0.
    SKIL2(I)=0.
    SK2(I)=0.
    AVSK(I)=0.
    S3(I)=0.
    ST3(I)=0.
    C3(I)=0.
    S2(I)=0.
    ST2(I)=0.
    C2(I)=0.
    AS2(I)=0.
    AST2(I)=0.
    C2(I)=0.
    ST2(I)=0.
    S(I)=0.
    S2(I)=0.
    A(I)=0.
    C(I)=0.
18 CONTINUE
2 READ(1,100)I,OT1,II,Q2T1,Q2T2,IK,EN2,SIN2,KI,TIME,KL,TIM
IF((I+II+KL+IK).EQ.0)GOTO99
IF(1.EQ.0)GO TO145
GO TO 82
45 I=3
52 CONTINUE
S(I)=S(I)+OT1
C(I)=C(I)+1.

```

```

      IF(I1.EQ.0)GO TO 46
      GO TO 83
46  I1=3
83  CONTINUE
      S2(I1)=S2(I1)+Q2T1
      ST2(I1)=ST2(I1)+Q2T2
      C2(I1)=C2(I1)+1.
      ANUM=ANUM+1
      IF(IK.EQ.0)GO TO 47
      GO TO 84
47  IK=3
84  CONTINUE
      S3(IK)=S3(IK)+ENQ
      ST3(IK)=ST3(IK)+SIN2
      C3(IK)=C3(IK)+1.
      IF(K1.EQ.0)GO TO 48
      GO TO 85
48  K1=3
85  CONTINUE
      SK1L(K1)=SK1L(K1)+TIME
      SK1(K1)=SK1(K1)+1.
      IF(KL.EQ.0)GO TO 49
      GO TO 86
49  KL=3
86  CONTINUE
      SK1L2(KL)=SK1L2(KL)+TIM
      SK2(KL)=SK2(KL)+1.
      GO TO 59
59  CONTINUE
      GO TO 2
99  CONTINUE
      WRITE(3,102)
      DD2061=1.999
      IF(C(I).EQ.0.)GO TO 406
      A(I)=S(I)/C(I)
706  CONTINUE
203  CONTINUE
      CAR=0.
      CY=C(3)
      AY=A(3)
      C(3)=0.
      A(3)=0.
      WRITE(3,106)CAT,CY,AY
      DD301=1.999
      IF(C(I).EQ.0.)GO TO 451
      WRITE(3,103)I,C(I),A(I)
451  CONTINUE
80  CONTINUE
      WRITE(3,153)
      WRITE(3,154)

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```

DD00J=1,999
S1L(J)=SK1L(J)+SK1L2(J)
SK(J)=SK1(J)+SK2(J)
IF(SK(J).EQ.0.) GO TO 403
AVSK(J)=SK1L(J)/S1L(J)
403 CONTINUE
400 CONTINUE
AVSKY=AVSK(3)
SKY=SK(3)
WRITE(3,155)CAR,SKY,AVSKY
SK(3)=0.
AVS1(3)=0.
DD31J=1,999
IF(SK(J).EQ.0.)GOTO452
WRITE(3,155)J,SK(J),AVSK(J)
452 CONTINUE
31 CONTINUE
999 WRITE(3,150)
WRITE(3,151)
DD41K=1,999
S2(K)=S21(K)+S3(K)
C2(K)=C21(K)+C3(K)
ST(K)=S12(K)+ST3(K)
IF(C2(K).EQ.0.) GO TO 404
AS2(K)=S2(K)/C2(K)
AST2(K)=ST(K)/C2(K)
404 CONTINUE
401 CONTINUE
C2Y=C2(3)
AS2Y=AS2(3)
AST2Y=AST2(3)
WRITE(3,152)CAT,C2Y,AS2Y,AST2Y
AS2(3)=0.
AST2(3)=0.
C2(3)=0.
DD32K=1,999
IF(C2(K).EQ.0.)GOTO450
WRITE(3,152)K,C2(K),AS2(K),AST2(K)
450 CONTINUE
32 CONTINUE
STOP
END

```


Three Digit Computer Output

JUNCTION CITY TRAIL-BLICK CLASSIFICATION

OCCUPATION	QTY	AVE TIME
0	0.0	0.0
12	1.	1.
19	1.	7.
41	1.	3.
74	1.	10.
75	4.	10.
78	2.	2.
79	2.	10.
91	15.	14.
92	14.	11.
96	1.	4.
98	3.	1.
99	1.	11.
100	2.	1.
