DEINDUSTRIALIZATION AND THE REORGANIZATION OF OCCUPATIONS: THE REORGANIZATION OF THE LABOR MARKET IN OKLAHOMA BETWEEN 1970 AND 1990

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Abstract

Studies of deindustrialization generally assume that the decline of craft and laborer occupations is principally associated with a relative loss of manufacturing jobs combined with a gain in service and trade jobs. This study tests this assumption in Oklahoma between 1970 and 1990 using a secondary analysis of U.S. Census data for the state as a whole and for Oklahoma City, Tulsa, Muskogee, Ardmore, and McAlester. Deindustrialization was found principally in Tulsa. Oklahoma City and McAlester lost a significant proportion of employment in the government sector. Tulsa, Oklahoma City, and McAlester each lost significantly more employment in craft and laborer occupations and gained more employment in managerial, professional, and technical occupations than can be accounted for by the change in the industrial distribution of employment alone. In most areas included in the study, employment in administrative support occupations decreased more than expected from changes in the distribution of employment by industry alone while sales occupations increased. This additional change in the occupational distribution was associated with the reorganization of occupations within industries. Finally, a doubling of the rate of part-time workers occurred that cannot be accounted for by the proportional change of employment by industry or by occupation within industries.

INTRODUCTION

Deindustrialization has been a well-studied phenomenon in the United States beginning with the closing of factories in the "rust belt" in the midwest and northeast in the 1970s. Its causes have been linked to the natural maturation of the economy (Levy, 1998; Alderson, 1999), downturns in the business cycle (Rowthorn and Wells, 1987; Levy, 1987, 1998; Alderson, 1999); exporting jobs (Bluestone and Harrison, 1982; Harrison and Bluestone, 1988; Yates, 1994), and importing cheap foreign goods (Wood, 1994; Alderson, 1999). Its effects have been linked to personal and family deterioration (Newman, 1998; Wilkie, 1991; Schor, 1991; Cooke, 1998) and to increasing income inequality (Levy, 1987, 1998; Yates, 1994). Much of the labor movement and many leftists have adopted deindustrialization – defined as a loss of blue-collar jobs in manufacturing — as the principal focus for political action. Globalization – an expanded explanation for exporting jobs – tends to be identified as the driving force behind deindustrialization (Schwartz, 2000a, 2000b; Tabb, 2000).

Though many studies of deindustrialization and the political agenda of much of the labor movement assume that the loss of manufacturing jobs tells the story of the loss of blue-collar employment, other studies link the decline of blue-collar employment with how occupations and work are organized within firms. For example, Gordon (1996) found that the decline of blue-collar workers was due to simultaneously overstaffing management while cutting blue-collar employment and wages. Another important development in how occupations have been reorganized is the growth of part-time work in various occupations. For example, Edwards (1979) demonstrated how the labor process has segmented employment into full-time employment and "casual" employment in several industrial sectors. While commentators on the labor movement have noted the need for organizing workers to resist such changes, there is still a strong tendency for labor to define its problems in terms of the loss of manufacturing jobs to other countries or in terms of the growth of the service sector (Moberg, 2000). Both definitions focus on changes in industrial sectors rather than changes in the occupational structure within industrial sectors.

The purpose of this study is to explore how much the loss of blue-collar jobs is associated with the proportional loss of employment in manufacturing and how much the loss of blue-collar jobs is associated with the proportional change in occupations within all industries. Additionally, how much of the increase in part-time employment is associated with propor-

tional changes in employment by industrial sector. how much is it associated with proportional reorganization of occupations within industries. and how much is it an is a factor independent of the proportional changes? These questions were explored using a secondary analysis of U.S. Census data for the state of Oklahoma for 1970 and 1990. Changes in employment by industry and by occupation were explored and compared for the state as a whole, for the two largest urban areas in the state, Oklahoma City and Tulsa, and for three larger towns in the eastern part of the state: McAlester, Ardmore, and Muskogee.

DEINDUSTRIALIZATION AND THE REORGANIZATION OF OCCUPATIONS AND WORK

Deindustrialization is often defined as a decline in the relative proportion of employment in manufacturing as an industrial category. For example, Alderson (1999, p. 702) defined deindustrialization "as the decline of manufacturing employment relative to employment in other sectors." Since manufacturing as an industrial category has an occupational distribution in which craft and laborer occupations are concentrated. one would expect a decline in the proportion of persons employed in laborer and craft occupations as manufacturing declines as a fraction of total employment. Similarly, one would expect a relative increase in the proportion of those employed in service and sales occupations with an increase in the proportion of those employed in the service and trade industrial sectors.   If deindustrialization alone is the cause of the decline of blue-collar jobs. one should be able to predict the changes in the distribution of employment by occupation by changes in the distribution of employment by industrial category alone.

