

THE UNIVERSITY OF KANSAS
Institute for Public Policy and Business Research
School of Business
Department of Economics
RESEARCH PAPERS

**The Effective Labor Force in Kansas:
Employment, Unemployment, and Underemployment**

**prepared for
Kansas, Inc.**

**by
Robert H. Glass
Assistant Scientist**

**and
Charles E. Krider
Professor, School of Business
Director, Institute for Public Policy and Business Research**

**and
Kevin Nelson
Director, Survey Laboratory**

**January 1996
Report No. 227**

ACKNOWLEDGMENTS

We would like to thank a number of people for their help in making this report possible. Without the help Charles Warren this project would never have begun and the final product would not have the quality it does. The oversight committee for this project provided valuable assistance by reviewing the survey instrument prior to the actual running of the survey. Virginia Guzman of the Kansas City BLS Regional Office was extremely helpful at several times in this project. Specifically, she provided the new CPS survey instrument. Both Bill Layes and Steve MacAtee of the Kansas Department of Human Resources also helped solve several problems and provided feedback for this study.

We would like to thank the interviewing staff of the Survey Laboratory. We owe many thanks to the interviewers who spent much of April and May of 1995 calling Kansas households. In addition, we would like to thank the staff at the Institute for Public Policy and Business Research for their help in putting the final report together.

TABLE OF CONTENTS

	Page Number
EXECUTIVE SUMMARY	i
INTRODUCTION: BACKGROUND, PURPOSE, AND SCOPE	1
Labor Force and Effective Labor Force	1
Recent Structural Changes in the Labor Market	3
The Need to Study the Labor Market in more Depth	5
Purpose: Estimation of the Effective Labor Force in Kansas	5
Strategy	6
Survey and Analysis	6
SURVEY	8
The Information the Survey Needed to Generate	8
Definition and Description of Terms	9
Structure of the Survey Instrument	12
Implementation: a Chronology	14
RESULTS	16
Demographic Data from the Survey	16
<i>Location and Gender</i>	16
<i>Age Structure</i>	19
<i>Education</i>	21
<i>Income</i>	22
The Effective Labor Force	23
<i>Employed</i>	25
<i>Unemployed</i>	25
<i>Weighting of the Effective Labor Force Results</i>	27
<i>Comparing Labor Force Estimates</i>	28
<i>Workers with Multiple Jobs</i>	30
<i>Underemployed</i>	30
<i>Discouraged Workers</i>	30
<i>Part-Time Workers Who Want Full-Time Jobs</i>	31
<i>Temporary Workers Who Want Permanent Jobs</i>	32
<i>Mismatched</i>	33
Demographic Analysis of the Effective Labor Force	35
<i>Location and Gender</i>	35
<i>Age Structure and Educational Attainment</i>	36
<i>Special Training</i>	41
<i>Demographic Difference Between the Different Groups of the Underemployed</i>	43

CONCLUSIONS AND POLICY IMPLICATIONS	44
General Conclusions	44
Specific Empirical Conclusions	44
Policy Implications	46
<i>Economic Development</i>	<i>47</i>
<i>Job Training</i>	<i>47</i>
APPENDIX A	
THE SURVEY INSTRUMENT	A-1
APPENDIX B	
FREQUENCY OF ANSWERS FOR EACH QUESTION	B-1
APPENDIX C	
SURVEY RESPONSES COMPARED TO NUMBER OF ACTUAL HOUSEHOLDS: KANSAS COUNTIES	C-1
APPENDIX D	
EXPLANATION OF THE MISMATCHED CATEGORY	D-1

EXECUTIVE SUMMARY

This report and the study it is based on is in response to a request by the Kansas legislature to estimate the extent of underemployment in Kansas. We defined the underemployed as: 1) discouraged workers, 2) part-time workers who want full-time jobs, 3) temporary workers who want permanent jobs, and 4) workers whose skills are underutilized in their current job. In order to provide some context for evaluation and understanding, we also estimated the number of employed and unemployed workers. A major consequence of our research is a statistical description of the effective labor force in Kansas: the employed, the unemployed, and the underemployed.

The estimation was done by using a random telephone survey of 2,517 households in Kansas. The survey instrument used for the survey was based on the latest version of the Current Population Survey instrument which is used by the Bureau of Labor Statistics (BLS) to estimate national labor force statistics such as the unemployment rate. Based on our survey, the Kansas unemployment rate was estimated to be 4.0 percent (54,500 workers), slightly less than the Kansas Department of Human Resources estimate of 4.4 percent (60,000 workers) for the same time period. Because of this result and other reliability tests, we have concluded the survey has successfully measured the effective labor force in Kansas. The underemployment rate was estimated at 6.3 percent (85,100 workers). The proportion of the labor force in each of the four categories of underemployment was:

- discouraged workers—0.3 percent (4,000 workers),
- part-time workers who wanted full-time work—2.1 percent (28,300 workers),
- temporary workers who wanted permanent jobs—2.1 percent (28,300 workers), and
- workers whose current job underutilizes their skills—2.3 percent (31,300 workers).

Because of significant overlap among the last three categories of underemployed, the total percentage of underemployed is less than the sum of the categories of the underemployed.

To put our estimates of Kansas underemployment into context, we compared our estimates with two other sources of underemployment data: BLS and *The Nebraska Underemployment Study*. For the period comparable with our survey, the BLS national estimates of discouraged workers (0.3 percent of the labor force) and of part-time workers who wanted full-time jobs (2.3 percent of the labor force) were nearly the same as our estimates for Kansas. *The Nebraska Underemployment Study* found that 21.7 percent of their part-time workers wanted full-time jobs while we found that only 16.7 percent of Kansas's part-time workers wanted full-time jobs. The Nebraska study found that 58 percent of their employed workers felt they were over qualified for their jobs while we found

24.0 percent of Kansas workers felt their skill were underutilized in their current job. Further, we found that only about 2.4 percent of these Kansas workers were definitely underutilized in their current job. The difference between our estimates in Kansas and the Nebraska estimates is in large measure due to our additional questions and analysis of the respondents.

Specific Empirical Conclusions

1. *The low rates of unemployment (4.0 percent) and underemployment (6.3 percent) indicate the Kansas Labor Market is efficiently matching workers with jobs.*
2. *Unemployment is highest for metropolitan women (5.5 percent), next highest for metropolitan men (4.7 percent), relatively low for non-metropolitan women (3.6 percent), lowest for non-metropolitan men (2.1 percent).*
3. *Underemployment is highest for non-metropolitan women (8.3 percent), next highest for metropolitan men (7.2 percent), relatively low for metropolitan women (5.0 percent), and lowest for non-metropolitan men (4.6 percent).*
4. *Underemployment in Kansas is about equally divided between part-time workers who want full-time jobs, 2.1 percent (28,300 workers; temporary workers who want permanent jobs, 2.1 percent (28,300 worker; and mismatched workers 2.3 percent (31,300 workers).*
5. *The majority of those who might have been underemployed are not underemployed: 28,600 out of 171,300 part-time workers want full-time jobs, 28,300 out of 46,600 temporary workers want permanent jobs, and 31,300 out of 324,700 workers who claimed to be underutilized were convincingly underutilized.*
6. *Education and employment are directly correlated. The employed have more formal education and special training than the unemployed.*
7. *The underemployed have more education than the employed. Of the underemployed group, the mismatched workers have the most education and the part-time workers who want full-time jobs have the least education. While the underemployed have more formal education, they have less special training than either the employed or the unemployed.*
8. *Many in the labor force are currently getting more training. At the time of the survey, slightly more than 11 percent of the labor force was in either school or getting special job training which translates into about 140,000 workers getting trained. Of that group, 100,000 are full-time employees.*

Policy Implications

Because of the nature of the research supporting this report, we do not have any specific recommendations for the addition or removal of particular programs. Instead, this report suggests that the basic strategies for two policy areas—economic development and job training—might need to be reviewed in light of our empirical results.

Economic Development: Kansas workers are not demanding low wage jobs. This is true of both urban and rural Kansas workers. In fact, the combined unemployment and underemployment rate in non-metropolitan Kansas is less than in metropolitan Kansas. An implication is that there is no compelling labor force need to attract low skill/low wage jobs to Kansas in order to provide some employment to Kansans who otherwise would be unemployed or underemployed. Instead, Kansas should choose an economic development strategy aimed at bringing high skill/high wage jobs into the state. The strength of the Kansas's human capital is not in its numbers but in its willingness to work hard and in its willingness to get more schooling and training.

Job Training: Currently, the Kansas labor force is efficiently being utilized. For an economic development strategy of bringing high skill/high wage jobs to Kansas to be successful, the skills of the existing Kansas labor force must be improved. This situation argues for both an increased investment in human capital and for extensive cooperation between economic development and job training activities.

Our study indicates that at any particular point in time, about 100,000 full-time workers are in school or getting formal special training. This suggests that institutions that provide either schooling or job training should consider full-time employees as an important part of their clientele. This also suggests that a sizable portion of Kansas workers recognize the need for better skills and are willing to put in additional effort to improve their skills. A state policy of encouraging increased schooling and job training is consistent with the current behavior of many of Kansas's full-time workers.

INTRODUCTION: BACKGROUND, PURPOSE, AND SCOPE

This report is based on a survey authorized by Senate Bill No. 639, "An act concerning economic statistics; authorizing surveys of Kansas wage, occupation and underemployment." We are reporting on underemployment in Kansas. We used a telephone survey of a random sample of 2,517 Kansas households to estimate underemployment. The survey was run from April 13 to May 25, 1995. This introduction provides a context for understanding why and how we estimated underemployment.

First, we describe the inadequacies of the current practice of measuring a labor market's ability to match workers to jobs by simply classifying workers as either employed or unemployed. We suggest that including the underemployed with the existing labor force categories will produce a more comprehensive evaluation of the labor market's ability to match jobs and workers. We call this more comprehensive set of categories the "effective labor force": employed, unemployed, and underemployed workers, because it includes the labor force categories and adds a deeper understanding of the effective use of workers. Second, we describe three recent structural changes in the national labor market that have increased the visibility of the underemployed. Third, we discuss the importance for policy makers of having a good measure of the underemployed. Fourth, we tighten the focus of the report by more precisely defining the purpose of this study. Fifth, we describe the basic strategy used to estimate the effective labor force in Kansas. Finally, we outline the survey and our analysis of its results.

Labor Force and Effective Labor Force

Much labor market information is now accessible, especially at the national level. Most of the information is concerned with labor force categories. The concepts of employed persons, people with jobs, and unemployed persons, people without jobs, but who are looking for jobs, are relatively easily quantified concepts. However, the concept of employed worker ignores some of the qualitative aspects of labor market employment. For example, some people are working at part-time jobs but would rather be working at full-time jobs; or some people are working at temporary jobs with few benefits and would prefer to have a permanent job with more extensive benefits. In addition, some

people are working at jobs that do not fully utilize the training they have acquired or the skills they have developed in previous jobs. These three groups of workers are employed, but not as fully employed as they want to be — they are underemployed.¹ Finally, the concept of unemployed worker does not fully capture the number of persons who are without a job but want one. Some persons who have been laid off, especially during a recession, stop looking for a job because they believe no appropriate jobs exist for them. These are discouraged workers.

A more complete picture of the labor force could be given by using the concepts of

- 1) fully employed,
- 2) unemployed, and
- 3) underemployed,

and the underemployed can be further subdivided into

- a) part-time workers who want to work full-time,
- b) temporary workers who want permanent jobs,
- c) mismatched workers who want jobs that require the use of their skills, and
- d) discouraged workers who want a job but have stopped searching.

In order to distinguish our approach from the traditional labor force approach, we have labeled the combination of employed, unemployed, and underemployed the effective labor force. The effective labor force concept includes the labor force; however, the effective labor force concept refines the labor force concept by distinguishing between employed workers and employed workers who are underemployed—part-time workers who want full-time jobs, temporary workers who want permanent jobs, and workers whose current job underutilizes their skills. In addition the effective labor force concept adds to the labor force category of unemployed the workers who do not have jobs, but are not classified as unemployed because they have stopped searching for jobs.

A third approach to understanding the labor market, the available labor force, is sometimes used, particular by those focusing on economic development issues. The available labor force concept is an attempt to quantify the number of workers available to new employers moving into a region. Unfortunately, the unemployment rate has been used as the measure of labor market

¹The concept of underemployment tends to be fuzzy. In part, this is because macro economists have used the term underemployment equilibrium to refer to an equilibrium with involuntary unemployment in the labor market at the market wage. We are not concerned with this version of underemployment. Our concern is with the groups described above which we have labeled underemployed.

performance and as a basis of comparison of the relative available labor between regions and states. The unemployment rate fails to capture this concept of available labor force because of the number of workers who might take a new job but are not included as unemployed.² Underemployed workers may present the greatest opportunities for firms moving to Kansas and seeking skilled and experienced workers, especially given the structural changes taking place in the labor market. Thus, in this paper, the available labor force will be defined as the unemployed and the underemployed.

Recent Structural Changes in the Labor Market

Recent research suggests that those workers recently falling into the categories of the underemployed are a broader mix of the labor force than before. This trend is creating structural changes in the U.S. labor market. At the anecdotal level, "consultant" has become an euphemism for an individual with extensive education, training, and experience who has lost a well-paying job from a large company that is downsizing. Henry S. Farber analyzed the last two recessions to determine if the nature of unemployment had changed and concluded that it has.

The perception that the nature and consequences of job loss are different than they used to be seems generally correct. Job loss was relatively more common in important service industries and relatively less common in manufacturing in 1990-1 compared with 1982-83. It is indeed the case that older and more-educated workers were more vulnerable to job loss in the 1990-91 period than they were in the 1982-83 period.³

Not only older, more experienced workers face the prospect of not having jobs that fully utilize their special skills; recent college graduates are also facing this problem and their situation is expected to get worse.

The data indicate that nearly 20 percent of the supply of college graduates who entered the labor force each year during the 1984-90 period worked in jobs traditionally not requiring a 4-year college degree or were unemployed. This analysis shows that this

²"That the unemployment statistic was not comprehensive enough in its scope, and hence did not measure the true incidence of worker underutilization, was recognized very soon after the labor force approach was adopted. One of the many critiques was presented as early as 1936..." Clifford C. Clogg, *Measuring Underemployment: Demographic Indicators for the United States*, Academic Press, 1979, p. 5.

³Henry S. Farber, "The Incidence and Costs of Job Loss: 1982-91", *Brookings Papers on Economic Activity: Microeconomics*, 1993 (No. 1), p. 118.

percentage will increase to 30 percent over the 1990-2005 period.⁴

There is a further discouraging note about this "surplus schooling": "additional schooling does not always raise productivity and therefore will not always be rewarded with higher earnings."⁵ Thus, neither the workers nor the employers are benefiting from the employee's additional schooling.

A second structural change in the labor market has been the increase in part-time employment and temporary employment. Both of these types of employment appear to be attempts by employers to increase their labor force flexibility and reduce compensation to workers, particularly the reduction of non-wage benefits. The growth of involuntary part-time employment since the 1960's has been well documented: "*involuntary* part-time workers — part-time workers who would prefer full-time hours — account for most of the growth in part-time employment's share of the work force since 1969."⁶ The growth in temporary workers is a more recent and less well documented phenomenon spurred on, so the story goes, by the increased costs of worker health insurance.

Finally, these structural changes in the labor market creating underemployment are all alterations in labor demand, not labor supply. John, Murphy and Topel report "there is little doubt that rising unemployment and nonparticipation are demand driven."⁷ Another study of regional growth patterns by Blanchard and Katz notes the importance of these changes in labor demand.

Growth eventually returns to normal, but the path of employment is permanently affected. These transitory changes in growth lead to transitory fluctuations in relative unemployment and wages. The dominant adjustment mechanism is labor mobility, rather than job creation or job migration. Labor mobility, in turn, appears to be primarily a response to changes in unemployment, rather than in consumption wages."⁸

⁴Kristina J. Shelley, "The Future of Jobs for College Graduates," *Monthly Labor Review*, July 1992, p. 117.

⁵Russell W. Rumberger, "The Impact of Surplus Schooling on Productivity and Earnings," *The Journal of Human Resources*, Vol. 22, No. 1 (1987), p. 46. A large literature has developed around the problem of surplus schooling. See for example Richard B. Freeman, "The Facts about the Declining Economic Value of College," *The Journal of Human Resources*, Vol. 15, No. 1 (1980), pp. 124-142, and Richard R. Verdugo and Naomi Turner Verdugo, "The Impact of Surplus Schooling on Earnings: Some Additional Findings," *The Journal of Human Resources*, Vol. 24, No. 4 (1989), pp. 629-643.

⁶Chris Tilly, "Reasons for the Continuing Growth of Part-Time Employment," *Monthly Labor Review*, March 1991, p. 10.

⁷Chinhui John, Kevin M. Murphy, and Robert H. Topel, "Why Has the Natural Rate of Unemployment Increased over Time?," *Brookings Papers on Economic Activity*, 1991 (No. 2), p. 124.

⁸Olivier Jean Blanchard and Lawrence F. Katz, "Regional Evolutions?," *Brookings Papers on Economic Activity*, 1992 (No. 2), p. 52.)

Thus, if these underemployed persons in Kansas do not find suitable employment, then one would predict that they will leave Kansas for appropriate employment.

The Need to Study the Labor Market in more Depth

Before state policy makers attempt to develop labor market policies to reduce underutilization of Kansas workers, we need a clear picture of our labor market. New data must be developed, and this new data should be compatible with the current labor force data. In particular, more precise information is needed about the underemployed. We need to know not only how many fall within the categories of potentially underemployed people, but which of those in these categories will take better jobs. For example, we need to know not only the number of part-time workers, but the number of part-time workers who want full-time employment. This type of information is not only valuable to Kansas government and Kansas firms, but also to firms that are considering relocating in Kansas or expanding operations in Kansas.

A second problem with the labor force approach to quantifying the labor market is its inability to fully capture the loss of welfare experienced by individuals who are involuntarily underemployed. Because of the structural changes mentioned above, some people have been forced from relatively good jobs to lower paying jobs that do not require the skills they have developed. This phenomenon represents a loss of productivity for the economy and a loss of income for the individual. However, before any policy is developed, policy makers need to know the extent of the problem.

Purpose: Estimation of the Effective Labor Force in Kansas

This report provides an estimate of the size of the effective labor force in Kansas. We define the effective labor force as the employed, the unemployed, and the underemployed. These last two categories represent workers whose skills are not currently being fully utilized. They are available for employment or improved employment and are lumped together to form the available labor force: the underemployed plus the unemployed. As mentioned earlier, four different groups of people are underutilized labor resources that we classify as underemployed:

- 1) discouraged workers,
- 2) part-time workers who want full-time jobs,

- 3) temporary workers who want permanent jobs, and
- 4) mismatched workers who want jobs that better utilized their skills.

We designed our estimate of the effective labor force so that existing labor market data can still be used, both to act as a check on the new data's validity and to provide a context for its analysis.

Strategy

Since the existing national household labor force data is generated by the Current Population Survey (CPS), which provides the monthly estimate of the national unemployment rate, it was decided that a survey of Kansas households was the appropriate method for developing the new information about underemployment in Kansas. The survey instrument generated for this report was based on and is consistent with the CPS. In order for comparisons to be made between the survey data we developed and the survey data generated by the CPS, a number of the questions used in the CPS instrument had to be used in our survey instrument. We decided that our survey instrument would contain enough of the standard labor force questions so that we could generate the basic labor force data: the number of employed and unemployed persons. In addition, we used the questions about part-time workers and discouraged workers from the CPS instrument. We also used some of the industry/occupation, education/training, and income questions from that survey instrument. We developed our own demographic questions, and we developed the questions used to estimate the number of temporary workers and the number of mismatched workers.

Survey and Analysis

The rest of this report consists of two parts: a description of the survey and an analysis of the respondents' answers. The survey description begins with a delineation of the basic categories of data we wanted the survey to generate. The next section specifically defines and describes the following terms: employed worker, unemployed worker, discouraged worker, involuntary part-time worker, involuntary temporary worker, and worker with underutilized skills. The following section describes the questions chosen for and the structure of the survey instrument. Finally, this part of the report ends with a chronological explanation of the implementation of the survey.

The analysis of the survey results begins by using demographic information from the survey responses to provide a basic picture of the respondents and to delineate possible biases in their responses. Next, the survey responses are used to assign workers to the basic labor force categories. The identification of two major biases in the first part of this section is then used as a tool to weight the responses to get better labor force estimates. Then the analysis turns to the underemployed and how the estimates of these categories were generated. This section discusses only the discouraged workers, part-time workers and temporary workers. The following section is devoted to describing the estimates of the mismatched. The last section discusses the demographics of the labor force and the underemployed.

SURVEY

The Information the Survey Needed to Generate

We had four categories of questions we wanted to ask the respondents: (1) demographic questions, (2) employment or (3) unemployment questions, and (4) industry and occupation questions. For each of these basic categories of information, we wanted to determine the following information about the respondents:

- (1) *Demographic Information:* We wanted basic demographic information about the respondents: the county they lived in, whether they lived within any city limits, what year were they born, whether they were male or female, what type of education and training they had, and their income.
- (2) *Employment Information:* We wanted to know if respondents were employed, and if so we wanted to know if they were self-employed, if they had multiple jobs, and if they were part-time workers who wanted full-time employment.
- (3) *Unemployment Information:* For the persons who did not have jobs, we wanted to know if they had been laid off, were seeking employment, or had become discouraged workers.
- (4) *Industry and Occupation Information:* For those employed, we wanted to know the basic type of industry they worked in and a description of their occupations. We also wanted to know if they were temporary workers who wanted permanent positions, and if they were workers who felt that their skills were not being fully utilized on their current jobs.

For us to move from this general description of the information we wanted from the respondents to a more precise characterization which was consistent with the data derived from the CPS, we needed accurate definitions of the concepts of employed worker, unemployed person, involuntarily part-time worker, involuntary temporary worker, and worker with underutilized skills. The categories measured by the CPS have been defined by the Bureau of Labor Statistics (BLS). However, two of the categories we wished to measure — temporary workers who want permanent jobs and workers with mismatched skills and job requirements — are not defined by the BLS, nor is there a definitive conventional usage. In the next section, we give specific meaning to each of these concepts.

Definition and Description of Terms

We will first give the definitions used by BLS for employed worker, unemployed worker, discouraged worker, and involuntary part-time worker. In the cases of unemployed workers and discouraged workers we will add a few brief comments on the definitions.⁹ Then we will provide our definitions for temporary workers who want permanent jobs and for workers with a mismatch between their skills and job requirements of their current job. In addition we will describe how we applied our own definitions.