102	1.	0.
119	2.	7.
152	1.	10.
160	4.	17.
162	1.	3.
168	3.	8.
169	1.	27.
17	5.	12.
180	2.	5.
183	1.	15.
185	6.	11.
187	3.	4.
188	1.	8.
189	9.	10.
191	1.	3.
199	5.	11.
201	17.	7.
202	1.	14.
203	2.	5.
205	1.	1.
206	5.	5.
207	2.	1.
210	12.	8.
211	7.	9.
212	2.	5.
215	1.	12.
221	1.	27.
222	5.	7.
223	3.	1.
232	3.	13.
233	5.	6.
235	4.	8.
219	1.	6.
243	1.	6.
249	1.	3.
250	6.	9.

250	1.	4.
252	2.	3.
27	1.	1.
276	1.	3.
280	1.	17.
280	9.	0.
292	4.	0.
297	1.	15.
305	1.	36.
311	3.	5.
315	7.	6.
316	2.	10.
319	1.	0.0
320	1.	20.
332	3.	13.
339	1.	30.
355	3.	8.
361	3.	9.
362	1.	13.
372	1.	0.
373	2.	5.
375	3.	6.
378	15.	11.
379	1.	2.
382	4.	4.
411	1.	25.
421	4.	23.
463	1.	5.
523	2.	10.
529	1.	37.
599	1.	1.
620	4.	17.
637	1.	13.
659	1.	32.
750	1.	10.
722	1.	0.
723	2.	14.
749	1.	10.
760	1.	21.
755	1.	20.
755	1.	29.
822	2.	3.
829	1.	16.
850	3.	10.
850	1.	10.
832	1.	0.
864	1.	6.
869	2.	11.
902	1.	1.
902	2.	1.
913	4.	6.

919	1.	10.
922	1.	8.
954	1.	2.
955	1.	3.
963	1.	20.
990	61	17.
990	1.	0.0
995	1.	3.
999	6.	0.0

SKILLS INDEX

SKILLS QTY AVE TIME

0	0.0	0.0
01	2.	7.
92	2.	17.
93	1.	6.
129	1.	25.
130	1.	19.
143	3.	20.
144	2.	12.
149	1.	26.
152	7.	15.
153	1.	3.
161	1.	2.
165	4.	17.
179	1.	33.
193	1.	31.
196	1.	1.
201	2.	7.
202	7.	11.
203	22.	15.
206	1.	2.
207	1.	8.
208	5.	21.
209	2.	12.
210	4.	16.
215	1.	25.
216	1.	4.
223	1.	1.
230	1.	2.
237	1.	10.
259	1.	0.0
250	1.	1.
265	1.	25.
305	1.	10.
313	4.	16.
317	1.	14.
332	1.	33.
355	1.	11.
361	1.	4.
362	1.	2.
363	2.	17.
375	1.	20.
378	2.	12.
3 2	1.	0.
421	1.	14.
600	3.	0.

613	2.	13.
620	4	13.
621	1.	48.
622	1.	4.
625	1.	8.
627	1.	12.
628	1.	17.
639	1.	21.
680	1.	15.
659	2.	26.
720	1.	27.
723	2.	17.
726	1.	12.
729	1.	2.
749	2.	14.
763	2.	8.
739	1.	15.
782	3.	19.
736	47.	19.
800	4.	5.
801	1.	24.
804	1.	22.
810	2.	6.
811	2.	6.
814	7.	14.
819	7.	9.
829	1.	3.
840	1.	6.
841	1.	1
844	1.	25.
850	1.	10.
860	16.	15.
862	1.	4.
859	1.	6.
906	1.	1.
913	1.	22.
915	1.	12.
937	1.	5.
950	1.	2.
979	1.	20.
990	1.	0.0
999	513.	0.

EXPERIENCE	AVERAGE LENGTH	AVERAGE TIME SINCE WORKED
0	0.0	0.0
5	1.	0.0
12	1.	1.
16	1.	1.
74	1.	2.
75	3.	0.0
78	2.	3.
79	3.	20.
91	10.	6.
92	18.	8.
96	1.	6.
97	1.	0.0
99	2.	9.
100	2.	2.
110	1.	13.
119	1.	0.0
132	1.	3.
151	2.	20.
160	6.	8.
163	6.	9.
163	1.	13.
166	6.	2.
169	4.	13.
171	1.	9.
187	2.	20.
187	2.	9.
188	7.	3.
188	7.	8.
188	1.	6.
189	6.	2.