The way in which manufacturing declines could increase the decline in craft and laborer occupations beyond what one would expect from the decline in manufacturing alone. Several mechanism have been identified that would accelerate the loss of blue-collar jobs beyond what one would expect solely from deindustrialization.

According to the international division of labor model (Cohen, 1981: Reich, 1983). the proportion of the labor force in manufacturing could decline by moving manufacturing plants outside the United States while retain-

ing management. engineering. and sales functions within the United States. Here. employment in manufacturing as an industrial sector would decline. but employment in craft and laborer occupations would decline even more rapidly because of the changing mixture of occupations in manufacturing left in the United States. Maume (1987), Lobao (1990), and Brown and Hirschl (1995) found that such divisions of labor can also occur between urban and rural areas.

Levy (1987, 1998) suggested that the decline of an industrial sector in and of itself could both decrease the relative proportion of employment in that sector and rearrange employment by occupation within it. For example, a large number of blue-collar workers permanently lost their jobs with plant closings in the 1970s. Similarly, many administrative support positions were permanently eliminated with the consolidation of the financial sector in the 1980s.

Fundamental changes in how work is organized could also change the distribution of employment by occupation within different industrial sectors and across industrial sectors. Just as the digital revolution automated and deskilled work in manufacturing, Garson (1988) found that the same happened in the office environment. Levy (1998) reported shifts in employment from administrative support to sales occupations as industrial sectors have come under competitive pressure and as administrative support functions have become automated. Office environments are broadly distributed across industrial sectors. Gordon (1996) found that the decline in blue-collar employment and wages was a result of management overstaffing and overpaying itself at the expense of blue-collar employment and wages. Power differences in a hierarchical organization enable managers to exploit workers.

In addition to changing the distribution of occupations within industries, several mechanisms similar to those identified above seem to contribute to an increase in part-time employment. On the demand side of the labor market. Edwards (1979) demonstrated how the labor process has segmented employment into full-time employment and "casual" employment across industrial sectors. Wasmer (1997) found that a slow-down in the growth of labor productivity and higher levels of population

encourage temporary employment. Bluestone and Rose (1998) found that firms have shifted away from dealing with economic growth by hiring more full-time workers as in the 1970s to either employing workers longer hours or employing additional part-time workers in the 1980s and 1990s. On the supply side of the labor market, Yates (1996) found that workers deal with household income maintenance in the face of stagnant wages and a weak labor market by working more part-time jobs

In reviewing these findings, three things stand out. First, these mechanisms are more pervasive than simply those associated with deindustrialization because they affect or potentially affect all industrial sectors rather than simply the manufacturing sector. Second, these mechanisms affect more than traditional blue-collar jobs. For example, employment in administrative support positions was lost while sales positions were added across various industrial sectors. Finally, some of these mechanisms contribute to the growth of part-time employment.

To investigate these trends in Oklahoma, employment in nonagricultural industrial sectors was analyzed to test whether deindustrialization as a proportional loss of manufacturing occurred between 1970 and 1990. Alderson (1999) found that manufacturing composed twenty-five percent of nonagricultural employment in developed nations in 1970 but only twenty percent in 1990. Was the level of manufacturing in Oklahoma in 1970 and 1990 similar to the average developed country? This was explored for Oklahoma City. Tulsa, McAlester, Ardmore, and Muskogee as well as for the state as a whole.

To explore whether changes in employment by occupational category were principally associated with changes in employment by industry or by changes of employment by occupation within industries, three distributions of employment by occupation were generated and compared for each of the areas in the study. First, a percent distribution of employment by occupation was calculated for 1970. Next, a percent distribution of employment by occupation was calculated using the distribution of employment by industry for 1990 and the 1970 occupational distribution of employment for each industry. This provides a picture of the occupational distribution of employment expected in 1990 if changes in the occupational

distribution were due to changes in the industrial distribution alone. Finally, a percent distribution of employment by occupation was calculated for 1990. By comparing the distribution that is expected from changes in the industrial distribution alone with the distribution that actually occurred because of changes in both the industrial distribution and the occupational distribution within each industry, one can estimate the relative importance of deindustrialization compared to the reorganization of occupations within industries on the loss of blue collar and administrative support occupations.