Employed persons:

All persons who, during the reference week, (a) did any work at all (at least 1 hour) as paid employees in their own business, profession, or on their own farm, or who worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family, and (b) all those who were not working but who had jobs or businesses from which they were temporarily absent because of vacation, illness, bad weather, child care problems, maternity or paternity leave, labor-management dispute, job training, or other family or personal reasons, whether or not they were paid for the time off or were seeking other jobs.

Unemployed persons:

All persons who had no employment during the reference week, were available for work, except for temporary illness, and had made specific efforts to find employment some time during the 4-week period ending with the reference week. Persons who were waiting to be recalled to a job from which they had been laid off need not have been looking for work to be classified as unemployed.

We will expand on this definition with the help of an article by two BLS researchers. First, looking for work means an active job search. "Only individuals who actually said they did 'nothing' or used passive methods exclusively would be classified as not in the labor force instead of unemployed."¹⁰ Second, those counted as unemployed because they were "on layoff" must expect to be recalled.

Discouraged workers:

Persons not in the labor force who want and are available for a job and who have looked

⁹All of these definitions come from the section designated "Household Data ('A' tables, monthly; 'D' tables, quarterly)," near the back of the BLS monthly publication titled *Employment and Earnings*.

¹⁰Anne E. Polivka and Jennifer M. Rothgeb, "Redesigning the CPS Questionnaire," *Monthly Labor Review*, September 1993, p. 21.

for work sometime in the past 12 months (or since their last job if they held one within the past 12 months), but are not currently looking, because they believe there are no jobs available or there are none for which they would qualify.

The definition of discouraged worker has been widely criticized as being too subjective. The latest revision of the CPS instrument, which was first used for official estimates in 1994, added two questions to limit some of the subjectivity. The new questionnaire included "questions to determine whether a person has searched for a job within the last 12 months, and whether an individual was available to work during the reference week."¹¹ Because of these changes in the CPS survey, the number of discouraged workers dropped substantially, and as a result, BLS has discontinued the publication of the historical series on discouraged workers.

At work part time for economic reasons:

Sometimes referred to as involuntary part time, this category refers to individuals who gave an economic reason for working 1 to 34 hours during the reference week. Economic reasons include slack work or unfavorable business conditions, inability to find full-time work, and seasonal declines in demand. Those who usually work part time must also indicate that they want and are available to work full time to be classified as on part time for economic reasons.

Temporary workers who want permanent jobs:

We found the concept of a temporary worker vague for a couple of reasons: we are all temporary in some sense, and many businesses and governments hire workers initially on a temporary basis with the idea of giving them permanent status if they work out. The phenomenon we are trying to assess is the use of workers from a personnel supply firm by other businesses on a temporary basis. This segment of the labor force has been one of the fastest growing components of the national economy over the last 20 years.¹² "Though the personnel supply industry currently comprises less than 2 percent of total employment, it accounted for over 15 percent of employment

¹¹*Ibid.*, p. 24.

¹²Lewis M. Segal and Daniel G. Sullivan, "The Temporary Labor Force," *Economic Perspectives*, published by the Federal Reserve Bank of Chicago, March/April 1995, p. 6. The authors note two features of this industry:

First, the average growth rate of the personnel supply industry has been much higher than that of the economy as a whole, averaging 11 percent annualized growth per quarter since 1972 compared with 2 percent in the aggregate economy...Second, personnel supply employment growth is much more volatile than aggregate employment, falling more during economic contractions and rising more during expansions. (p. 6)

growth between 1992 and 1993." However, "there has been considerable controversy about the social desirability of temporary help. Some describe temporary workers as an underclass who, because of their contingent status, do not receive sufficient human capital investments to succeed in today's labor market."¹³

Our concern is that some of these temporary workers wanted permanent jobs and were not able to find them. If a permanent job became available for these workers, they would want to change jobs, and thus, would be part of the available labor force. We used two basic criteria to distinguish this group of workers: they must work for a temporary employment agency and they must be willing to take a permanent job if offered.

Workers with a mismatch between their skills and experience and the requirements of their job: The basic idea of this category is clear from examples: college graduates "flipping burgers", or accountants who have lost their jobs and are now working as a cab drivers.¹⁴ Clearly these are cases of people with skills superior to the job they currently have. The problem comes in the application of this idea to actual cases, because many people believe that they have skills or abilities superior to the job they currently have, and thus, believe themselves to be an underutilized worker. Without a full work history and some additional in-depth study, it is hard to judge the validity of these individual claims of underutilization.

Since the only information we can generate to evaluate people's claims of underutilization of

¹³*Ibid*, p. 2.

¹⁴Robert Lucas, the recent noble laureate in economics from the University of Chicago is an example of an economist who takes the position that underemployment does not exist. The following is part of a conversation between Arjo Klamer (AK) and Lucas (RL) at the peak of the 1981-1982 recession:

AK: My taxi driver here is driving a taxi, even though he is an accountant, because he can't find a job. He is obviously frustrated. It seems a lot of people are running around in that position.

RL: I would describe him as a taxi driver [laughing], if what he is doing is driving a taxi.

AK: But a frustrated taxi driver.

RL: Well, we draw these things out of urns, and sometimes we get good draws, and sometimes we get bad draws.

A couple of questions later, Lucas characterizes the Great Depression as follows:

If you look back at the 1929 to 1933 episode, there were a lot of decisions made that, after the fact, people wished they had not made; there were a lot of jobs people quit that they wished they had hung on to; there were job offers that people turned down because they thought the wage offer was crappy. Then three months later they wished they had grabbed. Accountants who lost their accounting jobs passed over a cab-driver job, and now they're sitting on the street while their pal's driving a cab. So they wish they'd taken the cab-driver job. People are making this kind of mistake all the time. (p. 41)

Arjo Klamer, *The New Classical Macroeconomics: Conversations with the New Classical Economists and their Opponents*, Harvester Press, Brighton, U.K., pp. 40-41.

their skills is the information that we receive from these people through the survey, we have to depend upon their own evaluation to some extent. However, we tried to balance this subjective evaluation with some additional objective criteria. *The net result is that for us to classify respondents as having underutilized skills (mismatched), they had to identify themselves as mismatched and have some objective criteria to support this belief.* These objective criteria could either be that 1) a respondent had a previous job that required greater training and/or skills, or 2) since they began their current job, they have received additional training and/or education, or 3) their current job does not require the training and/or education they have obtained. Finally, we have not included having a previous job which paid more as a criteria for a mismatched worker. The logic behind this decision is that labor market changes, either the demand for workers in a particular occupation falling, or the supply of workers in a particular occupation increasing, can result in lower wages for that occupation without changing the education, training or skills needed for the job.

Structure of the Survey Instrument

The requirements built into the construction of the survey instrument clashed with the constraints on time and complexity necessary to make the survey workable. We wanted basic demographic information about the respondents; we wanted to estimate the basic labor force concepts of employment and unemployment; we wanted to estimate the four types of underemployment; we wanted the survey instrument to be simple enough for respondents to answer over the phone; and, we wanted the survey interview to last no more than eight minutes. We met the simplicity and time constraints of the survey instrument by leaving out a number of questions used in the CPS. We added a few questions concerning demographics and we added questions about temporary employment and workers with underutilized skills. The result was a survey instrument consisting of four groups of questions which are described below. The survey instrument used to create the computer program that the telephone surveyors used to record answers from interviews is presented in Appendix A. The copy of this survey instrument in the appendix is the same one given to all surveyors prior to their actual interviewing of respondents. In addition to the questions, the survey instrument includes a general explanation and specific explanations of each section of the survey instrument.

The first group of questions requests basic demographic information about the households which answer the survey. These questions asked about the county the person lived in, whether they lived within any city limits, what year were they born, whether they were male or female, what types of education and training they may have had, and what their income was in the past year. We began the survey with the first four demographic questions because they are easy and innocuous. This is not true of the education and training questions, and it is particularly not true of the income questions. Because income is a sensitive subject that can cause respondents to end the interview at that point, we waited until the end of the survey to ask the income questions. We placed the education and job training questions just before the income questions.

The second group of questions seeks employment information about the person interviewed. The initial question was designed to identify persons who might be self-employed or working for the family business. Later questions further refined our knowledge of these people. The next set of questions was designed to identify persons who work for pay, do not work, or are not part of the labor force. Some of these questions tried to identify those persons who are not part of the labor force, for example, disabled, retired, etc. If someone had a job but was absent from work last week, they were asked why they were absent from work. Respondents were then asked whether they have more than one job. One of the most difficult problems with asking people about their employment is trying to determine in some cases whether they are full-time or part-time workers. The next three sections of the instrument were designed to identify part-time workers and determine if they are part-time for economic reasons (sometimes referred to as involuntary part-time) or if they are part-time for non-economic reasons (they prefer to work part-time given their situation).

The third group of questions is aimed at persons who are out of work. The first section directs questions to persons who are on layoff and asks if they have been given any indication they will be recalled. The next section is designed to determine if persons who say they want jobs have been looking for work, and if they have been looking, what they have been doing to find work. The third section is designed to identify those persons who want a job but have stopped looking because they believe there are no jobs available for them, for example, discouraged workers.

The fourth group of questions asks the person interviewed for information about their job. We begin by asking those without a job something about their job history. We then ask respondents that currently have a job about that job's characteristics: their occupation and the industry within which

they work. This information is important in and of itself, but it is also important for comparison later when the respondent is asked whether they feel they are underemployed. The second part of this group of questions is directed at temporary workers. We ask them to identify themselves if they are temporary workers, then we ask how long they have been temporary workers and how long they expect to be temporary workers, and finally we ask them if they want to have a permanent job. The third part of this group of questions is designed to identify mismatched workers, workers whose education, training or skills are not being fully utilized in their current job. Determining whether a person is a mismatched worker is a tricky problem. Simply asking people seems guaranteed to yield exaggerated estimates of the number of mismatched persons. For that reason, several checks are incorporated in this section. The first check is to ask why they think they are a mismatched worker. Surprisingly, a large number of respondents do not have an answer to this question. Second, if respondents answer that they had a previous job which required more skill, then we ask them to identify that job. This information can then be used for comparison with the answers to the occupational questions. Finally, we ask if they would change jobs if the new job better utilized their skills. To affect the available labor force, they must be willing to change jobs to better utilize their skills, otherwise these skills are superfluous.

Implementation: a Chronology

The survey instrument was developed in October and November with a final version given to the Oversight Committee for suggestions at the end of November.¹⁵ After a few modifications, the survey instrument was tested. The survey instrument was computerized using the software SPSS/PC. A list of random phone numbers for Kansas exchanges was created for the surveyors.¹⁶ The choice of random phone numbers prevents some possible bias. It does not, however, prevent the obvious bias of choosing only households with phones; however, approximately 98 percent of the households

¹⁵Virginia Guzman of the Kansas City BLS Regional Office was extremely helpful at several times in this project. Specifically, she provided the new CPS survey instrument. Both Bill Layes and Steve MacAtee of the Kansas Department of Human Resources also helped solve many problems and provided feedback for this study.

¹⁶We used a CD with all the telephone numbers in the U.S. Because we wanted random numbers in Kansas and because we did not want to exclude persons with unlisted numbers, we used the CD to identify exchanges with large percentages of dead numbers, and then these exchanges were removed from the choice of possible numbers. At the end of the survey, we found that about 30 percent of the numbers we reached were not listed on the CD.

in Kansas have phones. Most of the phone calls were to be made at night, but some calling was done during the day to capture a sample of those persons who work nights. It was further decided that questions would only be asked about one person over 16 in each household. When a child answered the phone they were asked to call the adult with the most recent birthday to the phone.

After two pilot tests of the survey instrument, the survey began on April 13, 1995. During the first part of May, an analysis of the first 1,764 responses was done and we concluded that the survey was progressing appropriately. By May 25, the surveyors had 2,574 completed surveys. It took another three weeks to check the survey results for consistency and to modify, where possible, inconsistent cases revealed by check questions. The data were also cleaned up to facilitate analysis. When these checks were complete, 2,529 cases were found to be consistent — only 47 cases had to be thrown out, less than 2 percent. After the analysis began, another 12 cases had to be removed because the respondent had refused to identify their gender. Because of the disproportionately large response rate of women to men, the survey data had to be weighted by gender, and those who did not identify gender could not be weighted.

RESULTS

We have divided our analysis of the results into three parts: demographics of all respondents, the estimation of the effective labor force, and the demographics of the effective labor force.¹⁷

Demographic Data from the Survey

Our analysis of the demographics of all respondents focuses on comparing the survey results with other sources of similar data, primarily the 1990 census. We found several biases in our survey results, but these biases either do not affect the basic results of the survey, or they can be compensated for by weighting the results using 1990 Census figures.

Location and Gender

Our examination of the demographic information in the survey begins with the location and gender responses of the persons surveyed. Before we began the survey we were concerned that women and metropolitan areas might be over-sampled. We did over sample-women, we did not over-sample metropolitan areas, and we are not sure if we over or under sampled urban areas. We first discuss the problem of over-sampling women and under-sampling metropolitan areas. A summary of the relevant data is available in Table 1.

The first two columns of figures in Table 1 identify all respondents by whether they live in Metropolitan Statistical Areas (MSA)¹⁸ or not, and if they live in a MSA, which MSA that is, and in the cases of MSAs with multiple counties, which county that is. Recall from the second section of this report that we only asked for information from one member of each household. Thus we compare our data with household data from the 1990 census. Table 1 gives the metro/non-metro

¹⁷Appendix B gives the frequencies of answers for most questions and notes where the rest can be found in this report.

¹⁸MSAs are designated by the Bureau of the Census. Two basic criteria exist for a county to be part of a MSA: (1) the county has a city of 50,000 population or larger, and (2) the county is "culturally tied to a county that is already a MSA county. For example, Lawrence was designated a MSA in the 1970s and in 1982 Harvey County was added to the Wichita MSA.

TABLE 1
SURVEY RESPONSES COMPARED TO NUMBER OF ACTUAL HOUSEHOLDS:
METROPOLITAN AND NON-METROPOLITAN STATISTICAL AREAS

METROPOLITAN STATISTICAL AREAS IN KANSAS	SURVEY RESPONSES						NUMBER OF HOUSEHOLDS FROM THE 1990 CENSUS	
	All Responses		All Men		All Women		Number	Percent of Total
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total		
KANSAS PORTION OF THE KANSAS CITY MSA								
Johnson County	354	14.1	135	13.9	219	14.2	136,433	14.4
Leavenworth County	58	2.3	25	2.6	33	2.1	19,715	2.1
Miami County	24	1.0	13	1.3	11	0.7	8,402	0.9
Wyandotte County	137	5.4	53	5.4	84	5.4	61,514	6.5
Total	573	22.8	226	23.2	347	22.5	226,064	23.9
LAWRENCE MSA								
Douglas County	63	2.5	31	3.2	32	2.1	30,138	3.2
TOPEKA MSA								
Shawnee County	159	6.3	60	6.2	99	6.4	63,768	6.7
WICHITA MSA								
Butler County	44	1.7	17	1.7	27	1.7	18,488	2.0
Harvey County	39	1.5	12	1.2	27	1.7	11,581	1.2
Sedgewick County	350	13.9	154	15.8	196	12.7	156,571	16.6
Total	433	17.2	183	18.8	250	16.2	186,640	19.8
METROPOLITAN	1,228	48.8	500	51.4	728	47.2	506,610	53.6
NON-METROPOLITAN	1,289	51.2	473	48.6	816	52.8	438,116	46.4
.KANSAS	2,517		973		1,544		944,726	

breakdown for our respondents along with the 1990 census breakdown for households. A comparison of columns 2 and 8 shows that each of the MSAs in Kansas was under-represented in our survey. As a result, our respondents were 48.8 percent metropolitan compared with 53.6 percent from the 1990 census. Given the large size of our sample, this error is clearly outside of the boundary of the 95 percent confidence interval and must be considered a bias.

The third through the sixth columns of Table 1 contain the data on gender by MSA. Only 47.2 percent of the female respondents lived in MSAs while 51.4 percent of the male respondents lived in MSAs. The overall result is that of the 2,517 responses, 973 identified themselves as men (38.7 percent) and 1,544 identified themselves as women (61.3 percent). The 1990 census has a split of 48.3 percent men and 51.7 percent women for persons over 16 years of age. As with the MSA/non-MSA comparison, the large disparity between men and women respondents in our survey is clearly outside the boundary of the 95 percent confidence interval and must be considered another bias.¹⁹

The urban/rural dichotomy is different than the metro/non-metro dichotomy. Counties are designated as either part of a MSA or not part of a MSA. The definitions of urban and rural from the Bureau of the Census are not county-wide designations. For example, both Johnson County and Sedgwick County, the two most urban areas in Kansas, have a small percentage of their populations designated as rural while Thomas County, a basically rural county, has a large percentage of its population designated as urban (because of the city of Colby). Effectively evaluating the reliability of the urban/rural split in our survey cannot be done because we used different definitions of urban and rural than the Bureau of the Census does. Our question (Q18-2) was, “Do you live within the city limits of any city?” The Bureau of the Census defines anyone who lives in a city of less than 2,500 people or lives outside of a city as living in a rural area.²⁰ Thus, there is an obvious problem with the number of people living in communities of less than 2,500 calling themselves urban in our survey, but considered rural by the Bureau of the Census. For a comparison basis, the best that can be done is to note that by the Bureau of the Census definitions, in 1990 slightly more than 30 percent of Kansans lived in rural areas while by our definition, the survey got almost exactly 20 percent of its responses from people who identified their location as rural.

¹⁹A table containing the same information as Table 1 for all the Kansas counties can be found in Appendix C.

²⁰We did not ask people if they lived within the city limits of a city of 2,500 or more for the obvious reason that we did not expect many people to know whether their city was that large or not.

Age Structure

Evaluating the reliability of the age structure of the survey respondents is similar to the problem of evaluating the urban/rural dichotomy. We asked respondents to give us the year of birth while the Bureau of the Census asked for age. Another problem is the difference between 1990 and 1995. We know that the proportion of the older population in Kansas has been growing for quite some time, and we expect the population to get even older in the future. Thus, if the survey accurately reflects the age structure of the state in 1995, its respondents should be skewed more toward the older age groups than the data from the 1990 census. As Table 2 shows, the survey results are definitely skewed toward the older age groups and away from the younger age groups. However, if the extremes of the age groups are eliminated so that only the major part of the stable labor force is left (age 25 to 65), as in Table 3, then the survey age structure looks much more like the Bureau of the Census 1990 age structure. One further modification, shifting the census age groups up as in Table 4, shows that in fact the age structure of the survey is very close to the age structure of the 1990 census if everybody is aged five years from the 1990 census. Thus, we argue that our survey respondents show no major age structure bias within the age groups that dominate the laborforce—the age groups we are most concerned with.

**TABLE 2
COMPARISON OF AGE STRUCTURES
THE SURVEY AND THE 1990 CENSUS**

FROM SURVEY			FROM THE 1990 CENSUS		
DATE OF BIRTH	Number	Percent of Total	AGE	Number	Percent of Total
1930 and before	618	24.7	65+	342,571	18.2
1931-1935	162	6.5	60 - 64	105,188	5.6
1936-1940	132	5.3	55 - 59	103,821	5.5
1941-1945	171	6.8	50 - 54	106,790	5.7
1946-1950	229	9.1	45 - 49	128,598	6.8
1951-1955	273	10.9	40 - 44	165,514	8.8
1956-1960	281	11.2	35 - 39	195,812	10.4
1961-1965	262	10.5	30 - 34	211,749	11.3
1966-1970	178	7.1	25 - 29	201,424	10.7
1971-1975	128	5.1	20 - 24	180,087	9.6
1976-1979	70	2.8	16 - 19	138,982	7.4
Total	2,504	100.0	Total	1,880,536	100.0

TABLE 3
COMPARISON OF AGE STRUCTURES: BORN 1970 TO 1931
THE SURVEY AND THE 1990 CENSUS

FROM SURVEY			FROM THE 1990 CENSUS		
DATE OF BIRTH	Number	Percent of Total	AGE	Number	Percent of Total
1931-1935	162	9.6	60 - 64	105,188	8.6
1936-1940	132	7.8	55 - 59	103,821	8.5
1941-1945	171	10.1	50 - 54	106,790	8.8
1946-1950	229	13.6	45 - 49	128,598	10.6
1951-1955	273	16.2	40 - 44	165,514	13.6
1956-1960	281	16.6	35 - 39	195,812	16.1
1961-1965	262	15.5	30 - 34	211,749	17.4
1966-1970	178	10.5	25 - 29	201,424	16.5
Total	1,688	100.0	Total	1,218,896	100.0

TABLE 4
COMPARISON OF AGE STRUCTURES: AJUSTED FOR SAMPLYING DATE
THE SURVEY AND THE 1990 CENSUS

FROM SURVEY			FROM THE 1990 CENSUS		
DATE OF BIRTH	Number	Percent of Total	AGE	Number	Percent of Total
1931-1935	162	9.6	55 - 59	103,821	8.0
1936-1940	132	7.8	50 - 54	106,790	8.3
1941-1945	171	10.1	45 - 49	128,598	9.9
1946-1950	229	13.6	40 - 44	165,514	12.8
1951-1955	273	16.2	35 - 39	195,812	15.1
1956-1960	281	16.6	30 - 34	211,749	16.4
1961-1965	262	15.5	25 - 29	201,424	15.6
1966-1970	178	10.5	20 - 24	180,087	13.9
Total	1,688	100.0		1,293,795	100.0

One additional result involving age structure from the survey that we have found interesting is the bunching of the rural respondents in the middle age groups. Table 5 contains a cross tabulation of age structure with urban/rural designation. Recall that almost exactly 20 percent of the survey respondents identified themselves as living in rural areas. Table 5 indicates the interesting phenomenon that these rural people tend to be in the middle of the age structure of the survey, with the age groups born between 1936 and 1945 containing the highest percentages of rural residents.

Those respondents born before 1925 and after 1955 all have smaller than average proportions of their cohorts living in rural areas.