189	6.	12.
191	1.	15.
199	1.	0.0
199	2.	4.
201	22.	1.
202	22.	8.
202	7.	6.
203	7.	10.
203	19.	8.
204	1.	4.
204	1.	3.
205	1.	1.
205	7.	7.
207	1.	17.
207	1.	6.
208	4.	2.
209	4.	9.
209	1.	12.
210	1.	3.
210	23.	9.
211	6.	9.
212	2.	4.
212	2.	2.
213	1.	1.
213	1.	12.
215	1.	0.0
216	1.	6.
216	1.	8.
217	1.	0.0
217	1.	9.
221	3.	10.
222	3.	10.
222	9.	3.
222	9.	3.
230	1.	1.
230	1.	1.

231	1.	3.	15.
232	3.	8.	7.
235	5.	7.	11.
237	2.	5.	0.0
240	1.	1.	1.
243	2.	7.	7.
246	1.	3.	17.
250	3.	1.	0.0
255	1.	4.	0.0
259	1.	2.	5.
260	1.	5.	5.
262	1.	3.	4.
280	2.	6.	1.
290	20.	5.	10.
292	1.	15.	7.
305	1.	5.	1.
308	1.	10.	5.
309	1.	1.	1.
311	10.	1.	3.
315	8.	10.	6.
317	4.	6.	1.
319	7.	10.	2.
324	1.	4.	16.
331	2.	4.	0.
339	1.	30.	0.0
355	4.	10.	5.
359	1.	1.	1.
361	4.	9.	8.
362	4.	7.	10.
363	1.	25.	11.
375	1.	11.	0.0
373	7.	21.	4.
382	1.	4.	0.0
40	1.	25.	19.
406	1.	15.	3.
412	1.	17.	2.
413	2.	16.	10.
21	8.	16.	6.
509	1.	3.	21.
519	1.	3.	30.
522	1.	5.	10.
524	1.	2.	3.
525	1.	2.	0.
529	1.	1.	5.
559	1.	1.	18.
605	1.	3.	7.
613	1.	1.	21.
620	10.	13.	1.
621	1.	5.	21.
637	1.	21.	0.0
650	1.	13.	0.0

651	1.	40.	0.0
652	1.	18.	0.0
659	2.	21.	1.
670	1.	2.	17.
688	1.	1.	10.
694	1.	10.	2.
709	1.	12.	12.
710	1.	7.	0.0
720	6.	11.	8.
722	1.	15.	5.
723	3.	12.	2.
7.5	1.	5.	12.
769	1.	8.	24.
782	1.	2.	2.
785	5.	13.	3.
789	1.	10.	21.
800	1.	2.	24.
801	1.	13.	0.0
805	1.	1.	14.
822	1.	4.	17.
827	1.	12.	10.
850	6.	5.	5.
859	1.	15.	0.0
860	2.	4.	9.
862	2.	3.	5.
892	1.	6.	0.0
905	1.	3.	18.
906	6.	7.	11.
910	1.	1.	20.
912	1.	4.	9.
913	5.	7.	1.
915	2.	1.	1.
922	1.	1.	0.0
935	1.	23.	1.
957	1.	5.	0.
958	1.	1.	2.
963	3.	9.	2.
969	1.	2.	2.
970	1.	5.	10.
983	1.	3.	0.0
999	311.	0.0	0.0

MANHATTAN THREE-DIGIT CLASSIFICATION

OCCUPATION	QTY	AVE TIME
0	1.	19.
1	1.	18.
5	2.	10.
7	1.	8.
13	2.	12.
17	1.	1.
3	1.	4.
19	3.	6.
22	1.	10.
23	2.	8.
40	2.	2.
41	9.	8.
45	4.	7.
50	4.	13.
70	3.	28.
72	1.	5.
73	2.	5.
75	13.	8.
78	3.	3.
79	5.	5.
90	47.	9.
91	17.	12.
92	26.	8.
94	1.	3.
93	5.	12.
97	1.	6.
98	47.	6.
99	19.	3.
100	4.	3.
110	4.	15.
119	1.	1.
132	1.	6.
141	2.	10.
143	3.	2.
153	3.	6.
160	9.	5.
163	2.	15.
165	2.	8.
166	3.	6.
168	1.	3.
169	6.	5.
171	1.	18.
172	1.	6.
182	6.	16.
183	1.	34.
184	1.	42.
186	18.	10.
188	8.	5.
187	3.	4.
188	4.	10.

189	1.	12.
191	6.	8.