Finally, to explore whether part-time employment has increased by occupation, the percent of employed persons from 16 through 64 years of age that were normally employed less than 35 hours per week in each occupation in 1970 and 1990 for the state as a whole was calculated. The separate effects of changes in the distribution of employment by industry, by occupation within industries, and by the proportion of persons employed less that 35 hours per week in each occupation within each industry on the overall distribution of persons employed less than 35 hours per week by occupation were explored. Because of problems with the comparability of smaller areas between the 1970 and 1990 Public Use Microdata Samples (U.S. Bureau of the Census, 1973c, 1992c) and because of limitations with the 1970 state-wide sample used by this researcher, only a statewide comparison of part-time employment by industry by occupation was made.

METHODS AND DATA

From the technical documentation included in the U. S. Census Public Use Microdata Samples from 1970 and 1990 (U.S. Bureau of the Census, 1973c, 1992c), certain issues of the comparability of data between the 1970 and 1990 U.S. Census for the purpose of this study are apparent. First, the definition of the Oklahoma City and Tulsa Metropolitan Statistical Areas changed between 1970 and 1990. The 1970 definition was used to define Oklahoma City as Oklahoma, Canadian, and Cleveland counties and Tulsa as Tulsa, Osage, and Creek counties. Second, there were some inconsistencies in the definition of occupations in nonagricultural industrial sectors. Some managerial, professional, and technical occu-

pations classified under one of these catego-
ries in 1970 were classified in another in 1990.
Also, some specific occupations were added.
If one aggregates all of the occupations under
one general category — managerial, profes-
sional, and technical occupations — the com-
parability between time periods is significantly
improved. In 1990, some workers in nonagri-
cultural industrial sectors were classified in
agricultural occupations. None were so clas-
sified in 1970. The workers so classified in
1990 appear to be principally laborers. One
could have classified some of them as craft
workers. Since most agricultural occupations
in nonagricultural industries seemed to be la-
borers, they were classified as such. This prob-
ably slightly overstates the proportion of work-
ers that are laborers and understates the pro-
portion of workers that are craft workers in
1990.

To test whether a proportional loss of manu-
facturing occurred between 1970 and 1990,
the tables, "Occupation of Employed Persons
by Industry Group and Sex: 1970" and "In-
dustry of Employed Persons and Occupation
of Experienced Unemployed Persons for
Places of 10,000 to 50,000: 1970," from the
1970 U.S. Census (1973a) and the tables, "In-
dustry of Employed Persons: 1990," from the
1990 U.S. Census (1992a) were used to cal-
culate a percent distribution of employed per-
sons 16 years and over by nonagricultural in-
dustrial categories for the state as a whole,
Oklahoma City, Tulsa, and the towns of
McAlester, Ardmore, and Muskogee for 1970
and 1990. These distributions and results are
reported in Table 1.

To explore whether changes in employment
by occupational categories were principally
associated with changes in employment by
industry or by changes of employment by oc-
cupation within industrial categories, three dis-
tributions of employment by occupation were
generated and compared for each of the areas
in the study. First, a percent distribution of
employment by occupation was calculated for
1970 using "Occupation of Employed Persons
by Industry Group and Sex: 1970" and "Oc-
cupation and Earnings for Places of 10,000 to
50,000: 1970" from the 1970 U.S. Census
(1973a) for all of the areas in the study. Us-
ing the above data sources, a percent distribu-
tion of employment by occupation was calcu-
lated using the industrial distribution of em-

ployment for 1990 and the 1970 occupational
distribution of employment within each indus-
try for the state as a whole, Oklahoma City,
Tulsa, and the part of the state excluding Okla-
homa City and Tulsa. Since census data for
McAlester, Ardmore, and Muskogee do not
include a cross classification of occupation by
industry for 1970, the occupation by industry
distribution for the part of the state excluding
Oklahoma City and Tulsa adjusted by the over-
all occupational distribution for the three towns
in 1970 was used for this procedure for the
three towns. This provides a picture of the
occupational distribution of employment that
one would expect in 1990 if changes in the
occupational distribution were due to changes
in the industrial distribution alone. Finally, a
percent distribution of employment by occu-
pation was calculated for 1990 for all defined
areas in the study using the table, "Occupa-
tion of Employed Persons: 1990" (1992a).
These distributions are reported in Table 2.