TABLE 5
URBAN/RURAL AGE STRUCTURE FROM SURVEY

YEAR OF BIRTH	URBAN/RURAL DESIGNATION						
	Rural	Percent of Row	Urban	Percent of Row	Don't Know	Percent of Row	Row Total
Before 1900	0	0.0	5	100.0	0	0.0	5
1901 to 1905	1	10.0	9	90.0	0	0.0	10
1906 to 1910	8	15.1	45	84.9	0	0.0	53
1911 to 1915	18	18.4	80	81.6	0	0.0	98
1916 to 1920	18	12.0	131	87.3	1	0.7	150
1921 to 1925	29	19.7	118	80.3	0	0.0	147
1926 to 1930	33	21.4	120	77.9	1	0.7	154
1931 to 1935	35	21.6	127	78.4	0	0.0	162
1936 to 1940	36	27.3	96	72.7	0	0.0	132
1941 to 1945	45	26.5	125	73.5	0	0.0	170
1946 to 1950	52	22.8	175	76.8	1	0.4	228
1951 to 1955	64	23.5	208	76.5	0	0.0	272
1956 to 1960	54	19.4	224	80.3	1	0.4	279
1961 to 1965	48	18.3	214	81.7	0	0.0	262
1966 to 1970	31	17.4	146	82.0	1	0.6	178
1971 to 1975	16	12.5	112	87.5	0	0.0	128
1976 to 1979	8	11.6	58	84.1	3	4.4	69
Total	496	19.9	1993	79.8	8	0.3	2497
Number who did not identify their year born = 20							

Education

The education level of the survey respondents is much higher than the education level of Kansas as shown in the 1990 census. Table 6 has the comparison between the two levels of education. A

much lower percentage of the survey respondents were without a high school degree (5.0 percent) than in the 1990 census (18.7 percent). In addition, 66.0 percent of the survey respondents had some college with 26.5 percent having a bachelor's degree or more education while the 1990 census showed that only 49.5 percent have some college and only 21.1 percent have a bachelor's degree or more education. The survey results are clearly biased in favor of the more educated people in Kansas.

TABLE 6
COMPARISON OF EDUCATIONAL ATTAINMENT:
SURVEY RESULTS AND THE 1990 CENSUS

	Data from Survey		Data from 1990 Census	
	Number	Percent of Total	Number	Percent of Total
No High School Degree	80	5.0	293,272	18.7
High School Degree	498	31.0	514,177	32.8
Some College	532	33.2	342,964	21.9
Associates Degree	69	4.3	85,146	5.4
Bachelor's Degree	300	18.7	221,016	14.1
Graduate or Advanced Professional Degree	125	7.8	109,361	7.0
TOTAL	1,604		1,565,936	

Income

Unfortunately, no similar income data exists to compare with the income data from the survey. As an alternative check on the survey results, we looked for broad internal income distribution relationships within the survey results that would match the income distribution relationships that are known to exist in the Kansas economy. Table 7 has the income distribution from the survey for the whole state and for the total of all MSAs and the non-MSA total. The first two columns of Table 7 have the total number of persons in each income class, and beneath that number in italics is the percentage of all persons answering this question for that particular income class. The next four columns have the same data for the non-MSA part of Kansas and for the total of all the MSAs. The non-MSA income distribution has a greater proportion of its distribution at the extremes, while the MSAs have more of their distributions bunched in the middle. This seems consistent with personal income data from the Bureau of Economic Analysis (BEA) and with the 1990 Census, but for several

TABLE 7
INCOME CLASS BY METRO/NON-METRO

INCOME CLASS <i>(Percent of Column Total)</i>	Total in Each Income Class	Total Non- Metro	Percent of Income Class Total	Total Metro	Percent of Income Class Total
0 to \$20,000 <i>(Percent of Column Total)</i>	663 <i>(41.8%)</i>	351 <i>(45.5%)</i>	52.9%	312 <i>(38.3%)</i>	47.1%
\$20,001 to \$40,000 <i>(Percent of Column Total)</i>	556 <i>(35.1%)</i>	262 <i>(33.9%)</i>	47.1%	294 <i>(36.1%)</i>	52.9%
\$40,001 to \$60,000 <i>(Percent of Column Total)</i>	150 <i>(9.5%)</i>	58 <i>(7.5%)</i>	38.7%	92 <i>(11.3%)</i>	61.3%
\$60,001 to \$80,000 <i>(Percent of Column Total)</i>	53 <i>(3.3%)</i>	16 <i>(2.1%)</i>	30.2%	37 <i>(4.5%)</i>	69.8%
\$80,001 to \$100,000 <i>(Percent of Column Total)</i>	10 <i>(0.6%)</i>	5 <i>(0.6%)</i>	50.0%	5 <i>(0.6%)</i>	50.0%
Over \$100,000 <i>(Percent of Column Total)</i>	14 <i>(0.9%)</i>	7 <i>(0.9%)</i>	50.0%	7 <i>(0.9%)</i>	50.0%
Refused to Answer <i>(Percent of Column Total)</i>	140 <i>(8.8%)</i>	73 <i>(9.5%)</i>	52.1%	67 <i>(8.2%)</i>	47.9%
TOTAL	1,586	772	48.7%	814	51.3%

reasons one cannot be sure.²¹ Table 8 provides the same type of comparison between the different MSAs. The results of the survey look somewhat consistent with received wisdom about income distribution among Kansas MSAs—Lawrence is the poorest of the MSAs and the Kansas portion of the Kansas City MSA is slightly wealthier than Wichita. However, since the 1990 census indicates that over 45 percent of the households in Kansas which earn more than \$100,000 are located in Johnson County, the under-representation of the Kansas portion of the Kansas City MSA in the upper income bracket raises some doubts. Our conclusion is that the income data is interesting, but not the strongest part of the survey results.

The Effective Labor Force

This section provides our estimates of the effective labor force in Kansas, and describes how we generated these estimates. Table 9 contains the basic statistics for the Kansas effective labor force

²¹BEA county data is only a county wide per capita figure—no income distribution. The non-MSA counties vary widely in their per capita incomes but the MSA counties are bunched closer together (except Johnson County which is wealthier than the other MSA counties). The 1990 census indicates that more extremes in income distribution (again, except for Johnson County) exist in the non-MSA counties.

TABLE 8
INCOME CLASS BY METROPOLITAN STATISTICAL AREA

INCOME CLASS <i>(Percent of Column Total)</i>	Total Metro	Kans. Part of the Kansas City MSA	% of Income Class Total	Lawrence MSA	% of Income Class Total	Topeka MSA	% of Income Class Total	Wichita MSA	% of Income Class Total
0 to \$20,000 <i>(Percent of Column Total)</i>	312 <i>(19.7%)</i>	122 <i>(33.2%)</i>	39.1%	19 <i>(38.0%)</i>	6.1%	54 <i>(47.8%)</i>	17.3%	117 <i>(41.2%)</i>	37.5%
\$20,001 to \$40,000 <i>(Percent of Column Total)</i>	294 <i>(18.5%)</i>	137 <i>(37.3%)</i>	46.6%	19 <i>(38.0%)</i>	6.5%	34 <i>(30.1%)</i>	11.6%	104 <i>(36.6%)</i>	35.4%
\$40,001 to \$60,000 <i>(Percent of Column Total)</i>	92 <i>(5.8%)</i>	43 <i>(11.7%)</i>	46.7%	5 <i>(10.0%)</i>	5.4%	11 <i>(9.7%)</i>	12.0%	33 <i>(11.6%)</i>	35.9%
\$60,001 to \$80,000 <i>(Percent of Column Total)</i>	37 <i>(2.3%)</i>	23 <i>(6.3%)</i>	62.2%	2 <i>(4.0%)</i>	5.4%	5 <i>(4.4%)</i>	13.5%	7 <i>(2.5%)</i>	18.9%
\$80,001 to \$100,000 <i>(Percent of Column Total)</i>	5 <i>(0.3%)</i>	3 <i>(0.8%)</i>	60.0%	0 <i>(0.0%)</i>	0.0%	1 <i>(0.9%)</i>	20.0%	1 <i>(0.4%)</i>	20.0%
Over \$100,000 <i>(Percent of Column Total)</i>	7 <i>(0.4%)</i>	4 <i>(1.1%)</i>	57.1%	0 <i>(0.0%)</i>	0.0%	0 <i>(0.0%)</i>	0.0%	3 <i>(1.1%)</i>	42.9%
Refused to Answer <i>(Percent of Column Total)</i>	67 <i>(4.2%)</i>	35 <i>(9.5%)</i>	52.2%	5 <i>(10.0%)</i>	7.5%	8 <i>(7.1%)</i>	11.9%	19 <i>(6.7%)</i>	28.4%
TOTAL	814	367	45.1%	50	6.1%	113	13.9%	284	34.9%

as a whole and the breakdown of all the categories by metro/non-metro and gender. We first describe the derivation of the employment and unemployment data. As was shown in the previous part of this report, the survey results are biased toward non-metropolitan areas and toward women. In order to make the results of the survey more compatible with the whole population, we weighted the labor force results. This weighting process will be described next. Then, using the weighting process, labor force estimates of the Kansas Department of Human Resources (DHR) are compared with our labor force estimates. This section ends with a brief description of multiple job holders in Kansas.

Next, we describe the derivation of underemployment data. We have identified four types of underemployment—discouraged workers, part-time workers who want to be full-time, temporary workers who want permanent jobs, and workers whose skills and experience are mismatched with their current job. The determination of the number of persons in each of the first three categories is fairly straight forward. The identifying of the mismatched workers is more subjective and difficult and is discussed last.

Employed

We adopted the criteria that the Bureau of Labor Statistics uses to determine whether a respondent was employed or not. Respondents were counted as employed if:

- (a) They reported working for pay during the previous week.
- (b) They worked for the family business and were paid or received money from the business in some way.
- (c) They worked for the family business and received no payment, but worked more than 15 hours for the business in the preceding week.

Finally, some people answered that they did not work last week, but in follow-up questions they indicated they had a job and did not work because they were on vacation or leave. Whether they were paid or not, this temporary absence from work did not count as unemployment. The first section of column one in Table 9 has the number of each type of employed person. The total number of employed persons in the survey sample was 1,549.

Unemployed

The determination of the number of unemployed respondents began with the number of persons

TABLE 9
EFFECTIVE LABOR FORCE IN KANSAS:
EMPLOYED, UNEMPLOYED AND UNDEREMPLOYED

	Total	Metro		Non-Metro		Total Weighted
		male	female	male	female	
CIVILIAN LABOR FORCE	1614	383	440	341	450	1614.0
EMPLOYED						
Worked for pay	1485	359	400	317	409	1488.9
Family business (for money)	40	2	7	12	19	36.3
Already had a job	12	3	5	2	2	12.3
Worked for Family Business for Free	12	1	4	3	4	11.3
TOTAL EMPLOYED	1549	365	416	334	434	1548.9
UNEMPLOYED						
Looked for a job, Laid off, etc.	95	24	32	14	25	94.7
Could not start job	2	0	0	1	1	1.8
Already have a part-time job	15	3	6	3	3	15.1
Have job, but did not work	2	0	0	1	1	1.8
Did not actively look for a job	11	3	2	2	4	10.8
TOTAL UNEMPLOYED	65	18	24	7	16	65.1
UNEMPLOYMENT RATE	4.0%	4.7%	5.5%	2.1%	3.6%	4.0%
UNDEREMPLOYED						
Discouraged Workers	5	2	0	1	2	5.1
Part-time Want Full-time	38	4	12	5	17	34.2
Temporary want Permanent	33	10	2	10	11	33.8
Mismatch of Skills and Job	37	13	9	4	11	37.4
TOTAL UNDEREMPLOYED*	104	28	22	16	38	101.6
UNEMPLOYED AND UNDEREMPLOYED	169	46	46	23	54	166.8
COMBINED UNEMPLOYMENT & UNDEREMPLOYMENT RATE	10.4%	11.9%	10.5%	6.7%	11.9%	10.3%

NOTE: 9 of the part-time who want to be full-time are also temporary who want to be permanent (3 men and 6 women), and 3 of the mismatched are also temporary who want to be permanent (2 men and 1 woman). There are 7 part-time workers that are mismatched, but they do not want full-time jobs (2 men and 5 women).

looking for employment—95. From 95 we subtracted the number of persons in each category who could not be categorized as unemployed by the Bureau of Labor Statistics criteria: persons who could not take a new job — 2; persons who had part-time jobs — 15; persons who had jobs but for some reason did not work—2; and persons who did not actively look for a job—11.²² The total number of unemployed persons was 65.

Weighting of the Effective Labor Force Results

As noted earlier, the survey results are biased towards women and non-metropolitan areas. To compensate for these biases, we developed weights for each of these categories. Table 10 contains the data used. The 1990 census indicates that the Kansas labor force consisted of about 30 percent metropolitan men, 26 percent metropolitan women, 24 percent non-metropolitan men, and 20 percent non-metropolitan women. In contrast, the survey results showed 24 percent metropolitan men, 27 percent metropolitan women, 21 non-metropolitan men, and 28 percent non-metropolitan women. The weights were calculated by dividing the 1990 census ratio by the survey ratio for each group of the civilian labor force.²³ Table 10 has the resulting weights and the new weighted civilian labor force figures from the survey. A more detailed presentation of the impact of the weights can be found in the final column of Table 9. Even though the weighting process “adds” over 100 metropolitan men to the civilian labor force, the unemployment rate for the unweighted civilian labor data and the weighted civilian labor force data rounds to the same percentage—4.0 percent.

²²The standard for unemployment is the requirement that during the last 4 weeks a person must have *actively* looked for a job. For example, sending out a resume is considered actively looking for a job. Simply looking at want ads in the paper is *not* actively looking for a job, it is passively looking for a job. Passive searching for work does not get one categorized as unemployed. For a complete list of active and passive categories of searching for a job, see question Q22-A in Appendix A.

²³One problem with using the 1990 census as a basis for calculating survey weights is the fact the data are 5 years old. Since the 1960s women's labor market participation rate has grown nearly continuously. However, some persons have argued that women's labor market participation rates are either dropping or stabilizing in the 1990s. (See Betty Holcomb, “No, We're Not Going Home Again,” *Working Mother*, November 1994, p. 28, and Howard V. Hayghe, “Are Women Leaving the Labor Force?” *Monthly Labor Review*, July 1994, pp. 37-39.) Whatever the situation, we have little choice in this matter since the 1990 census is the best available data, and the ratios derived from it are used by the Kansas Department of Human Resources to make gender estimates today.

TABLE 10
WEIGHTING THE SURVEY RESULTS

	Metro		Non-Metro	
	Men	Women	Men	Women
1990 Census				
Civilian Labor Force	371,069	321,850	296,384	240,683
Ratio of Total	0.301686	0.261670	0.240965	0.195679
Survey Results				
Civilian Labor Force	383	440	341	450
Ratio of Total	0.237299	0.272614	0.211276	0.278810
Survey Weights	1.271333	0.959852	1.140522	0.701837
Weighted Civilian Labor Force	486.9	422.3	388.9	315.8

Comparing Labor Force Estimates

A further method of evaluating the reliability of the survey results is to compare the labor force estimates with the labor force estimates made by DHR. Table 11 displays these comparisons. At the top of the table the labor force estimates done by the Bureau of Labor Statistics for the United States for April and May. Since our survey took place between April 13 and May 25, the April/May average was used as the basis of comparison. The next section in Table 11 has the DHR labor force estimates for Kansas. Finally, the last section of the table has the labor force estimates derived from the survey, blown-up to the estimated size of the state labor force. The discrepancy between the DHR estimates and our estimates is the 0.4 percent difference in the unemployment rate—about 5,500 more people are unemployed when DHR estimates are used. The weighting of the results by metro/non-metro and gender accounts for some of the bias in the survey, but not all of it. Two other major sources of bias that might skew the survey estimates toward a lower unemployment rate are the use of a telephone survey and the more educated nature of our respondents when compared to the whole population.²⁴

²⁴The 95 percent confidence interval for the unemployment rate in our survey is about plus or minus 0.8 percent. Thus, a 4.0 percent unemployment rate is well within the 95 percent confidence interval.

TABLE 11
COMPARISON OF LABOR FORCE STATISTICS

UNITED STATES LABOR FORCE STATISTICS
April and May of 1995 averaged
(Bureau of Labor Statistics)

Civilian Labor Force	132,274,000
Employed	124,695,500
Unemployed	7,578,500
Unemployment Rate	5.7%

KANSAS LABOR FORCE STATISTICS
April and May of 1995 averaged
(From the Department of Human Resources)

Civilian Labor Force	1,351,299
Employed	1,291,304
Unemployed	59,995
Unemployment Rate	4.4%

KANSAS LABOR FORCE STATISTICS
(April 13 to May 25, 1995)
From the Survey

Civilian Labor Force	1,351,299
Employed	1,296,794
Unemployed	54,504
Unemployment Rate	4.0%
Underemployed	85,063
Underemployment Rate	6.3%
Combined Unemployment and Underemployment Rate	10.3%

Workers with Multiple Jobs

Before discussing the underemployed, we look at one other category of worker—the multiple job holder. The survey found that 174 people, 11.2 percent of our labor force estimate, had more than one job.²⁵ Compared to the national average of 6.3 percent of the labor force for April and May of 1995 having more than one job, this is a high percentage. Of these people with more than one job, 74.1 percent had two jobs, 17.8 percent had three jobs, and 6.3 percent had four or more jobs.

Underemployed

We now investigate individually each of the four categories of underemployed worker: discouraged workers, part-time workers who want full-time, temporary workers who want permanent employment, and the mismatched workers. The data for all of the underemployed workers can be found in Table 12.

Discouraged Workers

Of the four groups of underemployed workers, discouraged workers are the only group which is not part of the labor force—they are neither employed nor unemployed. Discouraged workers are basically workers without jobs who want to work, but have given up looking for work because they feel no jobs exist for them. In our survey we found 5 people who fit this criteria. Table 13 compares the number of discouraged workers for the whole United States for April and May of 1995 with the results from our survey. In the United States and in Kansas, discouraged workers are 0.3 percent.²⁶ One additional note about discouraged workers in Kansas: two of these workers were born in 1978—they were 16 or 17 years old at the time of the survey.

²⁵If the number of persons is weighted as described above, the number drops to 173 which is still 11.2 percent of the labor force.

²⁶Table 13 has the percentage of the labor force carried out to two places past the decimal point. The additional decimal places in the table are for the curious. There is no meaningful difference between the Kansas and United States percentage of the labor force.

**TABLE 12
UNDEREMPLOYMENT IN KANSAS**

	Total	Metro		Non-Metro		Total Weighted
		Male	Female	Male	Female	
DISCOURAGED WORKERS	5	2	0	1	2	5.1
Percent of Labor Force*	0.3%	0.5%	0.0%	0.3%	0.4%	0.3%
PART-TIME WORKERS						
Total Part-Time Workers	228	19	92	26	89	204.6
Percent of Labor Force	14.1%	5.0%	20.9%	7.6%	19.8%	12.7%
Part-Time want Full-Time	38	4	12	5	17	34.2
Percent of Labor Force	2.4%	1.0%	2.7%	1.5%	3.8%	2.1%
TEMPORARY WORKERS						
Total Temporary Workers	55	14	6	17	18	55.6
Percent of Labor Force	3.4%	3.7%	1.4%	5.0%	4.0%	3.4%
Temporary want Permanent	33	10	2	10	11	33.8
Percent of Labor Force	2.0%	2.6%	0.5%	2.9%	2.4%	2.1%
MISMATCHED WORKERS						
Claimed to be Mismatched	391	101	99	69	122	387.8
Percent of Labor Force	24.2%	26.4%	22.5%	20.2%	27.1%	24.0%
Definitely Mismatched	37	13	9	4	11	37.4
Percent of Labor Force	2.3%	3.4%	2.0%	1.2%	2.4%	2.3%

NOTE: Percent of Labor Force is the percent of each group to the total in the labor force for each group. For example, percent of the labor force for part-time metro males is part-time metro males divided by total number of metro males.

Part-Time Workers Who Want Full-Time Jobs

The second group of underemployed workers are part-time workers who want to be full-time. (The Bureau of Labor Statistics describes these persons as part-time for economic reasons while those part-time workers who do not want a full-time job are classified as part-time for noneconomic

TABLE 13
COMPARISON OF THE SURVEY RESULTS WITH THE CPS RESULTS:
DISCOURAGED WORKERS AND PART-TIME WORKERS

	UNITED STATES (All Numbers are in Thousands)			KANSAS
	April	May	Average	Survey Results
CIVILIAN LABOR FORCE	131,739	131,657	131,698	1,614
DISCOURAGED WORKERS	385	398	392	5
Percent of the Labor Force	0.29%	0.30%	0.30%	0.31%
PART-TIME WORKERS				
For Economic Reasons	3,097	3,097	3,097	38
Percent of the Labor Force	2.35%	2.35%	2.35%	2.35%
For Non-Economic Reasons	19,002	18,891	18,947	190
Percent of the Labor Force	14.42%	14.35%	14.39%	11.77%
Total Part-Time Workers	22,099	21,988	22,044	228
Percent of the Labor Force	16.77%	16.70%	16.74%	14.13%

reasons.) This is a straightforward classification because all part-time workers are asked if they would like a full-time job. This question is the sole basis for categorizing workers as part-time wanting full-time employment. Table 12 indicates that 228 part-time workers were found in Kansas, but only 38 of these wanted full-time jobs. In addition, part-time jobs are overwhelmingly being filled by women—181 out of 228. While part-time jobs represent about 12.7 percent of the weighted labor force, part-time jobs represent about 20 percent of female employment in Kansas. Table 13 again provides a comparison with the whole United States, and again, part-time workers who want full-time jobs (part-time for economic reasons) represent the same percentage in Kansas as in the United States. The only difference between the United States and Kansas is that Kansas has a smaller percentage of the labor force working part-time for noneconomic reasons.

Temporary Workers Who Want Permanent Jobs

The third group of underemployed workers are those workers who are employed by a temporary job agency who would like a permanent job. This is also a straightforward categorization of workers. All persons with jobs were asked if they worked for a temporary job agency. If they said yes, they were eventually asked if they would like permanent jobs. As Table 12 indicates, 55 in the survey said

they worked for a temporary job agency (3.4 percent of the labor force), and 33 said they would like permanent jobs (2.0 percent of the labor force). Two surprising results were: (1) the non-metro part of Kansas has more than 65 percent of the temporary jobs Kansas, and (2) men make up nearly 60 percent of the workers with temporary jobs and further, if the labor force weights are applied, men make up about 70 percent of the temporary workers. Because there are no comparable national data, this result for Kansas cannot be compared effectively to any national figures.