193	1.	20.
194	1.	7.
196	1.	10.
199	12.	10.
201	37.	7.
202	8.	5.
203	10.	4.
205	3.	3.
206	17.	3.
208	1.	2.
209	2.	1.
210	13.	6.
211	7.	8.
212	1.	4.
213	1.	5.
215	2.	2.
216	4.	3.
222	1.	12.
221	5.	5.
232	2.	9.
233	1.	19.
235	2.	9.
237	5.	2.
239	1.	20.
240	1.	10.
243	3.	4.
249	5.	3.
250	5.	11.
252	1.	10.
253	1.	16.
257	1.	10.
258	1.	20.
259	1.	10.
262	1.	3.
274	1.	2.
275	1.	4.
277	1.	20.
280	2.	13.
283	1.	0.
289	1.	22.
290	12.	7.
301	2.	2.
303	1.	16.
307	1.	1.
311	1.	6.
314	.	7.
315	3.	3.
317	2.	9.
318	2.	3.

319	2.	1.
350	5.	13.
332	4.	5.
354	2.	2.
355	5.	4.
361	1.	2.
362	1.	20.
363	1.	18.
372	1.	0.
373	1.	5.
375	1.	4.
378	9.	7.
379	1.	6.
382	6.	5.
389	3.	4.
401	2.	28.
413	1.	8.
421	12.	26.
465	2.	29.
469	1.	22.
521	1.	10.
526	3.	4.
533	1.	12.
599	1.	10.
600	1.	10.
619	1.	18.
620	6.	5.
624	1.	21.
633	2.	3.
539	1.	2.
651	1.	9.
710	1.	10.
716	1.	1.
720	1.	17.
722	1.	20.
723	1.	21.
736	1.	4.
741	1.	8.
749	1.	45.
771	1.	15.
789	1.	5.
804	-.	8.
823	1.	12.
829	4.	20.
840	2.	18.
842	1.	20.
850	4.	11.
85	4.	13.
861	1.	1.
862	1.	1.
864	1.	6.

856	4.	10.
857	2.	5.
899	2.	21.
905	1.	13.
906	4.	8.
915	1.	27.
921	1.	4.
934	5.	5.
950	150.	10.
995	5.	0.
999	6.	0.0

SKILLS INDEX.

SKILLS QTY AVE TIME

6	1.	26.
5	.	10.
7	1.	20.
3	1.	1.
17	7.	10.
18	1.	6.
19	1.	4.
24	1.	20.
25	1.	1.
29	2.	4.
41	3.	3.
47	2.	3.
75	2.	21.
78	1.	3.
79	1.	1.
96	2.	14.
91	3.	3.
92	6.	11.
99	3.	15.
100	1.	5.
110	1.	20.
129	1.	15.
150	2.	9.
132	2.	19.
137	1.	9.
139	1.	13.
143	6.	14.
144	16.	10.
149	5.	12.
150	1.	15.
152	24.	15.
153	2.	5.
156	2.	1.
166	1.	11.
166	2.	23.
139	1.	25.
191	1.	2.
193	2.	24.
198	1.	20.
194	6.	14.
201	3.	20.
202	13.	14.
203	60.	13.
204	3.	13.
207	1.	20.

208	6.	10.
209	3	20.
210	13.	14.
211	4.	14.
213	1.	2.
214	1	3.
216	11.	11.
219	1.	2.
223	1.	20.
236	2.	16.
239	3.	7.
240	1.	25.
250	1.	15.
250	1.	2.
251	1.	4.
289	1.	26.
290	1.	5.
302	1.	17.
305	10.	20.
307	1.	12.
308	2.	7.
311	4.	11.
315	7.	19.
316	3.	14.
317	2.	25.
330	1.	19.
339	1.	7.
343	1.	7.
374	2	15.
385	3.	3.
386	1.	3.
382	1.	23.
385	1.	23.
366	1.	2.
403	1.	43.
406	1.	1.
407	6.	15.
421	5.	15.
424	1.	3.
437	1.	4.
502	1.	4.
523	1.	6.
524	4.	8.
525	1.	10.
575	1.	3.
600	3.	24.
605	1.	24.
610	1.	17.
616	1.	13.
621	2.	21.
625	1.	7.

631	1.	17.
633	1.	5.
652	1.	25.
659	1.	2.
677	1.	0.0
685	1.	2.
709	1.	1.
720	5.	6.
723	2.	15.
724	1.	2.
737	1.	4.
740	1.	23.
741	2.	13.