To explore the relative contribution of
changes in employment by industry, by occu-
pation within industries, and by the use of part-
time workers within occupations within indus-
tries to changes in part-time employment by
occupation across industries, the U. S. Census
Public Use Microdata Samples (PUMS) from
1970 (1973b) and 1990 (1992b) were used to
estimate the percent of employed persons 16
through 64 years of age that were normally
employed less than 35 hours per week in each
occupation in 1970 and 1990 for the state as a
whole. Following the suggestions in the tech-
nical documentation (U.S. Bureau of the
Census, 1973c), the 1970 estimate was created
by combining the 1/100 sample from the 5%
sample and the 1/100 sample from the 15%
sample of the PUMS to created a 2% sample.
The 1990 estimate was created from the 5%
sample PUMS. Because of problems with
comparability of smaller areas between the
1970 and 1990 Public Use Microdata Samples,
only a statewide comparison of part-time em-
ployment by industry by occupation was made.
Two additional distributions were created.
First, the percent of part-time workers for each
occupation that would be expected from the
1990 industrial distribution, the 1970 occupa-
tional distribution by industry, and the 1970
distribution of part-time workers in each oc-
cupation in each industry was calculated to
estimate the effect of the change in the indus-

trial distribution alone on part-time employment. Second, the percent of part-time workers for each occupation that would be expected from the 1990 industrial distribution, the 1990 occupational distribution by industry, and the 1970 distribution of part-time workers in each occupation in each industry was calculated to estimate the effect of the changes in the industrial distribution and in the occupational distribution within each industry on part-time employment. The results are reported in Table 3.

FINDINGS

Statewide employment in manufacturing in Oklahoma hardly meets the standards of a developed nation. Instead of having twenty-five percent of nonagricultural employment in manufacturing as did most developed nations in 1970 (Alderson, 1999), Oklahoma's employment in manufacturing was only seventeen percent. While Alderson (1999) found that employment in manufacturing in developed nations dropped to twenty percent by 1990, Oklahoma's employment in manufacturing dropped only to fifteen percent. While Oklahoma was not as industrialized as the average developed nation in 1970, it also did not experience the level of deindustrialization between 1970 and 1990.

Tulsa most resembled a developed nation with respect to deindustrialization. Nonagricultural employment in manufacturing in Tulsa dropped from twenty-one percent in 1970 to sixteen percent in 1990. As with the state as a whole, Oklahoma City, Ardmore, and McAlester had lower initial levels of employment in manufacturing and small changes in levels between 1970 and 1990. Against the trend of deindustrialization, Muskogee gained employment in manufacturing from sixteen percent in 1970 to eighteen percent in 1990. Employment in manufacturing in Muskogee in 1990 was almost at the level of the average developed nation reported by Alderson (1999).

Some locations had higher proportions of employment in certain industries than average for the state in 1970 and lost significant proportions of employment in those industries between 1970 and 1990. Employment in government in Oklahoma City — the state capitol — dropped from fourteen percent of nonagricultural employment in 1970 to nine percent 1990. In McAlester, employment in government dropped from twenty-four percent to thir-

teen percent between 1970 and 1990. Two towns experienced a greater gain or loss in employment in trade than the state average. Between 1970 and 1990, McAlester gained five percentage points of nonagricultural employment in trade while Muskogee lost four percentage points.

Consistent with the deindustrialization model, employment in the service sector increased between 1970 and 1990 from five to seven percentage points for all areas in the study except Ardmore. No industrial category of nonagricultural employment in Ardmore gained or lost more than two percentage points between 1970 and 1990.

While it is evident from the above examination of Table 1 that changes in nonagricultural employment by industry have occurred, the distributions in Table 2 indicate that these changes have played a minor role in changes in the occupational distribution. If one compares the actual occupational distribution for 1970 with that expected in 1990 based on the occupational distribution by industry in 1970 and the industrial distribution in 1990 and with the actual occupational distribution for 1990, 38 percent of the redistribution of employment by occupation between 1970 and 1990 appears to be attributable to changes in the distribution of employment by industry alone for the state as a whole, 33 percent for Oklahoma City, 23 percent for Tulsa, 29 percent for Muskogee and for Ardmore, and 43 percent for McAlester. Most of the change in the overall distribution of occupations appears to be rooted in changes in how occupations are organized within industries rather than in changes in the distribution of employment by industry alone, i.e., deindustrialization.