Mismatched

The concept of the mismatched worker, or the worker underutilized in their job, is the most difficult of the underemployment categories to identify from a questionnaire. It is intuitively appealing, especially to anyone who feels they have been in that situation. The problem is that some workers overrate their abilities and skills. For example, "One survey shows that 90% of today's workers feel they are more productive than the median worker."²⁷ This problem was one of the concerns expressed by the Oversight Committee before this project was begun. To mitigate this problem of perception, first we tried to make clear to respondents what was meant by underutilization, and second we used additional questions to act as a screen mechanism. In all, we asked five question about underutilization. A contrasting approach to this problem is provided by *The Nebraska Underemployment Study*. They asked the question, "Do you think you are qualified for a better job?" They got a 58 percent yes response and labeled these people as overqualified for their current job.²⁸

The first question simply stated what was meant by underutilization, gave an example of underutilization, and then asked the respondents if they felt they were underutilized in their current job.²⁹ In response to that question, 74.6 percent said no, 23.2 said yes, 1.7 percent said they did not know, and 0.5 percent refused to answer the question. Only those who answered "yes" or "do not

²⁷Kathleen Madigan, "If You're not No. 1 You're Zero," *Business Week*, September 18, 1995, p. 17.

²⁸The Nebraska Department of Labor, Labor Market Information Center, 1993, pp. 24 and 30.

²⁹The text of our question was: "Because of circumstances, some people are forced to work at jobs that do not match their skill level. For example, a master plumber taking tickets at a movie theater would be a mismatch between skills and job requirements. Does your current job underutilize your skills, education and talents?"

know,” a total 391 persons, continued to the next underutilization question.

The second question began the screening process by asking, “Why do you think you are currently underutilized in your job?” The respondents were given five possible answers:

- (1) Had previous job that required more skill and/or education
- (2) Have had additional job training and/or education
- (3) Current job does not require my training and/or education
- (4) Had a previous job where I earned more income
- (5) Don't know

Table 14 has the responses. The two most popular answers were (2) and (3) which comprised 227 of the 374 who answered the second question. If the respondents gave answers (2) through (5), they were asked only one more question. If respondents said they were underutilized because they had a previous job that required more skill and/or education, they were asked two additional questions. First, they were asked: “What type of job have you had in the past which required more skill and/or education?” Then they were asked if that job paid more money. The final question all the people who said they were underutilized were asked was: “Would you change jobs so you could better utilize your skills?” Their responses were: 26.5 percent said no, 64.1 percent said yes, 8.8 percent said they did not know, and 0.5 percent refused to answer.

Given the information the respondents gave us about their current job, their education attainment, special training, and in some cases, their previous job, we then evaluated whether or not we thought the respondent was in fact mismatched with their current job. Even if the person said they did not know why they were mismatched, we still evaluated their education and training relative to their current job, and in 3 cases concluded they were mismatched. More details of this procedure are given in Appendix D. The results of our evaluation are provided in Table 14. For example, 49 people claimed to have had a previous job which required more skill. We concluded that 9 of those people were mismatched.

Our approach was that a respondent had to convince us that they were mismatched before they were counted as such. Two examples illustrate how we made our decisions. First, one person was working as a temporary accountant, but had been the controller of an oil company. This person was obviously underutilized. Another person was an accountant and had previously had an “accounting job.” This person may have been underutilized, but from this description, it was hard for us to conclude they were being underutilized. Thus, our standard was that if it was fairly clear the person

was underutilized, the person was counted as mismatched; otherwise, the person was not counted as mismatched. Starting with 391 who claimed they were mismatched or did not know if they were or were not, only 37 were counted as mismatched.

**TABLE 14
MORE DETAILED DESCRIPTION OF THE ANSWERS TO:
WHY DO YOU THINK YOU ARE UNDERUTILIZED IN YOUR CURRENT JOB?**

	Total	Metro		Non-Metro	
		Male	Female	Male	Female
Had a better job	49	14	16	6	13
Mismatched	9	3	2	0	4
Have better education or training	128	30	35	16	47
Mismatched	11	4	3	0	4
Job does not require training or education	99	28	21	22	28
Mismatched	13	3	4	3	3
Previous job paid more money	30	6	9	5	10
Mismatched	1	0	1	0	0
Don't Know	68	21	15	15	17
Mismatched	3	2	0	0	1
Did not answer	17	2	3	5	7
Claimed to be Mismatched	391	101	99	69	122
Percent of Labor Force	24.2%	26.4%	22.5%	20.2%	27.1%
Mismatched Total	37	13	9	4	11
Percent of Labor Force	2.3%	3.4%	2.0%	1.2%	2.4%

Demographic Analysis of the Effective Labor Force

Location and Gender

Table 9 has the final count of the employed, unemployed, and underemployed by gender and by location: inside a MSA or outside a MSA. The statewide unemployment rate is 4.0 percent. The table clearly shows that the metropolitan areas have a greater unemployment rate (5.1 percent) than the combined area outside of the metropolitan areas (2.9 percent). Metropolitan men have an

unemployment rate of 4.7 percent while non-metropolitan men have an unemployment rate of 2.1 percent. The difference between metropolitan women and non-metropolitan women is not as pronounced, but it is still sizable: 5.5 percent unemployment for metropolitan women and 3.6 percent for non-metropolitan women. While in our survey, metropolitan women represented 27.3 percent of the labor force, they represented 36.9 percent of the unemployed.

The demographic group with the largest proportion of workers with two or more jobs was non-metropolitan men at 13.2 percent, while metropolitan men had the smallest proportion with two or more jobs, 10.7 percent. A greater proportion of non-metropolitan women had two or more jobs, 12.2 percent, than of metropolitan women, 11.5 percent.

The statewide weighted underemployment rate is 6.3 percent. The location and gender of the underemployed is different than the location and gender of the unemployed. While unemployment was worse in the metropolitan areas, underemployment was worse in the non-metropolitan areas: 6.1 percent in metropolitan areas and 6.8 percent in non-metropolitan areas. The underemployment rate ranged from 4.6 percent for non-metropolitan men and 5.0 percent for metropolitan women to 7.2 percent for metropolitan men and 8.3 percent for non-metropolitan women. Clearly, the group most affected by underemployment are non-metropolitan women who made up 27.9 percent of the labor force from our survey but were 36.5 percent of the underemployed in our survey.

The combined weighted unemployment rate and underemployment rate for the state is 10.3 percent. The two groups with the highest combined unemployment and underemployment rate are metropolitan men and non-metropolitan women at 11.9 percent. Metropolitan women have a combined rate of 10.5 percent and non-metropolitan men have a combined rate of 6.7 percent.

Age Structure and Educational Attainment

The educational attainment of each of the major groups in the effective labor force is presented in a separate table for each group along with the age structure of the members of that group. Table 15 has the educational attainment of employed workers by age structure, and Table 16 and Table 17 have the same for the unemployed and the underemployed respectively. We will begin with some general tendencies that our survey shows about the relationship between education and employment.

TABLE 15
AGE STRUCTURE AND EDUCATIONAL ATTAINMENT FOR THE EMPLOYED

AGE STRUCTURE	EDUCATIONAL ATTAINMENT										Total
	No High School Degree	High School Degree	Some College	Associate Degree	Bachelor's Degree	Masters Degree	Ph. D.	Advanced Professional Degree			
Before 1930	5.6	33.2	16.5	0.0	10.9	3.1	0.0	1.3			70.6
Percent of Row Total	8.0	47.1	23.4	0.0	15.4	4.4	0.0	1.8			
1931 to 1935	4.8	25.9	23.0	1.0	6.8	3.0	1.1	0.0			65.5
Percent of Row Total	7.3	39.5	35.1	1.5	10.4	4.6	1.7	0.0			
1936 to 1940	6.9	17.7	31.4	1.7	9.6	5.5	1.1	0.0			74.0
Percent of Row Total	9.4	24.0	42.5	2.3	13.0	7.4	1.5	0.0			
1941 to 1945	4.6	49.2	42.0	6.4	20.9	7.5	0.0	0.0			130.7
Percent of Row Total	3.6	37.6	32.2	4.9	16.0	5.8	0.0	0.0			
1946 to 1950	3.8	47.1	54.6	6.9	40.8	24.2	4.6	1.9			183.9
Percent of Row Total	2.1	25.6	29.7	3.7	22.2	13.1	2.5	1.0			
1951 to 1955	2.1	61.9	74.9	7.1	52.5	20.5	3.7	3.5			226.2
Percent of Row Total	0.9	27.4	33.1	3.2	23.2	9.1	1.6	1.6			
1956 to 1960	8.9	70.7	76.1	9.4	41.0	12.4	4.4	1.3			224.3
Percent of Row Total	4.0	31.6	33.9	4.2	18.3	5.5	2.0	0.6			
1961 to 1965	5.1	59.2	65.1	14.3	54.2	13.9	4.7	1.3			217.7
Percent of Row Total	2.3	27.2	29.9	6.6	24.9	6.4	2.2	0.6			
1966 to 1970	2.2	27.3	50.0	9.6	44.5	5.3	0.0	1.0			139.9
Percent of Row Total	1.6	19.5	35.7	6.8	31.8	3.8	0.0	0.7			
1971 to 1975	1.8	31.5	48.0	4.3	11.0	0.0	0.0	0.0			96.7
Percent of Row Total	1.9	32.6	49.7	4.5	11.4	0.0	0.0	0.0			
1976 to 1978	13.0	20.5	3.9	0.0	0.0	0.0	0.0	0.0			37.4
Percent of Row Total	34.8	54.8	10.4	0.0	0.0	0.0	0.0	0.0			
TOTAL	59.0	444.3	485.5	60.7	292.1	95.3	19.7	10.2			1466.8
Percent of Row Total	4.0	30.3	33.1	4.1	19.9	6.5	1.3	0.7			
Number of employed persons who did not answer the questions about education attainment and age = 83											

TABLE 16
AGE STRUCTURE AND EDUCATIONAL ATTAINMENT
FOR UNEMPLOYED WORKERS

AGE STRUCTURE	EDUCATIONAL ATTAINMENT						
	No High School Degree	High School Degree	Some College	Associate Degree	Bachelor's Degree	Masters Degree	Total
Year of Birth							
Before 1930	0.0	0.0	1.2	0	0	0	1.3
<i>Percent of Row Total</i>	<i>0.0</i>	<i>0.0</i>	<i>100.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1931 to 1935	1.0	0.0	2.2	0	1.3	0	4.5
<i>Percent of Row Total</i>	<i>21.5</i>	<i>0.0</i>	<i>50.0</i>	<i>0.0</i>	<i>28.5</i>	<i>0.0</i>	
1936 to 1940	0	3.5	1.7	1.3	0	1.0	7.4
<i>Percent of Row Total</i>	<i>0.0</i>	<i>47.4</i>	<i>22.5</i>	<i>17.2</i>	<i>0.0</i>	<i>13.0</i>	
1941 to 1945	0	1.4	1.9	0	0	0	3.3
<i>Percent of Row Total</i>	<i>0.0</i>	<i>42.2</i>	<i>57.8</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1946 to 1950	0	2.9	2.0	0	0	0	4.9
<i>Percent of Row Total</i>	<i>0.0</i>	<i>59.8</i>	<i>40.2</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1951 to 1955	0	0	2.0	0	2	0	3.9
<i>Percent of Row Total</i>	<i>0.0</i>	<i>0.0</i>	<i>50.7</i>	<i>0.0</i>	<i>49.3</i>	<i>0.0</i>	
1956 to 1960	2.4	3.8	4.1	1.0	1.0	1.0	13.4
<i>Percent of Row Total</i>	<i>18.1</i>	<i>28.6</i>	<i>30.5</i>	<i>7.2</i>	<i>8.5</i>	<i>7.2</i>	
1961 to 1965	0.0	1.7	1.7	1.0	1.3	0.0	5.6
<i>Percent of Row Total</i>	<i>0.0</i>	<i>29.9</i>	<i>29.9</i>	<i>16.7</i>	<i>22.9</i>	<i>0.0</i>	
1966 to 1970	0.0	4.2	3.5	0.0	1.0	0.0	8.6
<i>Percent of Row Total</i>	<i>0.0</i>	<i>48.2</i>	<i>40.7</i>	<i>0.0</i>	<i>11.1</i>	<i>0.0</i>	
1971	0.0	0.0	0.0	0.0	1.1	0.0	1.1
<i>Percent of Row Total</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>100.0</i>	<i>0.0</i>	
1972	0.0	1.1	0.0	0.0	0.0	0.0	1.1
<i>Percent of Row Total</i>	<i>0.0</i>	<i>100.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1973	0.0	0.7	0.0	0.0	0.0	0.0	0.7
<i>Percent of Row Total</i>	<i>0.0</i>	<i>100.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1974	0	1	0	1	1	0	3
<i>Percent of Row Total</i>	<i>0.0</i>	<i>33.3</i>	<i>0.0</i>	<i>33.3</i>	<i>33.3</i>	<i>0.0</i>	
1978	0	0.7	0	0	0	0	0.7
<i>Percent of Row Total</i>	<i>0.0</i>	<i>100.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1979	2.1	0	0	0	0	0	2.1
<i>Percent of Row Total</i>	<i>100.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
TOTAL	5.5	21.3	20.3	3.9	8.4	1.9	61.2
<i>Percent of Row Total</i>	<i>8.9</i>	<i>34.8</i>	<i>33.1</i>	<i>6.4</i>	<i>13.7</i>	<i>3.1</i>	
Four unemployed persons did not answer the questions about education and age							

TABLE 17
AGE STRUCTURE AND EDUCATIONAL ATTAINMENT FOR UNDEREMPLOYED WORKERS

AGE STRUCTURE		EDUCATIONAL ATTAINMENT									
		No High School Degree	High School Degree	Some College	Associate Degree	Bachelor's Degree	Masters Degree	Ph. D.	Total		
Before 1930	0.7	0	0	0	0	0	0	0	0	0.7	
<i>Percent of Row Total</i>	<i>100.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1931 to 1935	0	1.7	0.7	0	0	0	0	0	0	2.4	
<i>Percent of Row Total</i>	<i>0.0</i>	<i>70.3</i>	<i>29.7</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1936 to 1940	0	1.0	0	0	0	0	0	0	0	1	
<i>Percent of Row Total</i>	<i>0.0</i>	<i>100.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1941 to 1945	0	1.4	2.1	0	0	5.3	0	0	0	8.9	
<i>Percent of Row Total</i>	<i>0.0</i>	<i>15.9</i>	<i>23.8</i>	<i>0.0</i>	<i>0.0</i>	<i>60.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1946 to 1950	0	3.0	2.7	0	0	3.1	2.5	0	0	11.3	
<i>Percent of Row Total</i>	<i>0.0</i>	<i>26.4</i>	<i>23.6</i>	<i>0.0</i>	<i>0.0</i>	<i>27.5</i>	<i>22.5</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1951 to 1955	0	2.5	2.7	0	0	5.0	1.1	0	0	11.4	
<i>Percent of Row Total</i>	<i>0.0</i>	<i>22.3</i>	<i>23.5</i>	<i>0.0</i>	<i>0.0</i>	<i>44.2</i>	<i>10.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1956 to 1960	1.3	0.7	3.3	0	0	4.9	1.3	0.7	0.7	12.2	
<i>Percent of Row Total</i>	<i>10.4</i>	<i>5.7</i>	<i>27.6</i>	<i>0.0</i>	<i>0.0</i>	<i>40.1</i>	<i>10.4</i>	<i>5.7</i>	<i>5.7</i>	<i>0.0</i>	
1961 to 1965	0	2.8	2.9	0	0	2.9	5.7	0	0	14.4	
<i>Percent of Row Total</i>	<i>0.0</i>	<i>19.5</i>	<i>20.4</i>	<i>0.0</i>	<i>0.0</i>	<i>20.4</i>	<i>39.8</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1966 to 1970	0	2.9	0.7	1.0	1.0	5.3	1.8	0	0	11.8	
<i>Percent of Row Total</i>	<i>0.0</i>	<i>24.9</i>	<i>6.0</i>	<i>8.2</i>	<i>8.2</i>	<i>45.4</i>	<i>15.6</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1971 to 1975	0	2.8	6.7	0	0	3.1	0	0	0	0.7	
<i>Percent of Row Total</i>	<i>0.0</i>	<i>21.4</i>	<i>50.0</i>	<i>0.0</i>	<i>0.0</i>	<i>28.6</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
1976 to 1979	5.3	5.2	0	0	0	0	0	0	0	10.5	
<i>Percent of Row Total</i>	<i>50.5</i>	<i>49.5</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	
TOTAL	7.3	24	21.8	1.0	1.0	29.7	12.5	0.7	0.7	97.0	
<i>Percent of Row Total</i>	<i>7.5</i>	<i>24.7</i>	<i>22.4</i>	<i>1.0</i>	<i>1.0</i>	<i>30.6</i>	<i>12.8</i>	<i>0.7</i>	<i>0.7</i>	<i>0.0</i>	

Four underemployed persons did not answer the questions about education and age

As would be expected, the educational attainment of the employed workers is greater than that of the unemployed workers. Underemployed workers tend to make up more of the more highly educated workers than employed workers: 43 percent of all underemployed workers have at least a bachelor's degree while only 28 percent of the employed workers have a bachelor's degree or more. To illustrate the relationship between education and employment consider, from our survey, the unemployment rate for each educational group is calculated in Table 18. The unemployment rate is highest for persons with no high school degree—8.1 percent, and declines steadily to 0.0 percent for persons with Ph. D. or advanced professional degrees, except for the small jump for persons with an associate degree. In contrast, the underemployment rate jumps around from 11.3 percent for persons with no high school and 12.1 percent for persons with masters degrees, to 1.5 percent for persons with associate degrees and 4.7 percent for persons with some college. The educational group with the highest percentage having two or more jobs is the group without a high school degree—21.7 percent. This is 10 percent more than the percentage of labor force in Kansas with two or more jobs.

In terms of age structure, only one age group's number of unemployed sticks out: the group born between 1956 and 1960 has 13 unemployed persons out of 235 persons in the labor force. Another age group with a relatively high unemployment rate is the group born between 1966 and 1970 which has 8 unemployed persons out of 145 in the labor force. The bulk of the workers with two or more jobs (62.8 percent) was born between 1946 and 1965, but they are only 58.1 percent of employed workers.

As one would expect, the younger the age group, the relatively more underemployed persons in that age group. Finally, as one moves toward the younger age groups among the employed (Table 15), excluding the groups born after 1970, the number of persons with a bachelor's degree increases significantly. In the age group born between 1931 and 1935 only 8.8 percent had a bachelor's degree, while in the age group born between 1966 and 1970 30.7 percent have a bachelor's degree. The lone exception to this trend is the age group born between 1956 and 1960, which has a significantly lower percentage of employed persons with a bachelor's degree than the surrounding age group, and interestingly, this is also the age group with the highest number of unemployed persons.

TABLE 18
EDUCATIONAL ATTAINMENT
EFFECTIVE LABOR FORCE CATEGORY

EFFECTIVE LABOR FORCE CATEGORY	EDUCATIONAL ATTAINMENT			
	No High School Degree	High School Degree	Some College	Associate Degree
Civilian Labor Force	64.5	465.5	505.8	64.6
Employed	59.0	444.3	485.5	60.7
Unemployed	5.5	21.2	20.3	3.9
Unemployment Rate	8.5%	4.5%	4.0%	6.0%
Underemployed	7.3	24.0	21.9	1.0
Underemployment Rate	11.3%	5.1%	4.3%	1.5%

EFFECTIVE LABOR FORCE CATEGORY	EDUCATIONAL ATTAINMENT			
	Bachelor's Degree	Masters Degree	Ph. D.	Advanced Professional Degree
Civilian Labor Force	302.0	97.2	19.7	9
Employed	292.1	95.3	19.7	10.2
Unemployed	8.4	1.9	0.0	0.0
Unemployment Rate	2.8%	2.0%	0.0%	0.0%
Underemployed	29.7	12.5	0.7	0.0
Underemployment Rate	9.8%	12.9%	3.6%	0.0%

Special Training

Besides formal education, workers have other avenues for obtaining skills for the labor market. Two of the most effective are special training in the form of vocational schools or apprentice programs and special on-the-job training. Table 19 has the number of each major group of the effective labor force with these types of special training. The most trained are the employed, the least trained are the underemployed. Since the underemployed are part of the employed, if they were removed from the employed group, the modified employed group would have an even greater percentage with either special formal training or special on-the-job training.

Table 20 presents the number of each category of the effective labor force currently in school or in formal special training. The pattern of the previous table is reversed—underemployed workers

TABLE 19
SPECIAL TRAINING BY EFFECTIVE LABOR FORCE CATEGORY

EFFECTIVE LABOR FORCE CATEGORY	FORMAL SPECIAL TRAINING			
	With Special Training	Percent of Group	Without Special Training	Percent of Group
Employed	748.2	50.9%	722.1	49.1%
Unemployed	29.3	47.8%	31.9	52.2%
Underemployed	40.3	41.2%	57.6	58.8%
EFFECTIVE LABOR FORCE CATEGORY	SPECIAL ON-THE-JOB TRAINING			
	With Special On-The-Job Training	Percent of Group	Without Special On-The-Job Training	Percent of Group
Employed	773.8	52.8%	692.2	48.2%
Unemployed	18.2	32.7%	37.6	67.3%
Underemployed	21.5	22.1%	75.6	77.9%

TABLE 20
CURRENTLY ENROLLED
IN EITHER SCHOOL OR SPECIAL TRAINING

EFFECTIVE LABOR FORCE CATEGORY	ENROLLED IN SCHOOL OR SPECIAL TRAINING					
	Not Enrolled	Percent of Group	School	Percent of Group	Special Training	Percent of Group
Employed	1,295.6	88.6%	141.7	9.7%	24.7	1.7%
Unemployed	45.3	80.8%	10.8	19.2%	0.0	0.0%
Underemployed	72.6	74.7%	23.1	23.8%	1.4	1.4%

have the greatest percentage currently receiving training while employed workers have the lowest percentage. Overall, about 13% of the persons in the survey were currently in training programs or

school. This translates into more than 140,000 people from the labor force currently in school or training programs. More than two-thirds of these people are full-time workers. More than half of these people in the training programs expect that this training will improve their positions: 22.6% expect to improve their position with their current employer, and 35.7% expect to move to a different employer.

Demographic Differences Between the Different Groups of the Underemployed

While noting the differences between the different types of underemployed persons, we will not discuss the discouraged workers, since our survey found only five in this group and that number is too small for even broad generalizations. When we discussed the identification of underemployed workers, we pointed out that part-time workers tended to be about 80 percent women, temporary workers were mostly in non-metropolitan areas, and more mismatched workers were in metropolitan areas than in non-metropolitan areas. Some other interesting differences also showed up in our survey. Part-time workers have the lowest educational attainment, and part-time workers who want full-time jobs have a lower educational attainment than part-time workers who do not want full-time jobs. Mismatched workers have the highest educational attainment of the underemployed workers. In addition, mismatched workers have had more special training than other underemployed workers. Yet 27.2 percent of the temporary workers who want permanent jobs are currently in school or training programs, while only 16.2 percent of the mismatched workers are currently in school or training.