749	1.	15.
750	1.	40.
751	2.	26.
752	3	11.
763	7.	11.
770	1.	20.
771	1.	22.
779	1.	20.
780	1.	5.
782	23.	11.
786	160.	17.
787	2.	19.
789	1.	30.
810	4.	15.
811	4.	9.
812	1.	12.
813	3.	18.
814	12.	14.
819	14.	14.
820	2.	5.
821	2.	15.
824	2.	20.
828	5.	14.
840	4.	13.
841	1.	20.
842	1.	6.
849	4.	10.
850	2.	4.
852	1.	10.
860	40.	16.
861	2.	22.
862	5.	12.
864	1.	2.
869	2.	16.
885	3.	6.
887	1.	3.
88.	1.	8.

960	1.	4.
970	2.	14.
974	1.	1.
990	2	0.0
999	31.	0.

EXPERIENCE	AVERAGE LENGTH	AVERAGE TIME SINCE WORKED
0	3.	13.
1	3.	7.
5	2.	2.
7	2.	1.
8	2.	2.
12	2.	9.
12	4.	8.
13	1.	9.
17	1.	15.
18	2.	11.
18	2.	3.
19	3.	7.
22	5.	2.
23	5.	4.
23	2.	8.
40	1.	0.0
41	1.	17.
41	4.	2.
45	..	3.
50	3.	10.
70	3.	2.
70	3.	0.0
72	2.	8.
73	2.	11.
73	2.	5.
75	17.	2.
77	6.	4.
78	6.	5.
78	12.	6.
78	12.	8.
79	3.	3.
79	3.	7.
91	32.	3.
91	32.	5.
91	74.	10.
96	10.	10.
96	10.	6.
97	4.	2.
98	3.	2.
98	3.	9.
99	15.	4.
100	9.	4.
110	9.	7.
110	1.	0.0
110	2.	0.0
110	2.	12.
129	1.	0.0
129	1.	2.
132	3.	17.
137	3.	0.
137	2.	2.
140	1.	12.
140	1.	7.
141	3.	15.
141	3.	9.
141	3.	0.0
141	2.	7.
143	3.	9.
143	3.	10.
143	3.	8.
144	1.	5.
149	1.	20.
149	1.	0.0
152	1.	3.
152	6.	7.
152	6.	5.
153	9.	13.
153	9.	3.
159	1.	4.
159	1.	12.
160	8.	7.
160	8.	4.
162	2.	5.
162	2.	10.

163	3.	5.	12.
165	2.	7.	6.
166	4.	7.	11.
167	5.	5.	5.
169	5.	7.	3.
171	1.	1.	15.
180	1.	3.	7.
182	3.	13.	9.
183	1.	6.	2.
184	1.	40.	0.0
185	6.	5.	9.
186	3.	10.	6.
187	4.	9.	10.
188	5.	7.	5.
189	5.	6.	9.
191	3.	2.	5.
193	2.	3.	20.
195	2.	3.	10.
195	2.	3.	15.
196	3.	7.	7.
201	55.	7.	8.
202	20.	9.	6.
203	74.	6.	5.
204	13.	9.	8.
205	4.	2.	11.
206	29.	4.	5.
209	2.	3.	3.
210	30.	7.	5.
211	20.	6.	5.
212	2.	1.	15.
213	1.	1.	5.
214	1.	4.	10.
215	1.	1.	0.
216	4.	4.	5.
217	1.	6.	0.0
219	1.	5.	2.
222	1.	1.	2.
223	7.	5.	9.
232	2.	1.	4.
234	1.	1.	4.
235	14.	4.	16.
256	3.	5.	14.
257	15.	5.	8.
239	1.	20.	0.0
240	1.	15.	15.
243	3.	1.	2.
249	7.	3.	5.
250	2.	1.	0.0
251	1.	1.	0.0
251	1.	15.	0.0
257	1.	5.	21.

259	1.	10.	0.0
260	3.	1.	8.
261	3.	14.	3.
263	2.	2.	9.
263	1.	-	13.
274	1.	1.	5.
275	1.	2.	3.
277	2.	17.	11.
280	2.	13.	0.0
284	1.	6.	0.0
287	1.	2.	2.
289	-	2.	2.
290	44	4.	8.
292	4.	6.	6.
299	1.	22.	0.0
301	1.	2.	2.
302	1.	1.	7.
308	1.	10.	0.0
307	3.	4.	12.
309	1.	20.	1.
310	3.	2.	5.
311	20.	4.	6.