An examination of each occupation in Table 2 reveals that more than blue-collar occupations were affected by the reorganization of occupations within industries. Consistent with Levy's (1998) findings, the proportion of those employed in administrative support occupations decreased between 1970 and 1990 more than one would expect from changes in the industrial distribution alone as the proportion of those employed in sales occupations increased more than expected. This was the most uniform change in the distribution of occupations across all towns and cities as well as the state as a whole with the exception of McAlester. In McAlester, the proportion em-

TABLE 1
PERCENT DISTRIBUTION OF NONAGRICULTURAL
EMPLOYMENT IN OKLAHOMA BY INDUSTRY

Industry	Statewide		Oklahoma City		Tulsa	
	1970	1990	1970	1990	1970	1990
Mining	4	3	2	2	5	3
Construction	7	6	6	5	6	5
Manufacturing	17	15	14	12	21	16
TCPU *	7	8	7	7	9	10
Trade	23	22	22	23	23	23
FIRE **	5	6	6	7	6	7
Services	29	34	29	35	26	33
Government	8	6	14	9	4	3

Industry	McAlester		Ardmore		Muskogee	
	1970	1990	1970	1990	1970	1990
Mining	1	3	4	4	0	0
Construction	6	4	7	5	7	5
Manufacturing	15	13	14	13	16	18
TCPU *	8	5	6	6	8	6
Trade	15	23	25	26	28	24
FIRE **	3	5	5	7	5	6
Services	28	34	33	35	30	35
Government	24	13	6	4	6	6

*   Transportation, Communications, and Public Utilities
** Finance, Insurance, and Real Estate

ployed in both sales and administrative support occupations increased more than expected from the change in the distribution of employment by industry alone.

Changes in the organization of occupations within industries decreased the proportion employed in service and craft occupations by 1990 somewhat more than one would expect from changes in the proportion of the workforce employed by industry alone. While one would expect small gains in the proportion of those employed in service occupations because of changes in employment by industry alone, the gains exactly equaled what one would expect for the state as a whole and were slightly less than expected for all of the towns and cities in the study. While one would expect small losses in the proportion of those employed in craft occupations because of changes in employment by industry, the loses

were somewhat larger than expected for the state as a whole as well as for all of the towns and cities in the study.

Changes in the proportion of employment in managerial, professional specialty, and technical occupations and in laborer occupations represent an interesting case. For the state as a whole and for the towns of Muskogee and Ardmore, almost all of the small decline in the proportion of those employed in laborer occupations and small increase in the proportion of those employed in managerial, professional specialty, and technical occupations can be accounted for by changes in the distribution of employment by industry alone. But, for Tulsa, McAlester, and, to a lesser extent, Oklahoma City, employment in managerial, professional specialty, and technical occupations increased and employment in laborer occupations decreased significantly more than ex-

pected because of changes in the industrial distribution alone.

One might be able to argue that Tulsa represents a case consistent with the international division of labor theory of deindustrialization. However, since Tulsa experienced a significant loss in the proportion of those employed in manufacturing while McAlester and Oklahoma City experienced a significant loss of those employed in government, something other than the mechanisms associated with deindustrialization must affect the reorganization of occupations. The one factor affecting Oklahoma City and McAlester with respect to government and Tulsa with respect to manufacturing was a significant decline in the proportion of those employed in those industrial

TABLE 2
PERCENT DISTRIBUTION OF NONAGRICULTURAL
EMPLOYMENT IN OKLAHOMA BY OCCUPATION

Actual Distribution in 1970

Occupation	Statewide	Oklahoma City	Tulsa	McAlester	Ardmore	Muskogee
Manager et al. *	25	27	26	23	27	25
Sales	7	8	9	7	9	9
Admin. Supp. **	18	21	20	18	16	17
Services	15	13	12	16	18	17
Crafts	15	14	15	16	12	16
Laborers	20	17	18	20	18	19

Expected in 1990 Based on Occupational Distribution by
Industry in 1970 and Industrial Distribution in 1990