CONCLUSIONS AND POLICY IMPLICATIONS

General Conclusions

The empirical results of this report point to the importance of taking a more comprehensive approach to evaluating the ability of the Kansas Labor Market to match jobs and workers. By adding the category of the underemployed to the basic labor force categories of employed and unemployed, we were able to provide a broader measure of labor market performance, which we labeled the effective labor force. This broader approach provides policy makers with a detailed picture of the labor market's behavior while still providing an organized, familiar approach based on the labor force categories. As a consequence, policy makers can better examine some of the structural changes taking place in the Kansas labor market. In addition, the effective labor force measure provides a better notion of the well-being of Kansas workers than simply looking at the number of employed and unemployed workers.

In addition, we concluded that the survey competently measured the effective labor force in Kansas. This is not to say that the survey was unbiased. Besides the obvious bias of only contacting people with telephones, we have identified a number of biases such as over sampling non-metropolitan areas, over sampling women, and an upward educational bias. Nevertheless, we have either been able to compensate for these biases by weighting the respondents, or we do not think that the bias has significantly affected the results. Evidence for this conclusion is the similarity between our estimate of the unemployment rate, 4.0 percent, and the Kansas Department of Human Resources estimate of 4.4 percent unemployment rate for the same period. The difference is within the 95 percent confidence interval. Thus, we have confidence that our estimate of a 6.3 percent underemployment rate is within about one half a percentage point of the true rate.

Specific Empirical Conclusions

Our investigation of the Kansas Labor Market has lead us to the following specific conclusions.

1. *The Kansas Labor Market is efficiently matching workers with jobs.* The survey results

revealed that only 10.3 percent of the respondents in the labor market were either unemployed (4.0 percent) or underemployed (6.3 percent).. These are remarkably low rates. The vast majority of Kansans in the labor market have a job and are not underemployed.

2. *Unemployment is higher in metropolitan areas than in non-metropolitan areas, and higher among women than men.* Metropolitan women have the highest unemployment rate (5.5 percent) and metropolitan men have the next highest rate (4.7 percent). Non-metropolitan men have the lowest unemployment rate (2.1 percent) and non-metropolitan women have the next lowest rate (3.6 percent).

3 *Underemployment is higher for women than men and can be found in significant amounts in both metropolitan and non-metropolitan areas.* The group with the highest underemployment rate is non-metropolitan women (8.3 percent) and the group with the lowest underemployment rate is non-metropolitan men (4.6 percent). Metropolitan women have a slightly higher underemployment rate (7.2 percent) than metropolitan men (6.4 percent).

4. *Underemployment in Kansas is about equally divided between part-time workers who want full-time jobs, 2.1 percent of the labor force (28,500 workers), temporary workers who want permanent jobs, 2.1 percent (28,300 workers), and mismatched workers, 2.3 percent (31,000 workers).* Discouraged workers represent less than 5 percent of the underemployed (4,000 workers) and only about 0.3 percent of the labor force, very close to the national average. Because of considerable overlap, the total number of underemployed is about 85,000 workers. Part-time workers are about 80 percent women and about 75 percent of the part-time workers who want full-time jobs are women. Temporary workers who want permanent jobs are 60 percent male. More of these workers live in non-metropolitan areas. Mismatched workers are predominantly metropolitan and with slightly more female than male. In general, underemployed workers are younger than the average of the civilian labor force.

5. *The majority of those in the survey who might have been underemployed are not underemployed.* From the survey sample, of the 228 part-time workers only 38 want full-time jobs. Of the 55 temporary workers only 33 want permanent jobs, and of the 374 workers who thought they

were mismatched, only 37 were judged to be convincingly mismatched.

6. *Education and employment are directly correlated.* Employed workers are better educated than unemployed workers, underemployed workers are better educated than either employed workers or unemployed workers. The mismatched workers are the best educated of the underemployed workers and the temporary workers are next. Part-time workers who want full-time jobs are the least educated and are less educated than part-time workers who do not want full-time jobs. In every effective labor force category, women tend to be better educated than men.

7. *The underemployed have less special training than either the employed or the unemployed.* More than 50 percent of the employed have had special formal training while only 47.8 percent of the unemployed have and only 41.2 percent of the underemployed have. The same is true of special on-the-job training. Of the employed, 52.8 percent have had special on-the-job training while only 32.7 percent of the unemployed and 22.1 percent of the underemployed have.

8. *Many in the labor force are getting more training.* Slightly more than 11 percent of the labor force was currently in school or receiving special formal training at the time of the survey. This translates into about 140,000 Kansas workers receiving either schooling or special training at any particular time. About two-thirds of those receiving this schooling or training are full-time employees at the time of training. In addition, about two-thirds of these workers are women. Finally, about 25 percent of the underemployed and slightly more than 10 percent of the unemployed are receiving either schooling or formal training.

Policy Implications

Because of the nature of the research supporting this report, we do not have any specific recommendations for the addition or removal of particular programs. Instead, this report suggests that the basic strategies for two policy areas—economic development and job training— might need to be reviewed in light of our empirical results. We will begin with the implications of the report for economic development.

Economic Development

Unemployment has historically been low in Kansas relative to the rest of the nation. This report indicates that underemployment in Kansas is greater than unemployment, but still low. The Kansas Labor Market is efficiently matching workers with jobs on a statewide basis. Kansas does not have a large group of workers that need any job they can find. In fact, more than 11 percent of the labor force, two-thirds of which are full-time employees, is in training to get a better job. Finally, while nation wide 6.3 percent of the labor force has two or more jobs, the figure for Kansas is nearly 5 percent higher at 11.2 percent. These facts suggest that Kansas should have an economic development strategy aimed at bringing high-quality, well paying jobs to the state. The strength of the Kansas's human capital is not in its numbers but in its willingness to work hard and in its willingness to get more schooling and training.

Job Training

Tied to an economic development strategy aimed at bringing in high-quality, well paying jobs is the need to demonstrate the existence of an available labor force for the employers who are being asked to move to Kansas. Kansas does not have a large reservoir of underemployed highly skilled labor. What Kansas does have is a large group of individuals willing to get additional schooling or training. Our survey suggests that at any particular point in time, the number of individuals seeking additional schooling or training is 140,000 workers, about 100,000 of which are full-time employee. We suggest that if a Kansas economic development strategy of bringing in high-quality, well paying jobs is to be successful, it must be tied to schooling and job training. Kansas does not have a surplus of highly skilled workers, but it does have a work force with the willingness and ability to train for these types of jobs. This situation argues for increased investment in human capital and for extensive cooperation between economic development operations and job training operations.

This situation also argues for cooperation between employed workers and institutions that provide either schooling or job training. Our survey indicates that the people who already have jobs and are working full-time present the greatest opportunity of improving Kansas's reservoir of human capital. This suggests that at least some schooling and job training should be designed with full-time workers in mind. The large number of workers seeking additional training further suggests that a

sizable portion of Kansas workers recognize the need for better skills and are willing to put in additional effort to improve their skills. A state policy of encouraging increased schooling and job training for member of the labor force is consistent with the current behavior of many Kansans working full-time.

APPENDIX A THE SURVEY INSTRUMENT

This appendix contains the survey instrument that was the basis of the survey. First is an outline of the questions asked, then the survey instrument itself.

OUTLINE

TOPIC	PAGE
General Purpose of the Survey	A-2
Houshold Data	A-2
Family Business	A-3
At Work	A-3
With a Job	A-5
Multiple Jobs	A-6
Usual Hours	A-6
Actual Hours	A-7
Economic Part-Time	A-8
On Layoff	A-9
Looking	A-10
Discouraged Workers	A-13
Job History	A-14
Industry/Occupation	A-15
Temporary Workers	A-16
Mismatched Workers	A-17
Education and Training	A-19
Earnings	A-20

GENERAL PURPOSE OF THE SURVEY

This survey is designed to give a detailed description of the Kansas labor force. In particular, we want a better understanding of the underemployed in the state of Kansas. The underemployed are defined as the (1) Unemployed, (2) Part-time who want to work Full-time, (3) Temporary workers who want to be Permanent, (4) Discouraged workers, workers who have given up finding a job, and (5) Mismatched workers, workers who are working at jobs that do not require their skill or education level.

This survey was requested by the Kansas Legislature and the funding is part of a bill passed in the 1994 session of the Kansas Legislature.

Our survey is based on the Current Population Survey which is used by the Bureau of Labor Statistics to estimate the monthly Civilian Labor Force, Employed, Unemployed, and Unemployment Rate for the United States. We have reduced the number of questions, but as you will see, our survey is still detailed and complex. As you go through the survey you will see that no respondent will answer all questions, and in fact, most will only answer a small percentage of the total number of questions.

HOUSEHOLD DATA

These first set of questions are designed to just get some basic demographic details from the respondents. All of the answers are confidential.

Q18-1	In what Kansas county do you live? _____	

Q18-2	Do you live within the city limits of any city?	
	No	0
	Yes	1
[blind]	Don't know	2

Q18-3	In what year were you born? _____	

Q18-4	Are you male or female?	
	Male	0
	Female	1
[blind]	Refused	2

FAMILY BUSINESS

These initial question about family business is designed to identify self-employed persons. If someone owns a business or works for a family business, whether for pay or not, they are generally considered employed.

Q19. I am going to ask a few questions about work-related activities LAST WEEK. By last week I mean the week beginning on Sunday and ending on Saturday.

Q19A Does anyone in this household have a business or a farm?

	No	0
	Yes	1
[blind]	Don't Know	2
[blind]	Refused	3

AT WORK

The next set of questions is designed to identify persons who work for pay, do not work, or are not part of the labor force. Some of these questions try to identify those persons who are retired, etc. and are not part of the labor force. We do not need to ask anymore questions of persons not in the labor force. Some of these questions also further refine our knowledge of the people who work for the family business.

Q20. (If Q19A is "yes", then parentheticals should be filled.)
LAST WEEK, did you do ANY work for (either) pay (or profit)? **Being on either paid vacation or paid sick leave counts as doing work for pay.**

	No	0
	Yes	1 (Skip to Q20-1)
[blind]	Refused	2

Q20-CK. Q19A is "No", "D" or "R".. 0 (Skip to Q20A-1)
Q19A is "Yes" 1 (Ask Q20-2)

Q20-1 Do you work in the same county that you live in?

	No	0 (Skip
	Yes	1 to
	Don't know	2 Q20C)

Q20-2.	LAST WEEK, did you do any unpaid work in the family business or farm?	
	No	0 (Skip to Q20A-1)
	Yes	1
[blind]	Don't know	2 (Skip to Q20A-1)
[blind]	Refused	3 (Skip to Q20A-1)
<hr/>		
Q20-3.	Do you receive any payments or profits from the business?	
	No	
	0	
	Yes	1
[blind]	Don't know	2
[blind]	Refused	3
<hr/>		
Q20A-1.	Why did you not work for pay last-week? Was it because you are:	
	Retired	0 (Go to Q20A-4)
	Disabled	1 (Go to Q20A-2)
	Unable to work	2 (Go to Q20A-3)
	Already have a job	3 (Skip to Q20B-1)
	Other	4 (Skip to Q20A-4)
<hr/>		
Q20A-2.	Does your disability prevent you from accepting any kind of work during the next six months?	
	No	0 (Skip to Q20A-4)
	Yes	1 (Out of Survey)
[blind]	Don't know	2 (Skip to Q20B-a)
[blind]	Refused	3 (Skip to Q20B-a)
<hr/>		
Q20A-3.	Do you have a disability that prevents you from accepting any kind of work during the next six months?	
	No	0 (Skip to Q20A-4)
	Yes	1 (Out of Survey)
[blind]	Don't know	2 (Skip to Q20B-a)
[blind]	Refused	3 (Skip to Q20B-a)
	3 (Skip to Q20B-a)	
<hr/>		

Q20A-4.	Do you currently want a job, either full or part-time?	
	No	0 (Out of Survey)
	Yes or Maybe, it depends	1 (Skip to Q22)
[blind]	Don't know	2 (Skip to Q22)
[blind]	Refused	3 (Skip to Q22)

WITH A JOB

This small section is designed to determine why someone was absent from work last week. Question Q20B-a makes sure that the only people who answer these questions are people with jobs.

NOTE:	(If Q19A is yes, fill parenthetical.)	
Q20B-a.	LAST WEEK, (in addition to the business,) did you have a job either full or part-time? Include any you have not started to work at or any job from which you were temporarily absent.	
	No	0 (Return to Q20A-4)
	Yes	1
	Refused	2 (Out of Survey)

Q20B-1. What was the main reason you were absent from work LAST WEEK?

- On layoff (temporary or indefinite) 0 (Skip to Q21)
- Slack work/business conditions 1 (Skip to Q21)
- Waiting for new job to begin
- 2 (Skip to Q20E-3)
- Vacation/personal days 3
- Own illness/injury/medical problems 4
- Child care problems 5
- Other family/personal obligation 6
- Maternity or paternity leave 7
- Labor dispute 8
- Weather affected job 9
- School/training 10
- Civic/military duty 11
- Other (Specify) 12

Q20B-2. Are you being paid by your employer for any of the time off last week?

- No
- 0
- Yes 1
- [blind] Don't know 2
- [blind] Refused 3

MULTIPLE JOBS

This sections is as it says, to determine if the respondent has multiple jobs.

NOTE:	"or business" should be displayed only if Q19A is "yes".	
Q20C.	LAST WEEK, did you have more than one job (or business), including part-time, evening or weekend work?	
	No	0 (Skip to Q20E-1)
	Yes	1
[blind]	Don't know	2 (Skip to Q20E-1)
[blind]	Refused	3 (Skip to Q20E-1)

NOTE:	"or businesses" should be displayed only if Q19A is yes.	
Q20D.	Altogether, how many jobs (or businesses) did you have?	
	2	0
	3	1
	4+	2
[blind]	Don't know	3
[blind]	Refused	4

USUAL HOURS

The next three sections (USUAL HOURS, ACTUAL HOURS, AND ECONOMIC PART-TIME) are designed to determine if the respondent is in fact a part-time worker and if they are part-time, do they want to be a full-time worker. Recall, that part-time who want to be full-time are considered underemployed, thus, these sections are central to the purpose of the survey.

These three sections are structure so that if someone tells you that they usually work certain hours which are part-time hours, then they will skip to Economic Part-Time. If they say their hours vary, then they will skip to Actual Hours and another attempt will be made to estimate hours. If, in either case the respondent identifies themselves as full-time, they will skip all the way to Industrial/Occupational data.

	(If Q20C is "yes", then fill parenthetical "main".)	
Q20E-1.	How many hours per week do you USUALLY get paid to work at your (main) job? (If Q20C is "yes") By "main" job we mean the one at which you usually work the most hours.	
Q20E-1a	(MAIN) JOB	Number of hours ⇒ _____
Q20E-1b	Hours vary	0 (Skip to Q20E-CK)
[blind]	Don't know	1 (Skip to Q20E-CK)
[blind]	Refused	2

- Q20E-CK. If Q20C is "yes" and Q20E-1 is less than 35 0
 If Q20C is "yes" and Q20E-1 is 35 or more 1 (Skip to Q25)
 If Q20C is "no" and Q20E-1 is less than 35 2
 If Q20C is "no" and Q20E-1 is 35 or more 3 (Skip to Q25)
 If Q20E-1 is "Hours vary" 4

NOTE: ("at all your jobs combined" should be filled if Q20D has an entry.)
 ("in the family business" should be filled if Q20-2 is yes.)

- Q20E-2. Do you USUALLY get paid to work at least 35 hours or more per week (at your job) (at all your jobs combined) (in the family business or farm)?
- No 0 (Skip to Q20G-1)
 Yes 1 (Skip to Q25)
 Hours vary 2 (Skip to Q20F-1)
 [blind] Don't know 3 (Skip to Q20F-1)
 [blind] Refused 4 (Skip to Q20F-1)

- Q20E-3 Will your new job be full-time or part-time?
- Full-time 0 (Skip to Q25)
 Part-time 1 (Skip to Q20G-1)
 Don't know 2 (Skip to Q20G-1)

ACTUAL HOURS

Q20F-1. LAST WEEK, how many hours did you ACTUALLY work?

Q20F-1a Number of hours ⇒ _____

- Q20F-1b
- [blind] Don't know 0
 [blind] Refused 1

- Q20F-2. Are you a full-time employee or a part-time employee?
- Full-time 0 (Skip to Q25)
 Part-time 1 (Skip to Q20G-1)
 [blind] Don't know 2 (**Out of Survey**)
 [blind] Refused 3 (**Out of Survey**)

ECONOMIC PART-TIME

Q20G-1.	Do you want to work a full-time workweek of 35 hours or more per week?	
	No	0
	Yes	1
	Regular hrs. are full-time	2 (Skip to Q25)
[blind]	Don't know	3
[blind]	Refused	4 (Out of Survey)
<hr style="border-top: 1px dashed black;"/>		
Q20G-2.	Some people work part-time because they cannot find full-time work or because business is poor. Others work part-time because of family obligations or other personal reasons. What is your MAIN reason for working part-time? (PROBE IF NECESSARY: What is your MAIN reason for working PART-TIME instead of FULL-TIME?)	
	Slack work/business conditions	0
	Could only find part-time work	1
	Seasonal work	2
	Child care problems	3
	Other family/personal obligations	4
	Health/medical limitations	5
	School/training	6
	Retired/Social Security limit on earnings	7
	Full-time workweek is less than 35 hrs	8
	Other (specify)	9
[blind]	Don't know	10
[blind]	Refused	11
<hr style="border-top: 1px dashed black;"/>		
Q20G-CK	All others	0 (Skip to Q22)
	If Q20G-1 is "No"	1
<hr style="border-top: 1px dashed black;"/>		
Q20G-3.	What is the main reason you do not want to work full-time?	
	Child care problems	0 (Skip
	Other family/personal obligations	1
	Health/medical limitations	2
	School/training	3
	Retired/Social Security limit on earnings	4 to
	Full-time workweek is less than 35 hrs	5
	Other (specify)	6
[blind]	Don't know	7
[blind]	Refused	8 Q25)
<hr style="border-top: 1px dashed black;"/>		

ON LAYOFF

The only way a respondent should get to these questions is if they answered question Q20B-1 (Why were you absent from work?) with either On layoff or Slack work/business conditions. These question probe for more information about the status of the worker who is laid off.

Q21.	Have you been given any indication that you will be recalled to work within the next 6 months?	
	No	0 (Skip to Q22)
	Yes	1
[blind]	Don't know	2 (Skip to Q22)
[blind]	Refused	3 (Skip to Q22)
<hr style="border-top: 1px dashed black;"/>		
Q21A.	Even though you expect to be called back to work, have you been looking for work during the last 4 weeks?	
	No	0
	Yes	1
[blind]	Don't know	2
[blind]	Refused	3
<hr style="border-top: 1px dashed black;"/>		
Q21B.	As of the end of LAST WEEK, how long had you been on layoff?	
Q21B.a	Number _____	
Q21B.b	Weeks	0
	Months	1
	Years	2
Q21B.c	Don't know	0
[blind]	Refused	1
<hr style="border-top: 1px dashed black;"/>		
Q21C.	Is the job from which you are on layoff a full-time job of 35 hours or more per week?	
	No	0
	Yes	1
[blind]	Don't know	2
[blind]	Refused	3
<hr style="border-top: 1px dashed black;"/>		
Q21C-CK	All others	0 (Skip to Q23-CK)
	If Q21A is "Yes"	1 (Skip to Q22)
<hr style="border-top: 1px dashed black;"/>		

LOOKING

Respondents have three ways of getting to this set of questions. Either they answered they wanted a job or might want a job to question Q20A-4, or they answered they wanted to work full-time but are currently working part-time, or they have not had any indication that they will be recalled from layoff in the next 6 months.

This section is designed to determine if the respondent has actively searched for a job recently. If they have, then they are unemployed. If they have not, then they are out of the labor force. This section also contains questions about what they have done to find a job. These questions are designed to help, and in some cases were supplied by the Kansas Dept. of Human Resources, those agencies which try to find jobs for persons searching for jobs. These questions give these agencies some idea of how Kansas workers search for jobs.

Q22.	Have you been doing anything to find work during the last 4 weeks?	
	No	0 (Skip to Q23-CK)
	Yes	1
[blind]	Don't know	2 (Skip to Q23-CK)
[blind]	Refused	3 (Skip to Q23-CK)

Q22A. What are all of the things you have done to find work during the last 4 weeks? (Mark ALL methods used; do not read list. **After each response ask, "Anything else?"**) For data sake, each answer is a cell, so if the answer is yes, then a 1 will be marked. For example, if contacted an employer directly, then Q22A.a will be marked 1, if not, then nothing.

	ACTIVE		PASSIVE
Contacted:			
a.	employer directly/interview	0	j. Looked at ads 0
b.	public employment agency	0	k. Attended job training
c.	private employment agency	0	programs/courses 0
d.	friends or relatives	0	l. Other passive (specify) 0
e.	school/university employment ctr	0	
f.	Sent out resumes/filled out applications	0	m. Nothing 0
g.	Placed or answered ads	0	
h.	Checked union/professional registers	0	n. Don't know 0
i.	Other active (specify)	0	o. Refused 0

Q22A-1.	Have you utilized your local Job Service Office in seeking full-time employment?	
	No	0 (Skip to Q22B-1)
	Yes	1
[blind]	Don't know	2 (Skip to Q22B-1)

Q22A-2	Was the Job Service Office helpful?	
	No	0
	Yes	1
[blind]	Don't know	2
<hr/>		
Q22A-3	Did you utilize the automated labor exchange computer information in your job search?	
	No	0
	Yes	1
[blind]	Don't know	2
<hr/>		
Q22B-1.	LAST WEEK, could you have started a job if one had been offered?	
	No	0
	Yes	1 (Skip to Q22C-1)
	All Else	2 (Skip to Q22C-1)
<hr/>		
Q22B-2.	Why is that?	
	Waiting for new job to begin	0
	Own temporary illness	1
	Going to school	2 (Skip to Q24A)
	Other (specify in notes)	3 (Skip to Q24A)
[blind]	Don't know	4 (Skip to Q24A)
[blind]	Refused	5 (Skip to Q24A)
<hr/>		
Q22C-1.	BEFORE you started looking for work, what were you doing: working, going to school, or something else?	
	Working	0
	School	1 (Skip to Q22D)
	Left military service	2 (Plug "Quit job" in Q22C-2 and skip to Q22D)
	Something else	3 (Skip to Q22D)
[blind]	Don't know	4 (Skip to Q22D)
[blind]	Refused	5 (Skip to Q22D)
<hr/>		
Q22C-2.	Did you lose or quit that job, or was it a temporary job that ended?	
	Lost job	0
	Quit job	1
	Temporary job ended	2
[blind]	Don't know	3
[blind]	Refused	4
<hr/>		

Q22D. (If Q22C-2 has an entry, then fill parenthetical with "that".)
When did you last work at (a) job or business?