312	1.	13.	0.0
314	4.	4.	5.
315	9.	7.	6.
316	3.	10.	7.
317	2.	3.	3.
318	1.	3.	0.
319	10.	4.	5.
321	1.	1.	4.
323	1.	3.	5.
328	1.	19.	0.0
322	6.	10.	4.
339	1.	7.	0.0
349	1.	5.	0.0
352	1.	4.	10.
354	1.	30.	0.0
355	10.	2.	9.
356	2.	11.	1.
351	2.	5.	3.
362	2.	11.	2.
353	.	1.	5.
378	7.	4.	12.
382	1.	2.	1.
401	2.	12.	5.
411	2.	6.	9.
412	2.	5.	4.
413	1.	7.	10.
421	32.	1.	7.
424	2.	14.	-
436	1.	3.	1.

441	1.	2.	8.
455	1.	30.	0.0
459	4.	5.	6.
520	1.	1.	0.0
521	1.	1.	2.
523	1.	2.	13.
529	2.	19.	1.
539	1.	1.	20.
554	1.	12.	0.0
500	3.	3.	13.
604	1.	1.	0.0
615	1.	7.	1.
620	26.	8.	7.
621	1.	6.	20.
625	1.	4.	3.
633	1.	3.	1.
651	1.	13.	5.
659	1.	2.	21.
710	1.	5.	0.0
715	1.	17.	1.
716	1.	4.	5.
719	1.	3.	15.
720	4.	7.	5.
723	1.	21.	0.0
726	3.	6.	3.
727	1.	3.	2.
730	1.	5.	0.0
741	1.	20.	0.0
751	1.	3.	29.
771	1.	2.	22.
735	1.	2.	0.0
785	3.	16.	6.
804	3.	6.	4.
811	1.	20.	0.0
813	1.	2.	2.
821	1.	23.	0.0
822	1.	12.	6.
829	5.	15.	3.
840	5.	22.	5.
841	2.	42.	0.0
844	1.	10.	0.0
849	2.	2.	20.
850	3.	8.	9.
860	16.	10.	4.
851	5.	3.	15.
862	7.	10.	7.
858	7.	3.	10.
851	2.	9.	0.0
858	1.	33.	0.0
858	3.	3.	19.
813	16.	9.	8.

910	2.	2.	19.
912	1.	5.	0.0
915	6.	6.	3.
921	1.	4.	0.0
920	2.	.	5.
957	1.	17.	4.
958	1.	5.	3.
957	1.	3.	8.
963	2.	2.	5.
964	1.	12.	16.
974	1.	5.	0.
990	1.	0.0	0.0
990	5.5.	0.0	0.0

OCCUPATIONAL SKILL SURVEY
OF
RILEY AND GEARY COUNTIES

by

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B.S., Kansas State University, 1966

AN ABSTRACT OF A MASTER'S THESIS

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OCCUPATIONAL SKILL SURVEY
OF RILEY AND GEARY COUNTIES

The purpose of this study was to provide an accurate source of information concerning the level of employable skills and abilities of the people in the Riley and Geary counties.

To provide data for the study, 7062 questionnaires were mailed to a systematically selected random sample of the population for both counties. Of this sample it was estimated that 6,257 of the sample questionnaires were delivered to the prospective respondents. The response rate of the survey was 23.1% for a total of 1,211 questionnaires returned. From the returned questionnaires, the sample was stratified eliminating all respondents over 60 years of age.

The findings of the survey indicated:

- a. Based on national averages, the survey area contained a disproportionate number of white collar workers. White collar workers represented over 50% of the working population in the survey area.
- b. Compared with the Occupational Index, Machine trade occupations in the Experience Index accounted for a larger percentage of the respondents.
- c. The median educational level of 13.4 years for the survey area, was well above the national and state median years of school completed.
- d. The income of the respondents in the survey area, was less than would be expected in each age group when the national comparative data was used as the norm.

Potential for a semi-industrial labor supply was available in the survey area. By combining the industrial potential of the Junction City-Geary County area and the technical and research capabilities of the Manhattan-Riley County area, a sound base of employable labor can be provided for many types of industries. It was estimated through the survey research that the survey area contained a potential 2,500 to 4,000 part and full time employees. Organizations which deal with light industrial products and are in research or technically orientated areas would be best suited for location in the Riley-Geary county area.

In addition to the survey research a set of computer programs was developed to aid in the evaluation and analysis of the survey data. These programs can be used in following studies of the type used for this thesis.