Occupation	Statewide	Oklahoma City	Tulsa	McAlester	Ardmore	Muskogee
Manager et al. *	26	28	26	25	28	26
Sales	8	9	9	10	9	9
Admin. Supp. **	18	21	19	16	17	17
Services	16	15	14	17	18	18
Crafts	14	12	13	14	11	12
Laborers	18	15	19	18	17	18

Actual Distribution in 1990

Occupation	Statewide	Oklahoma City	Tulsa	McAlester	Ardmore	Muskogee
Manager et al. *	27	32	32	29	28	26
Sales	12	13	13	11	14	14
Admin. Supp. **	16	18	17	18	15	15
Services	16	14	13	18	16	17
Crafts	12	10	12	12	10	10
Laborers	17	13	13	12	17	18

* Managerial, Professional Specialty, and Technical Occupations
** Administrative Support Occupations

sectors. As Levy (1998) suggested. the downsizing of an industrial sector in and of itself may well affect the loss of laborers in an industry.

From Table 3 it appears that part-time employment for all workers in the state of Oklahoma has more than doubled between 1970 and 1990. Proportionally. craft occupations have been affected least by this trend followed by laborer occupations and managerial, professional specialty, and technical occupations. Sales, services, and administrative support occupations have been affected most by this trend. All occupations seem to have been affected by the introduction of "casual" labor (Edwards, 1979).

If one compares the first and second columns in Table 3, the distributions are the same. Thus, the change in the industrial distribution of employment alone between 1970 and 1990 does not seem to increase part-time employment overall for any occupation. If one compares the first two columns with the third column, the distributions are almost the same. The only difference occurs with a one-percent decrease of part-time workers for service occupations. Thus, the change in the industrial distribution of employment combined with the change in the distribution of occupations within industries between 1970 and 1990 does not seem to increase part-time employment overall for any occupation. The increase in part-time work within each occupation appears to be a third, independent way in which the labor market changed between 1970 and 1990.

CONCLUSION

This study explores to what degree the decline in blue-collar jobs in Oklahoma between 1970 and 1990 was related to deindustrialization and to what degree it was related to the reorganization of occupations. Deindustrialization was found principally in Tulsa. Oklahoma City and McAlester lost a significant proportion of employment in the government sector. Tulsa, Oklahoma City, and McAlester each lost significantly more employment in craft and laborer occupations than can be accounted for by changes in the industrial distribution of employment. The abnormally large loss of employment in craft and laborer occupations and gain of employment in managerial, professional, and technical oc-

cupations was associated with the reorganization of occupations within industries. The most consistent shift in employment from place to place was the shift from employment in administrative service to sales occupations. This change is almost completely attributable to occupational changes within industries.

A doubling of the rate of part-time workers occurred that cannot be accounted for by the proportional change of employment by industry or by occupation within industries. The increase in part-time jobs was least pronounced in craft, laborer, and managerial, professional, and technical occupations and most pronounced in sales, service, and administrative support occupations. On average, the part-time worker in each occupation earned about one-third what the full-time worker earned. This makes the increase in part-time work across occupations the most problematic change in the labor market explored in this study for income inequality.

The use of the decennial census of population and housing does not easily allow one to test the relative contribution of the various factors that have been identified in other studies as contributing to deindustrialization or to the reorganization of occupations within or across industries. But, this study demonstrates that one can use the decennial census of population and housing to asses the relative importance of industry based changes and occupational based changes within industries on the overall distribution of occupations and on part-time employment in a geographical area. The findings of this study suggest that the labor movement should focus more on factors affecting the organization of existing industries. While deindustrialization has contributed to the loss of good paying blue-collar jobs, factors that have been working on the occupational distribution of existing industries seem to contribute as much or more to the loss of those jobs.

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TABLE 3

PERCENT OF EMPLOYEES 16 THROUGH 64 YEARS OF AGE IN OKLAHOMA
TYPICALLY EMPLOYED LESS THAN 35 HOURS PER WEEK IN EACH OCCUPATION

Occupation	1970	Expected from '90 industrial, '70 occupational, '70 part-time	Expected from '90 industrial, '90 occupational, '70 part-time	1990
Manager et al. *	9	9	9	18
Sales	16	16	16	37
Admin. Supp. **	13	13	13	28
Services	20	20	19	48
Crafts	10	10	10	16
Laborers	13	13	13	23
All Employees	13	13	13	27

*   Managerial, Professional Specialty, and Technical Occupations
** Administrative Support Occupations

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