Within last 12 months 0
More than 12 months ago 1
Never worked 2
[blind] Don't know 3
[blind] Refused 4

Q22E. As of the end of LAST WEEK, how long had you been looking for work?

Q22E.a Number _____

Q22E.b Weeks 0
Months 1
Years 2

Q22E.c
[blind] Don't know 0
[blind] Refused 1

Q22F. Have you been looking for full-time work of 35 hours or more per week?

No 0
Yes 1
Doesn't matter 2
[blind] Don't know 3
[blind] Refused 4

Q22F-CK All others 0 (Skip to Q25)
If Q22D is "Never worked" 1 (Skip to Q27-1)

DISCOURAGED WORKERS

Respondents get to these questions by indicating they want a job but have not actively search for a job in the last 4 weeks. The purpose of this section is to determine if these respondents are discouraged workers and to some extent, why they are discouraged workers. Since discouraged workers are part of the underemployed, this section is central to the survey.

Q23-CK	Q20-3 is "no"	0 (Skip to Q25)																																										
	Q20B-1 is "Waiting for a new job to begin"	1 (Skip to Q25)																																										
	All others	2																																										
<table border="0" style="width: 100%;"> <tr> <td style="width: 15%; vertical-align: top;">Q23.</td> <td style="width: 60%;">Do you currently want a job, either full or part-time?</td> <td style="width: 25%;"></td> </tr> <tr> <td></td> <td>No</td> <td style="text-align: right;">0 (Skip to Q24A)</td> </tr> <tr> <td></td> <td>Yes, or maybe, it depends</td> <td style="text-align: right;">1</td> </tr> <tr> <td>[blind]</td> <td>Don't know</td> <td style="text-align: right;">2 (Skip to Q24A)</td> </tr> <tr> <td>[blind]</td> <td>Refused</td> <td style="text-align: right;">3 (Skip to Q24A)</td> </tr> </table>			Q23.	Do you currently want a job, either full or part-time?			No	0 (Skip to Q24A)		Yes, or maybe, it depends	1	[blind]	Don't know	2 (Skip to Q24A)	[blind]	Refused	3 (Skip to Q24A)																											
Q23.	Do you currently want a job, either full or part-time?																																											
	No	0 (Skip to Q24A)																																										
	Yes, or maybe, it depends	1																																										
[blind]	Don't know	2 (Skip to Q24A)																																										
[blind]	Refused	3 (Skip to Q24A)																																										
<table border="0" style="width: 100%;"> <tr> <td style="width: 15%; vertical-align: top;">Q23A.</td> <td style="width: 60%;">What is the main reason you were not looking for work during the LAST 4 WEEKS? (Do not read list.)</td> <td style="width: 25%;"></td> </tr> <tr> <td></td> <td>Believes no work available in line of work or area</td> <td style="text-align: right;">0</td> </tr> <tr> <td></td> <td>Couldn't find any work</td> <td style="text-align: right;">1</td> </tr> <tr> <td></td> <td>Lacks necessary schooling, training, skills or experience</td> <td style="text-align: right;">2</td> </tr> <tr> <td></td> <td>Employers think too young or too old</td> <td style="text-align: right;">3</td> </tr> <tr> <td></td> <td>Other types of discrimination</td> <td style="text-align: right;">4</td> </tr> <tr> <td></td> <td>Child care problems</td> <td style="text-align: right;">5</td> </tr> <tr> <td></td> <td>Family responsibilities</td> <td style="text-align: right;">6</td> </tr> <tr> <td></td> <td>In school or other training</td> <td style="text-align: right;">7</td> </tr> <tr> <td></td> <td>Ill-health, physical disability</td> <td style="text-align: right;">8</td> </tr> <tr> <td></td> <td>Transportation problems</td> <td style="text-align: right;">9</td> </tr> <tr> <td></td> <td>Other (specify)</td> <td style="text-align: right;">10</td> </tr> <tr> <td>[blind]</td> <td>Don't know</td> <td style="text-align: right;">11</td> </tr> <tr> <td>[blind]</td> <td>Refused</td> <td style="text-align: right;">12</td> </tr> </table>			Q23A.	What is the main reason you were not looking for work during the LAST 4 WEEKS? (Do not read list.)			Believes no work available in line of work or area	0		Couldn't find any work	1		Lacks necessary schooling, training, skills or experience	2		Employers think too young or too old	3		Other types of discrimination	4		Child care problems	5		Family responsibilities	6		In school or other training	7		Ill-health, physical disability	8		Transportation problems	9		Other (specify)	10	[blind]	Don't know	11	[blind]	Refused	12
Q23A.	What is the main reason you were not looking for work during the LAST 4 WEEKS? (Do not read list.)																																											
	Believes no work available in line of work or area	0																																										
	Couldn't find any work	1																																										
	Lacks necessary schooling, training, skills or experience	2																																										
	Employers think too young or too old	3																																										
	Other types of discrimination	4																																										
	Child care problems	5																																										
	Family responsibilities	6																																										
	In school or other training	7																																										
	Ill-health, physical disability	8																																										
	Transportation problems	9																																										
	Other (specify)	10																																										
[blind]	Don't know	11																																										
[blind]	Refused	12																																										
<table border="0" style="width: 100%;"> <tr> <td style="width: 15%; vertical-align: top;">Q23B.</td> <td style="width: 60%;">Did you look for work at any time during the last 12 months?</td> <td style="width: 25%;"></td> </tr> <tr> <td></td> <td>No</td> <td style="text-align: right;">0 (Skip to Q24A)</td> </tr> <tr> <td></td> <td>Yes</td> <td style="text-align: right;">1</td> </tr> <tr> <td>[blind]</td> <td>Don't know</td> <td style="text-align: right;">2 (Skip to Q24A)</td> </tr> <tr> <td>[blind]</td> <td>Refused</td> <td style="text-align: right;">3 (Skip to Q24A)</td> </tr> </table>			Q23B.	Did you look for work at any time during the last 12 months?			No	0 (Skip to Q24A)		Yes	1	[blind]	Don't know	2 (Skip to Q24A)	[blind]	Refused	3 (Skip to Q24A)																											
Q23B.	Did you look for work at any time during the last 12 months?																																											
	No	0 (Skip to Q24A)																																										
	Yes	1																																										
[blind]	Don't know	2 (Skip to Q24A)																																										
[blind]	Refused	3 (Skip to Q24A)																																										

Q23B-1. Did you actually WORK at a job or business during the last 12 months

- No 0
- Yes 1
- [blind] Don't know 2
- [blind] Refused 3

Q23B-2. Did you do any of this work during the last 4 weeks?

- No 0
- Yes 1 (Skip to Q24B)
- [blind] Don't know 2
- [blind] Refused 3

JOB HISTORY

This section asks for some brief job history from persons currently without jobs.

Q24A. Have you worked at a job or business at any time during the past 12 months?

- No 0 (Skip to Q24C)
- Yes 1
- [blind] Don't know 2 (Skip to Q24C)
- [blind] Refused 3 (Skip to Q24C)

Q24B. What is the main reason you left you last job?

- Personal, family, (incl. pregnancy) 0
- Return to school 1
- Health 2
- Retirement or old age 3
- Temporary, seasonal or intermittent job completed 4
- Slack work or business conditions 5
- Unsatisfactory work arrangements (hours, pay, etc.) 6
- Other (specify) 7
- [blind] Don't know 8
- [blind] Refused 9

Q24C. Do you intend to look for work during the next 12 months?

- No 0
 - Yes, or it depends 1
 - [blind] Don't know 2
 - [blind] Refused 3
-

INDUSTRY/OCCUPATION

This sections asks the respondents questions about their current job. This information is important in and of itself, but it is also important for comparison later when the respondent is asked whether they feel they are underemployed.

The second part of this section is concerned with temporary workers. Very little is know about temporary workers, so we are asking questions about them besides the obvious question do they want to be permanent workers.

Q25	For your (MAIN) job, were you employed by government, by a private company, a non-profit organization, or were you self-employed?	
	Government	0
	Private company	1 (Skip to Q25A-2)
	Non-profit organization	2 (Skip to Q25B-1)
	Working in the family business	3 (Skip to Q25A-2)
	Self-employed	4 (Skip to Q25B-1)
Q25A-1	Were you working for the federal, state, or local government?	
	Federal	0 (Skip
	State	1 to
	Local	2 Q25B-1)
Q25A-2	Is this business or organization primarily:	
	Agricultural	0
	Mining	1
	Construction	2
	Manufacturing	3
	Transportation, Communications or Public Utility	4
	Wholesale or Retail Trade	5
	Finance, Insurance or Real Estate	6
	Service Industry	7
Q25B-1	What kind of work do you do, that is, what is (was) your occupation? (For example: plumber, typist, farmer...)	
Q25B-1a		
Q25B-1b		
[blind]	Don't know	0
[blind]	Refused	1

Q25B-2 What are your usual activities or duties at this job? (For example: types, keeps account books, files, sells cars, operates printing press, lays bricks...)

Q25B-2a _____

Q25B-2b

[blind]	Don't know	0
[blind]	Refused	1

TEMPORARY WORKERS

These questions are designed to identify persons who for temporary job agencies, determine how long they have worked in this capacity, how long they expect to continue working, and whether they would like a permanent job.

Q25C-1 Many employers now hire workers both directly (permanent employees) and through a temporary employment agency (temporary employees). Are you a permanent or temporary employee?

	Permanent	0 (Skip to Q26-1)
	Temporary	1
[blind]	Don't know	2 (Skip to Q26-1)
[blind]	Refused	3 (Skip to Q26-1)

 Q25C-2 How long have you been employed as a temporary worker?

Q25C-2a _____

Q25C-2b	days	1
	weeks	2
	months	3
	years	4

Q25C-2c	Don't know	0
	Refused	1

Q25C-3 How much longer do you expect to be employed in this job?

Q25C-3a _____

Q25C-3b	days	1
	weeks	2
	months	3
	years	4

Q25C-3c	Don't know	0
	Refused	1

Q25C-4 Would you like a permanent job?

	No	0
	Yes	1
[blind]	Don't know	2
[blind]	Refused	3

MISMATCH BETWEEN SKILLS AND JOB

Determining whether a person is mismatched between their job and their skills is a tricky problem. Simply asking people seems guaranteed to yield exaggerated estimates of the number of mismatched persons. For that reason, several checks are incorporated in this section. First, we ask why they think they are underemployed. Surprisingly, this eliminated more than half in the test survey. Second, if they answer that they had a previous job which required more skill, then we ask for that job. This can then be used for comparison with the data in the Industrial/Occupational section. Finally, we ask if they would change jobs if the new job better utilized their skills. This is central to the survey and the most difficult to analyze.

Q26-1 Because of circumstances, some people are forced to work at jobs that do not match their skill level. For example, a master plumber taking tickets at a movie theater would be a mismatch between skills and job requirements. Does your current job underutilize your skills, education and talents?

	No	0 (Skip to Q27-1)
	Yes	1
[blind]	Don't know	2
[blind]	Refused	3 (Skip to Q27-1)

Q26-2 Why do you think you are currently underutilized in your job?

Had previous job that required more skill and/or education . . . 0
 Have had additional job training and/or education 1 (Skip to Q26-5)
 Current job does not require my training and/or education 2 (Skip to Q26-5)
 Had a previous job where I earned more income 3 (Skip to Q26-5)
 Don't know 4 (Skip to Q26-5)

Q26-3 What type of job have you had in the past which required more skill and/or education?

Q26-3a _____

Q26-3b
[blind]

Refused 1

Q26-4 Taking into account inflation, did your previous job provide you with more income?

No 0
 Yes 1
 Don't know 2

Q26-5 Would you change jobs so you could better utilize your skills?

No 0
 Yes 1
 [blind] Don't know 2
 [blind] Refused 3

EDUCATION AND TRAINING

This sections simply asks for information about the education and skill level of the respondent and asks whether they are currently trying to improve that level skill or education level.

Q27-1	How much formal education have you completed?	
	Less than High School	0
	High School	1
	Some College	2
	Associates Degree	3
	Bachelors Degree	4
	Masters Degree	5
	Ph.D.	6
	Advanced Professional Degree (Medical, Law, etc.)	7
Q27-2	In addition to your formal education, have you received formal special training such as vocational training, apprentice training, or special professional training?	
	No	0
	Yes	1
Q27-3	Have you received special on-the-job training other than the usual introductory job training?	
	No	0
	Yes	1
Q27-4	Are you currently enrolled in school or a special training program?	
	No	0 (Skip to Q28)
	Enrolled in school	1
	Enrolled in a special training program	2
Q27-5	How do you anticipate that this schooling or training will change your employment status?	
	Promotion	0
	Increased pay at present job	1
	Change jobs with the same employer	2
	Change jobs with a new employer	3
	Don't know	4

EARNINGS

This is the most sensitive section of the survey and probably the hardest to get answered. That is the reason it is last. If the respondent will answer Q28-1 that is good. If you get an answer to Q28-2, great. Make sure that you put the time period for the pay.

Q28-1	Under which income category would your earnings during calendar 1994 fall:	
	0 to \$20,000	0
	\$20,001 to \$40,000	1
	\$40,001 to \$60,000	2
	\$60,001 to \$80,000	3
	\$80,001 to \$100,000	4
	Over \$100,000	5
[blind]	Refused	6

Q28-2	What is your current pay rate?	
Q28-2a	Amount \$ _____	
Q28-2b	Per Hour	0
	Per Day	1
	Per Week	2
	Per Month	3
	Per Year	4
[blind]	Refused	5

**APPENDIX B
FREQUENCY OF ANSWERS FOR EACH QUESTION**

HOUSEHOLD DATA

Q18-1 In what Kansas county do you live? _____

See Appendix C.

Q18-2 Do you live within the city limits of any city? _____

	No		0
	Yes		1
[blind]	Don't know		2
		Frequency	Percent
	No	500	19.9%
	Yes	2002	79.8%
[blind]	Don't know	8	0.3%

Q18-3 In what year were you born? _____

See Tables 2 and 5.

Q18-4 Are you male or female?

	Male		0
	Female		1
[blind]	Refused		2

See Table 1.

FAMILY BUSINESS

Q19. I am going to ask a few questions about work-related activities LAST WEEK. By last week I mean the week beginning on Sunday and ending on Saturday.

Q19A Does anyone in this household have a business or a farm?

		Frequency	Percent
	No	1942	77.2
	Yes	570	22.6
[blind]	Don't Know	2	0.1
[blind]	Refused	3	0.1

AT WORK

(If Q19A is "yes", then parentheses should be filled.)
 Q20. LAST WEEK, did you do ANY work for (either) pay (or profit)? **Being on either paid vacation or paid sick leave counts as doing work for pay.**

		Frequency	Percent
	No	1029	40.9
	Yes	1485	59.0
[blind]	Refused	2	0.1

Q20-1 Do you work in the same county that you live in?

		Frequency	Percent
	No	280	18.8
	Yes	1202	80.6
	Don't know	9	0.6

Q20-2. LAST WEEK, did you do any unpaid work in the family business or farm?

		Frequency	Percent
	No	121	61.1
	Yes	73	36.9
[blind]	Don't know	4	2.0
[blind]	Refused		

Q20-3. Do you receive any payments or profits from the business?

		Frequency	Percent
	No	26	35.6
	Yes	44	60.3
[blind]	Don't know	3	4.1
[blind]	Refused		

Q20A-1. Why did you not work for pay last-week? Was it because you are:

		Frequency	Percent
	Retired	626	60.7
	Disabled	63	6.1
	Unable to work	22	2.1
	Already have a job	27	2.6
	Other	293	28.4

Q20A-2. Does your disability prevent you from accepting any kind of work during the next six months?

	Frequency	Percent
No	7	11.1
Yes	51	81.0
[blind] Don't know		
[blind] Refused	5	7.9

Q20A-3. Do you have a disability that prevents you from accepting any kind of work during the next six months?

	Frequency	Percent
No	12	52.2
Yes	9	39.1
[blind] Don't know	1	4.3
[blind] Refused	1	4.3

Q20A-4. Do you currently want a job, either full or part-time?

	Frequency	Percent
No	787	84.3
Yes or Maybe, it depends	137	14.7
[blind] Don't know	7	0.7
[blind] Refused	3	0.3

WITH A JOB

NOTE: (If Q19A is yes, fill parenthetical.)
 Q20B-a. LAST WEEK, (in addition to the business,) did you have a job either full or part-time? Include any you have not started to work at or any job from which you were temporarily absent.

	Frequency	Percent
No	5	83.3
Yes	1	16.7
Refused		

Q20B-1. What was the main reason you were absent from work LAST WEEK?

	Frequency	Percent
On layoff (temporary or indefinite)	2	10.5
Slack work/business conditions		
Waiting for new job to begin	2	10.5
Vacation/personal days	3	15.8
Own illness/injury/medical problems		
Child care problems	2	10.5
Other family/personal obligation	3	15.8
Maternity or paternity leave		
Labor dispute	3	15.8
Weather affected job		
School/training		
Civic/military duty	4	21.1
Other (Specify)		

Q20B-2. Are you being paid by your employer for any of the time off last week?

	Frequency	Percent
No	14	70.0
Yes	6	30.0
[blind] Don't know		
[blind] Refused		

MULTIPLE JOBS

NOTE: "or business" should be displayed only if Q19A is "yes".

Q20C. LAST WEEK, did you have more than one job (or business), including part-time, evening or weekend work?

	Frequency	Percent
No	1332	88.4
Yes	174	11.6

NOTE: "or businesses" should be displayed only if Q19A is yes.

Q20D. Altogether, how many jobs (or businesses) did you have?

	Frequency	Percent
2	129	73.3
3	31	17.6
4+	12	6.8
[blind] Don't know	2	1.1
[blind] Refused	2	1.1

USUAL HOURS

(If Q20C is "yes", then fill parenthetical "main".)
 Q20E-1. How many hours per week do you USUALLY get paid to work at your (main) job? (If Q20C is "yes") By "main" job we mean the one at which you usually work the most hours.

Number of			Number of			
Hours	Frequency	Percent	Hours	Frequency	Percent	
0	50	3.5	39	1	0.1	
1	92	6.5	40	490	34.6	
2	49	3.5	41	1	0.1	
3	144	10.2	42	9	0.6	
4	34	2.4	43	10	0.7	
5	2	0.1	44	2	0.1	
6	1	0.1	45	58	4.1	
8	6	0.4	46	10	0.7	
10	5	0.4	47	1	0.1	
12	3	0.2	48	14	1	
13	2	0.1	49	1	0.1	
14	1	0.1	50	90	6.3	
15	12	0.8	52	5	0.4	
16	4	0.3	54	1	0.1	
18	6	0.4	55	20	1.4	
19	1	0.1	56	6	0.4	
20	31	2.2	60	52	3.7	
21	1	0.1	62	3	0.2	
22	4	0.3	65	11	0.8	
23	1	0.1	66	1	0.1	
24	9	0.6	68	1	0.1	
25	21	1.5	70	13	0.9	
27	2	0.1	72	1	0.1	
28	2	0.1	74	1	0.1	
29	1	0.1	75	6	0.4	
30	33	2.3	80	9	0.6	
32	10	0.7	85	1	0.1	
33	1	0.1	88	1	0.1	
35	36	2.5	90	1	0.1	
36	14	1	96	1	0.1	
37	9	0.6	100	1	0.1	
38	9	0.6				
			Frequency	Percent		
[blind]	Hours vary		64	86.5		
[blind]	Don't know		9	12.2		
[blind]	Refused		1	1.4		

NOTE: ("at all your jobs combined" should be filled if Q20D has an entry.)
 ("in the family business" should be filled if Q20-2 is yes.)
 Q20E-2. Do you USUALLY get paid to work at least 35 hours or more per week (at your job) (at all your jobs combined) (in the family business or farm)?

	Frequency	Percent
No	214	35.5
Yes	331	54.9
Hours vary	48	8.0
[blind] Don't know	10	1.7
[blind] Refused		

Q20E-3 Will your new job be full-time or part-time?

	Frequency	Percent
Full-time	1	100.0
Part-time		
Don't know		

ACTUAL HOURS

Q20F-1. LAST WEEK, how many hours did you ACTUALLY work?

Number of Hours	Frequency	Percent	Number of Hours	Frequency	Percent
0	15	27.3	40	3	5.5
1	4	7.3	45	1	1.8
4	1	1.8	50	3	5.5
8	1	1.8	51	1	1.8
10	1	1.8	52	1	1.8
13	1	1.8	55	2	3.6
15	2	3.6	60	3	5.5
20	5	9.1	61	1	1.8
28	1	1.8	65	1	1.8
30	3	5.5	70	1	1.8
35	2	3.6	80	1	1.8
37	1	1.8			

Q20F-1b

[blind] Don't know	1	100.0
[blind] Refused		

Q20F-2. Are you a full-time employee or a part-time employee?

		Frequency	Percent
	Full-time	32	59.3
	Part-time	18	33.3
[blind]	Don't know	4	7.4
[blind]	Refused		

ECONOMIC PART-TIME

Q20G-1. Do you want to work a full-time workweek of 35 hours or more per week?

		Frequency	Percent
	No	187	80.3
	Yes	38	16.3
	Regular hrs. are full-time	5	2.1
[blind]	Don't know	3	1.3
[blind]	Refused		

Q20G-2. Some people work part-time because they cannot find full-time work or because business is poor. Others work part-time because of family obligations or other personal reasons. What is your MAIN reason for working part-time?
(PROBE IF NECESSARY: What is your MAIN reason for working PART-TIME instead of FULL-TIME?)

		Frequency	Percent
	Slack work/business conditions	4	1.8
	Could only find part-time work	10	4.4
	Seasonal work	5	2.2
	Child care problems	7	3.1
	Other family/personal obligations	69	30.4
	Health/medical limitations	8	3.5
	School/training	49	21.6
	Retired/Social Security limit on earnings	41	18.1
	Full-time workweek is less than 35 hrs	7	3.1
	Other (specify)	22	9.7
[blind]	Don't know	5	2.2
[blind]	Refused		

Q20G-3. What is the main reason you do not want to work full-time?

	Frequency	Percent
Child care problems	3	1.6
Other family/personal obligations	71	38.4
Health/medical limitations	10	5.4
School/training	36	19.5
Retired/Social Security limit on earnings	41	22.2
Full-time workweek is less than 35 hrs	6	3.2
Other (specify)	9	4.9
[blind] Don't know	8	4.3
[blind] Refused	1	0.5

ON LAYOFF

Q21. Have you been given any indication that you will be recalled to work within the next 6 months?

	Frequency	Percent
No	0	
Yes	2	100.0
[blind] Don't know		
[blind] Refused		

Q21A. Even though you expect to be called back to work, have you been looking for work during the last 4 weeks?

	Frequency	Percent
No	2	100.0
Yes	0	
[blind] Don't know		
[blind] Refused		

Q21B. As of the end of LAST WEEK, how long had you been on layoff?

	Frequency	Percent
Zero weeks	1	50.0
One week	1	50.0

Q21C. Is the job from which you are on layoff a full-time job of 35 hours or more per week?

	Frequency	Percent
No	1	50.0
Yes	1	50.0

LOOKING

Q22. Have you been doing anything to find work during the last 4 weeks?

		Frequency	Percent
	No	90	48.4
	Yes	91	48.9
[blind]	Don't know	2	1.1
[blind]	Refused	3	1.6

Q22A. What are all of the things you have done to find work during the last 4 weeks? (Mark ALL methods used; do not read list. **After each response ask, "Anything else?"**) For data sake, each answer is a cell, so if the answer is yes, then a 1 will be marked. For example, if contacted an employer directly, then Q22A.a will be marked 1, if not, then nothing.

ACTIVE

Contacted:

	Frequency
a. employer directly/interview	41
b. public employment agency	17
c. private employment agency	8
d. friends or relatives	29
e. school/university employment	9
f. Sent out resumes/filled out applications	47
g. Placed or answered ads	35
h. Checked union/professional registers	7
i. Other active (specify)	2

PASSIVE

j. Looked at ads	55
k. Attended job training programs/courses	6
l. Other passive (specify)	1
m. Nothing	0
n. Don't know	0
o. Refused	2

Q22A-1. Have you utilized your local Job Service Office in seeking full-time employment?

	Frequency	Percent
No	52	60.5
Yes	34	39.5
[blind] Don't know		

Q22A-2	Was the Job Service Office helpful?		
		Frequency	Percent
	No	16	45.7
	Yes	18	51.4
[blind]	Don't know	1	2.9
<hr/>			
Q22A-3	Did you utilize the automated labor exchange computer information in your job search?		
		Frequency	Percent
	No	23	65.7
	Yes	11	31.4
[blind]	Don't know	1	2.9
<hr/>			
Q22B-1.	LAST WEEK, could you have started a job if one had been offered?		
		Frequency	Percent
	No	10	11.2
	Yes	78	87.6
	All Else	1	1.1
<hr/>			
Q22B-2.	Why is that?		
		Frequency	Percent
	Waiting for new job to begin	1	10.0
	Own temporary illness	1	10.0
	Going to school	4	40.0
	Other (specify in notes)	3	30.0
[blind]	Don't know	1	10.0
[blind]	Refused		
<hr/>			
Q22C-1.	BEFORE you started looking for work, what were you doing: working, going to school, or something else?		
		Frequency	Percent
	Working	46	58.2
	School	18	22.8
	Left military service	13	16.5
	Something else	2	2.5
[blind]	Don't know		
[blind]	Refused		
<hr/>			

Q22C-2. Did you lose or quit that job, or was it a temporary job that ended?

	Frequency	Percent
Lost job	17	39.5
Quit job	12	27.9
Temporary job ended	9	20.9
[blind] Don't know	3	7.0
[blind] Refused	2	4.7

Q22D. (If Q22C-2 has an entry, then fill parenthetical with "that".)
When did you last work at (a) job or business?

	Frequency	Percent
Within last 12 months	56	71.8
More than 12 months ago	18	23.1
Never worked	2	2.6
[blind] Don't know	2	2.6
[blind] Refused		

Q22E. As of the end of LAST WEEK, how long had you been looking for work?

Number of Weeks		Frequency	Number of Months		Frequency	Number of Years		Frequency
0	1		1	7		1	3	
1	7		2	10		2	6	
2	10		3	6		4	1	
3	4		4	1				
4	1		5	4				
			6	4				
			8	1				
			9	1				
Do not know how long					2			
Refused to answer					1			

Q22F. Have you been looking for full-time work of 35 hours or more per week?

	Frequency	Percent
No	15	19.5
Yes	60	77.9
Doesn't matter	2	2.6
[blind] Don't know		
[blind] Refused		

DISCOURAGED WORKERS

Q23. Do you currently want a job, either full or part-time?			
		Frequency	Percent
	No	32	29.4
	Yes, or maybe, it depends	70	64.2
[blind]	Don't know	5	4.6
[blind]	Refused	2	1.8

Q23A. What is the main reason you were not looking for work during the LAST 4 WEEKS? (Do not read list.)			
		Frequency	Percent
	Believes no work available in line of work or area	3	4.5
	Couldn't find any work	3	4.5
	Lacks necessary schooling, training, skills or experience	1	1.5
	Employers think too young or too old	3	4.5
	Other types of discrimination	6	9.0
	Child care problems	6	9.0
	Family responsibilities	16	23.9
	In school or other training	2	3.0
	Ill-health, physical disability	2	3.0
	Transportation problems	13	9.4
	Other (specify)	9	13.4
[blind]	Don't know	3	4.5
[blind]	Refused		

Q23B. Did you look for work at any time during the last 12 months?			
		Frequency	Percent
	No	34	50.7
	Yes	30	44.8
[blind]	Don't know	1	1.5
[blind]	Refused	2	3.0

Q23B-1. Did you actually WORK at a job or business during the last 12 months			
		Frequency	Percent
	No	11	36.7
	Yes	19	63.3
[blind]	Don't know		
[blind]	Refused		

Q23B-2. Did you do any of this work during the last 4 weeks?

		Frequency	Percent
	No	19	73.1
	Yes	7	26.9
[blind]	Don't know		
[blind]	Refused		

JOB HISTORY

Q24A. Have you worked at a job or business at any time during the past 12 months?

		Frequency	Percent
	No	53	51.5
	Yes	47	45.6
[blind]	Don't know	1	1.0
[blind]	Refused	2	1.9

Q24B. What is the main reason you left you last job?

		Frequency	Percent
	Personal, family, (incl. pregnancy)	8	15.7
	Return to school	11	21.6
	Health	5	9.8
	Retirement or old age	3	5.9
	Temporary, seasonal or intermittent job completed	5	9.8
	Slack work or business conditions	1	2.0
	Unsatisfactory work arrangements (hours, pay, etc.)	1	2.0
	Other (specify)	10	19.6
[blind]	Don't know	3	5.9
[blind]	Refused	4	7.8

Q24C. Do you intend to look for work during the next 12 months?

		Frequency	Percent
	No	36	31.9
	Yes, or it depends	69	61.1
[blind]	Don't know	6	5.3
[blind]	Refused	2	1.8

INDUSTRY/OCCUPATION

Q25 For your (MAIN) job, were you employed by government, by a private company, a non-profit organization, or were you self-employed?

	Frequency	Percent
Government	304	19.0
Private company	895	56.0
Non-profit organization	164	10.3
Working in the family business	13	0.8
Self-employed	223	13.9

Q25A-1 Were you working for the federal, state, or local government?

	Frequency	Percent
Federal	67	22.0
State	118	38.7
Local	120	39.3

Q25A-2 Is this business or organization primarily:

	Frequency	Percent
Agricultural	47	5.2
Mining	7	0.8
Construction	68	7.6
Manufacturing	175	19.4
Transportation, Communications or Public Utility	89	9.9
Wholesale or Retail Trade	175	19.4
Finance, Insurance or Real Estate	84	9.3
Service Industry	255	28.3

Q25B-1 What kind of work do you do, that is, what is (was) your occupation? (For example: plumber, typist, farmer...)

Not meaningful.

Q25B-2 What are your usual activities or duties at this job? (For example: types, keeps account books, files, sells cars, operates printing press, lays bricks...)

Not meaningful.

Q25C-1 Many employers now hire workers both directly (permanent employees) and through a temporary employment agency (temporary employees). Are you a permanent or temporary employee?

	Frequency	Percent
Permanent	1475	93.7
Temporary	56	3.6
[blind] Don't know	34	2.2
[blind] Refused	9	0.6

Q25C-2 How long have you been employed as a temporary worker?

Number of Weeks	Frequency	Number of Months	Frequency	Number of Years	Frequency
0	1*	2	3	1	9
1	1	3	5	2	5
2	2	4	3	3	3
3	2	5	3	4	1
		6	4	7	1
		8	1	8	1
		9	3	18	1
		18	1	20	1

Do not know how long 1

*One person had worked as a temporary worker for three days.

Q25C-3 How much longer do you expect to be employed in this job?

Number of Weeks	Frequency	Number of Months	Frequency	Number of Years	Frequency
0	11*	1	5	1	9
1	2	2	5	2	6
		3	6	3	2
		6	1	5	1

Do not know how long 5

*Nine people said this was their last day and one said they had one more day.

Q25C-4 Would you like a permanent job?

	Frequency	Percent
No	21	33.9
Yes	39	62.9
[blind] Don't know	2	3.2
[blind] Refused		

MISMATCH BETWEEN SKILLS AND JOB

Q26-1 Because of circumstances, some people are forced to work at jobs that do not match their skill level. For example, a master plumber taking tickets at a movie theater would be a mismatch between skills and job requirements. Does your current job underutilize your skills, education and talents?

		Frequency	Percent
	No	1117	74.6
	Yes	365	23.2
[blind]	Don't know	26	1.7
[blind]	Refused	8	0.5

Q26-2 Why do you think you are currently underutilized in your job?

	Frequency	Percent
Had previous job that required more skill and/or education	50	13.3
Have had additional job training and/or education	128	34.1
Current job does not require my training and/or education	99	26.4
Had a previous job where I earned more income	30	8.0
Don't know	68	18.1

Q26-3 What type of job have you had in the past which required more skill and/or education?

See Appendix D.

Q26-4 Taking into account inflation, did your previous job provide you with more income?

	Frequency	Percent
No	11	23.9
Yes	31	67.4
Don't know	4	8.7

Q26-5 Would you change jobs so you could better utilize your skills?

		Frequency	Percent
	No	99	26.5
	Yes	239	64.1
[blind]	Don't know	33	8.8
[blind]	Refused	2	0.5

SKILLS AND EDUCATION

Q27-1	How much formal education have you completed?		
		Frequency	Percent
	Less than High School	80	5.0
	High School	498	31.0
	Some College	532	33.2
	Associates Degree	69	4.3
	Bachelors Degree	300	18.7
	Masters Degree	99	6.2
	Ph.D.	17	1.1
	Advanced Professional Degree	9	0.6
<hr style="border-top: 1px dashed black;"/>			
Q27-2	In addition to your formal education, have you received formal special training such as vocational training, apprentice training, or special professional training?		
		Frequency	Percent
	No	817	51.2
	Yes	779	48.8
<hr style="border-top: 1px dashed black;"/>			
Q27-3	Have you received special on-the-job training other than the usual introductory job training?		
		Frequency	Percent
	No	871	55.0
	Yes	712	45.0
<hr style="border-top: 1px dashed black;"/>			
Q27-4	Are you currently enrolled in school or a special training program?		
		Frequency	Percent
	No	1378	87.3
	Enrolled in school	173	11.0
	Enrolled in a special training program	28	1.8
<hr style="border-top: 1px dashed black;"/>			
Q27-5	How do you anticipate that this schooling or training will change your employment status?		
		Frequency	Percent
	Promotion	16	8.3
	Increased pay at present job	24	12.4
	Change jobs with the same employer	17	8.8
	Change jobs with a new employer	74	38.3
	Don't know	62	32.1

EARNINGS

Q28-1 Under which income category would your earnings during calendar 1994 fall:

		Frequency	Percent
	0 to \$20,000	663	41.8
	\$20,001 to \$40,000	556	35.1
	\$40,001 to \$60,000	150	9.5
	\$60,001 to \$80,000	53	3.3
	\$80,001 to \$100,000	10	0.6
	Over \$100,000	14	0.9
[blind]	Refused	140	8.8

Q28-2 What is your current pay rate?

For those paid on an hourly basis:

\$ Per Hour	Number	\$ Per Hour	Number	\$ Per Hour	Number
\$2	3	\$12	33	\$22	2
3	4	13	16	23	1
4	20	14	22	24	1
5	60	15	16	25	1
6	78	16	9	27	1
7	81	17	12	28	2
8	54	18	9	30	2
9	43	19	4	35	1
10	45	20	6	40	1
11	30	21	5		

For those paid on a daily basis:

\$ Per Day	Number	\$ Per Day	Number	\$ Per Day	Number
\$7	1	\$70	1	\$172	1
40	1	120	2	180	1
65	1				

For those paid on a weekly basis:

\$ Per Week	Number	\$ Per Week	Number	\$ Per Week	Number
\$100	2	300	1	550	1
120	1	350	1	700	2
125	1	375	1	750	1
200	4	400	3	800	2
217	1	470	1	1,400	1
250	1	500	4	1,700	1

For those paid on a monthly basis:

\$ Per Month	Number	\$ Per Month	Number	\$ Per Month	Number
\$100	1	1,417	1	2,498	1
284	1	1,437	1	2,500	4
550	1	1,488	1	2,589	1
600	2	1,500	2	2,800	1
700	2	1,700	1	2,900	1
850	1	1,704	1	3,000	1
940	1	1,799	1	3,200	2
1,000	1	1,800	6	3,600	2
1,040	1	1,850	1	3,800	1
1,100	2	2,000	7	4,000	3
1,174	1	2,100	1	5,000	1
1,350	1	2,200	1	7,500	1
1,400	1	2,400	2	25,000	1

For those paid on an annual basis:

\$ Per Year	Number	\$ Per Year	Number	\$ Per Year	Number
\$330	1	20,000	5	37,000	1
1,500	1	21,000	3	38,000	2
1,800	1	22,000	2	39,000	1
2,000	1	23,000	3	40,000	7
2,204	1	24,000	3	41,000	2
3,000	1	24,700	1	44,000	2
5,400	1	25,000	1	45,000	5
9,000	1	25,300	1	47,000	1
9,600	1	26,000	5	50,000	4
10,000	2	27,000	6	54,000	1
12,000	1	27,500	1	55,000	1
12,500	1	28,000	5	58,000	2
14,000	2	29,000	4	60,000	3
15,000	2	29,300	1	61,000	1
15,500	1	29,500	1	64,000	1
16,400	1	30,000	9	70,000	5
16,500	2	31,000	3	73,000	1
16,600	1	32,000	1	75,000	2
17,000	3	34,000	1	79,000	1
17,500	1	34,600	1	90,000	1
18,000	3	35,000	7	100,000	1
19,500	1	36,000	8	120,000	1

Those refusing to answer this question: 706.

APPENDIX C
SURVEY RESPONSES COMPARED TO NUMBER OF ACTUAL HOUSEHOLDS:
KANSAS COUNTIES

KANSAS COUNTIES	SURVEY RESPONSES						NUMBER OF HOUSEHOLDS FROM THE 1990 CENSUS	
	Total Responses		All Men		All Women		Number	Percent of Total
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total		
Allen	33	1.3	9	0.9	24	1.6	5,705	0.6
Anderson	6	0.2	1	0.1	5	0.3	3,067	0.3
Atchison	14	0.6	8	0.8	6	0.4	6,129	0.6
Barber	3	0.1	1	0.1	2	0.1	2,358	0.3
Barton	28	1.1	10	1.0	18	1.2	11,561	1.2
Bourbon	27	1.1	14	1.4	13	0.8	5,897	0.6
Brown	14	0.6	6	0.6	8	0.5	4,347	0.5
Butler	44	1.7	17	1.7	27	1.7	18,488	2.0
Chase	5	0.2	3	0.3	2	0.1	1,214	0.1
Chautauqua	3	0.1	3	0.3	0	0	1,835	0.2
Cherokee	18	0.7	5	0.5	13	0.8	8,396	0.9
Cheyenne	5	0.2	1	0.1	4	0.3	1,389	0.1
Clark	2	0.1	0	0.0	2	0.1	1,006	0.1
Clay	14	0.6	5	0.5	9	0.6	3,641	0.4
Cloud	10	0.4	3	0.3	7	0.5	4,483	0.5
Coffey	12	0.5	6	0.6	6	0.4	3,311	0.4
Comanche	1	0.0	0	0.0	1	0.1	950	0.1
Cowley	41	1.6	11	1.1	30	1.9	14,047	1.5
Crawford	43	1.7	14	1.4	29	1.9	14,606	1.5
Decatur	2	0.1	0	0.0	2	0.1	1,651	0.2
Dickinson	20	0.8	8	0.8	12	0.8	7,542	0.8
Doniphan	8	0.3	5	0.5	3	0.2	3,074	0.3
Douglas	63	2.5	31	3.2	32	2.1	30,138	3.2
Edwards	6	0.2	2	0.2	4	0.3	1,585	0.2
Elk	4	0.2	1	0.1	3	0.2	1,436	0.2
Ellis	36	1.4	14	1.4	22	1.4	10,096	1.1
Ellsworth	5	0.2	3	0.3	2	0.1	2,522	0.3
Finney	17	0.7	10	1.0	7	0.5	10,836	1.1
Ford	23	0.9	13	1.3	10	0.6	9,872	1.0

KANSAS COUNTIES	SURVEY RESPONSES						NUMBER OF HOUSEHOLDS FROM THE 1990 CENSUS	
	Total Responses		All Men		All Women		Number	Percent of Total
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total		
Franklin	26	1.0	9	0.9	17	1.1	8,308	0.9
Geary	33	1.3	14	1.4	19	1.2	10,676	1.1
Gove	4	0.2	1	0.1	3	0.2	1,284	0.1
Graham	11	0.4	0	0.0	11	0.7	1,435	0.2
Grant	19	0.8	9	0.9	10	0.6	2,393	0.3
Gray	8	0.3	3	0.3	5	0.3	1,913	0.2
Greeley	1	0.0	1	0.1	0	0	656	0.1
Greenwood	12	0.5	5	0.5	7	0.5	3,285	0.3
Hamilton	2	0.1	0	0.0	2	0.1	986	0.1
Harper	7	0.3	3	0.3	4	0.3	3,007	0.3
Harvey	39	1.5	12	1.2	27	1.7	11,581	1.2
Haskell	2	0.1	2	0.2	0	0	1,372	0.1
Hodgeman	3	0.1	1	0.1	2	0.1	826	0.1
Jackson	8	0.3	3	0.3	5	0.3	4,277	0.5
Jefferson	21	0.8	8	0.8	13	0.8	5,778	0.6
Jewell	16	0.6	7	0.7	9	0.6	1,806	0.2
Johnson	354	14.1	135	13.9	219	14.2	136,433	14.4
Kearny	4	0.2	2	0.2	2	0.1	1,379	0.1
Kingman	11	0.4	2	0.2	9	0.6	3,175	0.3
Kiowa	4	0.2	2	0.2	2	0.1	1,466	0.2
Labette	19	0.8	7	0.7	12	0.8	9,377	1.0
Lane	2	0.1	0	0.0	2	0.1	966	0.1
Leavenworth	58	2.3	25	2.6	33	2.1	19,715	2.1
Lincoln	4	0.2	1	0.1	3	0.2	1,531	0.2
Linn	10	0.4	3	0.3	7	0.5	3,215	0.3
Logan	9	0.4	3	0.3	6	0.4	1,221	0.1
Lyon	34	1.3	9	0.9	25	1.6	13,059	1.4
McPherson	12	0.5	4	0.4	8	0.5	10,230	1.1
Marion	9	0.4	5	0.5	4	0.3	4,975	0.5
Marshall	32	1.3	13	1.3	19	1.2	4,689	0.5
Meade	2	0.1	1	0.1	1	0.1	1,667	0.2
Miami	24	0.9	13	1.3	11	0.7	8,402	0.9

KANSAS COUNTIES	SURVEY RESPONSES						NUMBER OF HOUSEHOLDS FROM THE 1990 CENSUS	
	Total Responses		All Men		All Women		Number	Percent of Total
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total		
Mitchell	7	0.3	1	0.1	6	0.4	2,846	0.3
Montgomery	37	1.5	10	1.0	27	1.7	15,670	1.7
Morris	6	0.2	2	0.2	4	0.3	2,528	0.3
Morton	3	0.1	2	0.2	1	0.1	1,290	0.1
Nemaha	13	0.5	6	0.6	7	0.5	3,996	0.4
Neosho	19	0.8	5	0.5	14	0.9	6,748	0.7
Ness	8	0.3	2	0.2	6	0.4	1,670	0.2
Norton	8	0.3	3	0.3	5	0.3	2,330	0.2
Osage	15	0.6	8	0.8	7	0.5	5,806	0.6
Osborne	9	0.4	2	0.2	7	0.5	2,057	0.2
Ottawa	10	0.4	2	0.2	8	0.5	2,266	0.2
Pawnee	6	0.2	3	0.3	3	0.2	2,923	0.3
Phillips	4	0.2	1	0.1	3	0.2	2,695	0.3
Pottawatomie	26	1.0	7	0.7	19	1.2	5,938	0.6
Pratt	11	0.4	4	0.4	7	0.5	3,937	0.4
Rawlins	5	0.2	3	0.3	2	0.1	1,361	0.1
Reno	63	2.5	26	2.7	37	2.4	24,239	2.6
Republic	12	0.5	3	0.3	9	0.6	2,769	0.3
Rice	9	0.4	4	0.4	5	0.3	4,165	0.4
Riley	66	2.7	27	2.8	39	2.5	21,280	2.3
Rooks	10	0.4	5	0.5	5	0.3	2,444	0.3
Rush	2	0.1	1	0.1	1	0.1	1,642	0.2
Russell	12	0.5	2	0.2	10	0.6	3,371	0.4
Saline	53	2.1	19	2.0	34	2.2	19,826	2.1
Scott	3	0.1	1	0.1	2	0.1	2,022	0.2
Sedgwick	350	13.9	154	15.8	196	12.7	156,571	16.6
Seward	25	1.0	9	0.9	16	1	6,614	0.7
Shawnee	159	6.3	60	6.2	99	6.4	63,768	6.8
Sheridan	4	0.2	1	0.1	3	0.2	1,171	0.1
Sherman	9	0.4	4	0.4	5	0.3	2,733	0.3
Smith	6	0.2	2	0.2	4	0.3	2,165	0.2
Stafford	5	0.2	2	0.2	3	0.2	2,203	0.2

KANSAS COUNTIES	SURVEY RESPONSES						NUMBER OF HOUSEHOLDS FROM THE 1990 CENSUS	
	Total Responses		All Men		All Women		Number	Percent of Total
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total		
Stanton	2	0.1	1	0.1	1	0.1	831	0.1
Stevens	3	0.1	0	0.0	3	0.2	1,885	0.2
Sumner	22	0.9	11	1.1	11	0.7	9,689	1.0
Thomas	7	0.3	1	0.1	6	0.4	3,124	0.3
Trego	4	0.2	2	0.2	2	0.1	1,464	0.2
Wabaunsee	13	0.5	5	0.5	8	0.5	2,482	0.3
Wallace	0	0.0	0	0.0	0	0	677	0.1
Washington	11	0.4	4	0.4	7	0.5	2,862	0.3
Wichita	4	0.2	3	0.3	1	0.1	996	0.1
Wilson	25	1.0	3	0.3	22	1.4	4,194	0.4
Woodson	7	0.3	2	0.2	5	0.3	1,699	0.2
Wyandotte	137	5.5	53	5.4	84	5.4	61,514	6.5
Kansas	2,517		973		1,544		944,726	

APPENDIX D EXPLANATION OF THE MISMATCHED CATEGORY

This appendix is designed to give a more detailed explanation of how we distinguished what we felt were definitely mismatched workers from all those workers who claimed they were mismatched. Our first question simply stated what we meant by underutilization, gave an example of underutilization, and then asked the respondents if they felt they were underutilized in their current job. In response to that question, 74.6 percent said no, 23.2 said yes, 1.7 percent said they did not know, and 0.5 percent refused to answer the question. Only those who answered “yes” or “do not know,” a total 391 persons, continued to the next underutilization question.

Our second question began the screening process by asking, “Why do you think you are currently underutilized in your job?” We gave them five possible answers:

- (0) Had previous job that required more skill and/or education (49 responses)
- (1) Have had additional job training and/or education (128 responses)
- (2) Current job does not require my training and/or education (99 responses)
- (3) Had a previous job where I earned more income (30 responses)
- (4) Don't know (68 responses)

Of the 391 who were asked this question, 374 answered it. If the respondents gave answers (1) through (4), they were asked only one more question. If respondents said they were underutilized because they had a previous job that required more skill and/or education, they were asked two additional questions. First, they were asked: “What type of job have you had in the past which required more skill and/or education?” Then they were asked if that job paid more money. The final question all the people who said they were underutilized were asked was: “Would you change jobs so you could better utilize your skills?” Their responses were: 26.5 percent said no, 64.1 percent said yes, 8.8 percent said they did not know, and 0.5 percent refused to answer.

Given the information the respondents gave us about their current job, their education attainment, special training, and in some cases, their previous job, we then evaluated whether or not we thought the respondent was in fact mismatched with their current job. Even if the person said they did not know why they were mismatched, we still evaluated their education and training relative to their current job.

The results of our evaluation are provided in Table 14. More detailed information is provided in the following 5 tables. The respondents that we thought were definitely mismatched are highlighted in these tables in bold italics. Table D-1 provides the current job, description of that job, and previous job that required more skill for those respondents that answered (0) to question Q26-2. Tables D2-D5 provide the current job, job description, formal educational achievement, formal job training, and special on-the-job training answers for those respondents who answered (1) through (4). Listed below are the education and job training questions and possible answers. In the tables only numbers are given as answers to these 3 questions.

Q27-1	How much formal education have you completed?	
	Less than High School	0
	High School	1
	Some College	2
	Associates Degree	3
	Bachelors Degree	4
	Masters Degree	5
	Ph.D.	6
	Advanced Professional Degree (Medical, Law, etc.)	7

Q27-2	In addition to your formal education, have you received formal special training such as vocational training, apprentice training, or special professional training?	
	No	0
	Yes	1

Q27-3	Have you received special on-the-job training other than the usual introductory job training?	
	No	0
	Yes	1

**TABLE D-1
MORE DETAILED ANSWERS TO Q26-3**

Current Job	Description of Job	Previous Job
Administrative Assistant	Support Person, Office Manage	Management with Profit Company
Cook	Cook	Refused
Bookkeeping	Accounting	Bookkeeper
Dod Civilian	Administrative	None
Carpenter	Does Maintenance	Machinist
Farm	Everything	Always Farmed
Insurance		
Secretary	Bookeeping	Director of Handicapped Prog
Sales	Sales	Management
Trucking Parts Manager	Customer Service	Restaurant Management
Service Technician	Hauling, Setting up Ag. Equip.	Public Utility
Forlift Driver	Drive a Forklift	Construction
Fertilizer	Sales	Finance
Groundskeeper	Maintenance	
Bank Teller	Teller, Insurance, Bookkeeping	Project Manager for Large Co.
Stocker	Putting Stuff up on Shelves	Air Craft Mechanic
Manager	Everything	Office Manager
Clerical	Typing, Filing, Data Entry	
Answering Service Operator		
Aide, School	Helping with Kids	Teaching
Daycare Services	Taking Care of Kids	Teaching
Secretary	Typing	Receptionist in Med Field
Clerking	Clerking	
Painter	Painting	Management
Pharmacy Technician		Property Management
Management	Operations	Management
Truck Driver		Nurse's Aide
Purchasing Clerk		Purchasing Agent
Maintance		
Lawn Maintenance	Mow Lawns	Graphic Artist
Accountant	Accounting	Accounting Job
Account Manager	Customer Service Work	Finanail Counseling
Furniture Store Manager	Selling Furniture	Retail Business
Hairdresser	Hair Styleing	
Receptionist	Patient Check, Filing, Paying.	Buyers Assistant for Hospital
Spc Tech	Quality Control	None
Prison Health Services	Director of Nursing	None
Picker-order Filler	Fill Orders	Fast Food Manager
Accountant	Accounting,computerwork	Controller of Oil Company
Project Coor	Running Federal Project	Asst Professpr
School Teacher	Teaching and Training	Physicains Assistant
Clerk	Payroll	Accounts Receivable Clerk
Loan Officer		Managing a Restaraunt
Office Mgr	Management	None
Nurse	Family Practice	None
Daycare	Childcare Provider	None
Medical Asst	Work in Front Area	Doctor Office
Office Asst	Clerical	Accounting
Line Server	University of Kansas	Construction

**TABLE D-2
MORE DETAILED INFORMATION
FOR THOSE WHO ANSWERED (1) TO Q26-2**

Current Job	Description of Job	Formal Education	Formal Job Training	Special O.J.T.
<i>Sales</i>	<i>Sale Cellular Service</i>	4	0	0
<i>Nurse</i>	<i>Care of Sick</i>	5	1	0
Sales Clerk	Sell Video	2	0	0
Construction	Lay Asphalt	1	0	0
Housekeeper	Cleans	2	0	0
Welder	Help Welder	2	1	0
Sales	Sales	1	0	1
Supervisor	Mangement	2	1	1
Office Work	Clerical Work	2	1	0
Secretary	Data Entry	2	0	0
Cashier	Take Money at Counter	0	0	0
Nurse	Home Hlth. Car Prov.	3	1	1
Business Owner	Gift Shop Owner	2	0	0
Inspector	Shoe Inventory Control	2	0	0
Manager	Manage Modile Park	1	0	1
Childcare	Caring for Children	2	0	0
Cook	Prepare and Serve Food	1	0	1
Secretary	Typing, Filing	2	0	0
Supervisor	Management	4	1	1
Janitorial	Clean Houses	3	0	0
Cook	Cook	1	0	0
Telemarketing	Telemarketing	2	1	1
Janitorial	Cleaning	0	1	1
Counselor	Guidance for Army Nat.guard	3	1	1
Receptionist		2	0	0
Cashier	Take Money at Restaurant	2	1	1
Clerk	Check Groceries	2	0	1
Secretary	Typing, Filing, Phone	2	0	0
Customer Service	Customer Service	4	0	0
Nurse	Direct Patient Care	2	1	0
Assembler	Assemble Equipment	2	0	1
Laborer	Various	1	0	0
Supervisor	Maintenance	1	1	1
Sales	Sell Technical Equipment	2	1	1
Janitorial	Clean Carpets	2	0	1
Technician	Chemistry Lab Assis Refinery	4	1	1
Manager	Work with Public, Handle Stock	2	1	0
Graphic Artist	Senior Labeling Asst	2	1	1
Sales	Farmer Market	3	1	Na
Supervisor	Supervise, Install Floors	2	0	0
Groundskeeper	Mow Grass	1	0	1
Teacher	Teach Students	4	0	1
<i>Waitress</i>	<i>Wait Tables in Restaurant</i>	4	0	0

Current Job	Description of Job	Formal Education	Formal Job Training	Special O.J.T.
Beautician	Fix Hair	1	1	0
Teacher	Teach School	4	0	0
Supervisor		1	0	0
Accountant		1	0	0
Carpenter	Framing Houses	4	1	1
Computer Operator	Computer Operator	1	0	0
Groundskeeper	Cutting Grass, Lawn Work	2	1	1
Nurse	Handle Radiation Projects	2	1	0
Housekeeper	Washing Laundry and Making Bed	4	1	0
Clerk	Checked/checker	1	1	0
Dietician	Seerving Meals	1	0	0
Nurse	Take Care of Older People	1	0	0
Insurance Agent	Selling Insurance	2	1	0
Picture Framer	Frame Pictures	4	1	1
Investigator	Look for Things That Are Lost	4	1	0
Clerk	Books, Clerking, Ordering	2	1	1
Military	Provide Support to Artillery	2	1	0
Supervisor		2	1	1
Marketing	Business Planning	3	0	1
Insurance Agent	Sell Insurance	5	1	1
Counselor	Counseling Youth	2	1	1
Shipping Clerk		4	0	1
Machine Operator	Run Machines	2	0	1
Buyer	Business Purchases (Senior)	2	0	0
Laborer	Farmwork, Roofing	4	1	0
Teacher	Teaching Pre School	2	0	0
Bank Teller	Handling Money	4	1	0
Property Manager	Manage Property	4	0	0
Customer Service	Customer Service	5	0	1
Laborer		4	1	0
Secretary	Phones	2	1	1
Laborer	Lay Carpet	3	0	1
Technician	Troubleshooting Etc	2	0	0
Cook	Baking	2	1	1
Nurse's Aid	Checking Patients	1	1	1
Housekeeper	Houskeeping	3	1	0
Teacher, Para	Help Children Cross Street	1	1	0
Teacher	Teaching	1	0	1
Bookkeeper	Keep Books for Family Bus.	4	0	1
Maintenance		2	0	0
Sales	Sell Communication Equip.	2	1	0
Administrator	Training Administrator	4	0	1
Health Care	Medication Cards for Homes	1	1	1
Financial Analyst		1	1	1
Waitress	Wait Tables	4	1	1
Machine Operator	Run Machines	2	0	0
		2	1	0

Current Job	Description of Job	Formal Education	Formal Job Training	Special O.J.T.
Secretary	Computer,paperwork	3	1	1
Telemarketing	Radio Station Telemarketer	2	1	0
Teacher	Assist Lessons	4	1	1
Cook	Food Preparation	1	0	0
Supervisor		4	0	0
Bookkeeper		2	0	1
Childcare	Child Care	3	0	0
Secretary	Clerical	3	1	1
Quality Control	Inspect Product	2	0	0
Sales	Selling	1	0	1
Nurse	Surgery Nurse	2	1	1
Truck Driver	Deliver Parcels	2	0	1
Cook	Prepare Food	1	0	1
Secretary	Typing, filing	4	1	0
Bookkeeper	Track of Money	2	0	0
Clerk	Stock Books	1	0	1
Assembler	Wrapper	2	0	1
Teacher		5	1	1
Teacher	Teaching Piano	4	0	0
Cook	Cooking	2	0	0
Mail Carrier	Deliver Mail	4	0	0
Auditor	Accounting-related	4	0	1
Teacher	First Grade Teacher	4	1	1
Supervisor	Supervise Crews	1	0	1
Truck Driver	Driving	2	0	0
Truck Driver	Driving	2	1	1
Supervisor	Supervise Employees, Market	5	0	0
Secretary	Answer Phone, Scheduling	2	1	1
Nurse	Pass Medications	4	1	0
Driver	Drive Children	2	1	0
Customer Service	Customer Service	1	0	0
Bookkeeper	Book Keeping, Pay Bills	2	0	0
Bookkeeper	Phones, Part Manager, Billing	2	1	0
Customer Service	Billing Review Etc	1	0	1
Cook	Cooking	1	0	0
Military	Author	5	1	1
Dietician	Cooking	1	1	1
Nurse	Nurse	4	1	0

**TABLE D-3
MORE DETAILED INFORMATION
FOR THOSE WHO ANSWERED (2) TO Q26-2**

Current Job	Description of Job	Formal Education	Formal Job Training	Special O.J.T.
Police	Guard Prisoners	2	1	1
Childcare	Take Care of Children	3	0	0
Graphics		4	1	1
Childcare	Teaching	2	0	0
Driver	Drives Busses	2	0	1
Inspector	Inspection, Assembly	2	0	0
Service	Heating Service	4	1	1
Secretary	Answer Phones	1	0	0
Janitorial	Cleaning Houses	1	0	0
Sales	Sales	2	0	0
Waitress	Waitress	1	1	1
Technician	Lab Testing	2	1	1
Waitress	Serving, Cleaning	1	0	0
Childcare	Supervision of Children	4	0	0
Height Setter	Sets Heights	3	1	0
Assembler	Assemble Bikes	2	0	0
Childcare	Care Worker	3	0	1
Administrator	Administrative	4	0	0
Supervisor	Purchasing, Sales	5	1	1
Waitress	Serving	1	0	0
Teacher	Instucting Perople	1	1	1
Bookkeeper	Bookkeeping	2	0	0
Machine Operator		2	1	0
Shipping Clerk	Book Distributors	2	1	0
Computer Programmer	Program Related	4	1	1
Office Manager	Managing Office	2	0	0
Supervisor	Production Scheduler	4	0	0
Teacher	Working with Disabled Kids	2	1	1
Assembler	Setup Equipment	1	1	1
Data Entry	Data Entry	4	0	0
Warehouse Worker	Operate Power Ox	1	0	0
Mechanic	Mechanic	3	1	1
Cashier	Cashier	5	1	0
Cook	Cooking	1	1	1
Janitorial	Cleaning and Sweeping	1	1	1
Teacher	Help Kids with Schoolwork	1	0	0
Supervisor	Scheduling Employees	2	1	0
Supervisor	Swine	4	0	1
Housekeeper	Cleaning, Work in Outpatient	1	0	1
Sales	Selling	2	0	0
Sales	Sit & Talk to Customers	1	0	1
Machine Operator	Make Feed	2	0	0
Railroad	Switching	1	1	1
Police	Animal Control	2	1	0
Childcare	Day Care	2	1	0
Computer Analyst	Information Services	6	1	1

Current Job	Description of Job	Formal Education	Formal Job Training	Special O.J.T.
Military	Air Controller	4	1	1
Technician	Service	3	0	1
Bank Teller	Banking Transactions	4	0	0
Mail Carrier	Sort & Deliver	5	1	0
Electrician		2	1	1
Shipping Clerk	Shipping	2	1	1
Secretary	Word Processing	3	0	0
Teacher	Calling Parents on the Phone	1	1	0
Groundskeeper	Tree Trimming	4	1	1
Janitorial	Cleaning	1	0	0
Assembler	Assembling Bombs	1	1	0
Shipping Clerk	Loading Trailers	3	1	1
Clerk	Stock Handling	2	1	1
Accountant	Accounting	4	0	0
Computer Operator	Computer Work	5	1	1
Typist	Type	4	0	0
Sales	Sales	4	1	0
Tattooist	Tattooing	0	0	0
Secretary	Secretarial	2	0	0
Line Person	Mechanic	4	1	0
Childcare	Childcare	2	1	0
Driver	Bus Driver	1	0	0
Accountant	Accounting	2	1	0
Sales	Sales	4	0	0
Electrician	Wiring up Campers	2	0	1
Childcare	Child Care and Cleaning	1	0	0
Police		1	1	0
Dispatcher	Sort Delivery,dispatch Drives	5	0	0
Military	Nation Guard, Wiring Industry	1	1	0
Foreman	Foreman Making Ink	2	0	0
Engineer	Administration	5	1	1
Cashier	Cashier Etc	2	1	0
Teacher		2	0	1
Farmer	Farming	0	0	1
Secretary	Computer, Patient Files	2	0	0
Clerk		2	1	1
Politician	Run the City	0	1	1
Teller		4	0	0
Mechanic		1	1	1
Business Owner	Sells Agricultural Products,	1	0	0
Merchandiser	Check Product Rotation Etc	4	1	1
Truck Driver	Drive Truck	2	0	0
Processor	Process Clothes	3	1	1
Firefighter		1	1	1
Military		4	1	1
Supervisor	Adminstration	4	1	1
Farmer	Cattle Feeding	2	0	0
Supervisor	Supervise, Clean Floors	2	1	0
Carpenter	Carpenter	2	1	0
Childcare	Babysit	1	1	0

Current Job	Description of Job	Formal Education	Formal Job Training	Special O.J.T.
Clerk	Sales and Stocking	2	1	0
Engineer		4	0	0
Social Worker	Child Abuse Prevention Work	4	1	1

**TABLE D-4
MORE DETAILED INFORMATION
FOR THOSE WHO ANSWERED (3) TO Q26-2**

Current Job	Description of Job	Formal Education	Formal Job Training	Special O.J.T.
Cashier		2	0	0
Waitress	Serving Food, Cleaning	0	0	0
Receiving Clerk	Get Ready for Stockers to Stok	2	1	0
Teacher	Help Teachers	1	1	1
Machine Operator	Run Heavy Equip.	1	1	0
Clerk	Retail Sales, Run Office	2	1	1
Farmer	Farming	1	0	0
Cook	Serve Drinks, food	1	0	0
Painter	House Painter	2	1	0
Receiving Clerk		2	1	1
Shipping Clerk	Numerous	4	0	0
Nurse	Saving Lives	2	1	0
Mechanic	Work on Cars	1	1	1
Waitress	Car Hop	1	0	1
Warehouse Worker	Warehouse Work	1	1	1
Lifeguard	Lifeguard	2	0	0
Sales	Sales	2	0	1
Minister	Children's Ministry	2	0	0
Supervisor	Service, scheduling	2	1	0
Sales Clerk	Selling	1	1	0
Assembler	Made Cables for Electrical Com	1	1	0
Purchasing Agent	Manage Office Supervisor	4	1	1
Health Care	Recreation for Nursing Home	4	1	0
Bank Teller	Teller	2	0	1
Travel Agent	Bookings	2	1	0
Cook	Fast Food Preparer	1	0	0
Cook	Food Service	1	0	1
Secretary	Answer Phones (Dr's Office)	2	1	0
Janitorial	Clean	4	0	0
Construction	Scale Operator and Records Clk	2	0	1

TABLE D-5
MORE DETAILED INFORMATION
FOR THOSE WHO ANSWERED (4) TO Q26-2

Current Job	Description of Job	Formal Education	Formal Job Training	Special O.J.T.
Cashier	Sack Groceries	Na	Na	Na
Carpenter	Build Houses	1	0	1
Secretary	Secretarial Work	2	0	0
Sales	Selling Things	2	1	1
Collection Agent	Collection of Account	4	0	1
Sales	Selling Things	2	0	0
Machine Operator	Rig Supervisor	0	0	0
Manager	Shipping Reciecing Etc	0	0	1
Marketing	Buying & Selling	4	0	0
Farmer	Farming	1	1	0
Bookkeeper	Records,charts,office	1	1	0
Painter	Painting	1	0	0
Tutor	Tutoring and Remedial Tutor	4	1	1
Food Preparation		0	0	0
Cook	Cooking	1	0	0
Farmer	Farming	2	0	0
Secretary	Switchboard, Mail, Customer,	2	0	0
Laborer	Fill out Parts, Run Errands	0	0	0
Sales	Sales	2	1	1
Mechanic	Repair	3	0	1
Truck Driver	Driving	2	1	0
Sales	Inventory	2	0	1
Machine Operator	Overseer of Machinery	2	1	1
Carpenter	Sawing	2	0	0
Waitress	Waiter	1	1	1
Delivery	Delivery	4	0	0
Nurse	Nurse	1	1	1
Technician	Running Machines	4	1	1
Inspector	Inspection	0	1	0
Assembler	Assembly Line	1	1	0
Tool Cript	Working with Tools	1	1	1
Maintenance	Building Matenence	2	1	1
Cook	Run Conession Stand for Eagles	1	0	0
Supervisor	Store Manager	1	1	1
Clerk	Check in Hardware	1	1	1
Geneologist	Geneology	1	0	0
Carpenter	Carpenter	1	0	0
Secretary	Office Management	1	1	1
Teacher	Teach K-5	4	1	0
Bank Officer	Loans	4	0	1
Computer Operator	Computer Operater	2	1	1
Meat Packer	Push Meat	1	0	0
Childcare	Babysit	0	0	0
Farmer	Farm	1	0	0
Computer Operator	Computing	2	1	0
Assembler	Construction of Coolers	2	0	0

Current Job	Description of Job	Formal Education	Formal Job Training	Special O.J.T.
Locksmith	Locksmithing	2	1	1
Department Manager	Distributing Parts	2	1	1
Purchasing Agent	Officework, Purchasing	1	0	0
Homemaker	Childcare, Domestic	1	1	0
Manager	Manage Retail Store	2	0	0
Machine Operator	Work with Mackines	1	0	0
Nurse	School Nurse	2	0	1
Sales	Sales	4	1	1
Housekeeper	Domestic Chores	1	0	0
Accountant	Accounting	4	1	1
Childcare	about Everything	1	0	1
Counselor	non Trd Students,testing	5	1	0
Assembler	Assemble Mirrors	1	0	0
Laborer	Make Boxes	1	0	0
Manager	Run Laundry	1	1	1
Ecologist	Review Cases for Pesticide	4	1	1
Cook	Cooked for a Soroity	1	0	1
Dietician	Menu Planning	4	0	1
Cashier	Take Money Clean	2	0	1
Waitress	Waited Tables	0	0	0
Childcare	Supervision	4	1	1
Clerk	Clerk	1	1	1