

**Table 2. Change in employment at secondary jobs by industry, May 1980–85**

[In thousands]

Industry of secondary job	May 1980	May 1985	Change
Total nonagricultural wage and salary workers	3,001	3,825	824
Mining .....	14	11	-3
Construction .....	115	68	-47
Manufacturing .....	203	290	87
Transportation and public utilities .....	162	213	51
Wholesale and retail trade .....	806	745	-61
Finance, insurance, and real estate .....	213	529	316
Services, except private households .....	1,255	1,721	466
Public administration .....	234	248	14

NOTE: Data for 1980 have been adjusted to reflect the 1980 census population adjustments introduced in January 1982.

820,000 over the May 1980–May 1985 period.<sup>5</sup>

There is no direct way to ascertain exactly how much of the growth in moonlighting occurred between the end of 1982, when the economic recovery began, and May 1985. Some indirect evidence, however, suggests that the 1980–85 growth in multiple jobholding is likely to have occurred during the recovery and that it contributed significantly to the greater employment growth shown by the payroll survey during this period.<sup>6</sup>

First, an examination of the number of multiple jobholders over the course of business cycles since 1959 indicates little or no growth during recessions and typically large increases during recovery periods. If this pattern repeated itself in the 1980's, as is quite likely, there would have been little or no growth in moonlighting from 1980 to the end of 1982, when the U.S. economy went through two recessions. The growth would have occurred from 1983 to 1985, during the economic recovery.

Secondly, additional insight is gained by examining the 1980–85 growth in the number of multiple jobholders by industry. The observed growth was heavily concentrated among those workers whose second jobs were in the finance, insurance, and real estate and services industries. These industries had some of the highest rates of overall employment growth during the recovery. (See table 2.)

Based on this evidence, it can be concluded with some confidence that the 1980–85 growth in multiple jobholding occurred largely during the period of economic recovery, which began in late 1982. Put another way, these data suggest that there is only a limited inconsistency in the finding that the number of jobs has increased by 12 million, while the number of employed persons increased by about 11 million. □

—FOOTNOTES—

<sup>1</sup> This figure has not been adjusted to reflect the introduction of population adjustments introduced into the household survey in January 1986. If an explicit account of these adjustments is taken, then the growth in em-

ployment would probably be reduced by about 200,000, to 11.1 million. The population adjustments are described as "Changes in the Estimation Procedure in the Current Population Survey Beginning in January 1986," *Employment and Earnings*, February 1986, pp. 7–10.

<sup>2</sup> The growth in the household survey employment series would be reduced to around 10.5 million after making the adjustment described in footnote 1.

<sup>3</sup> For an analysis of the May 1985 data on multiple jobholders, see John F. Stinson, Jr., "Moonlighting by women jumped to record highs," *Monthly Labor Review*, November 1986, pp. 22–25.

<sup>4</sup> After adjustment of the May 1980 data to 1980 census population controls.

<sup>5</sup> Persons who worked on second jobs in agriculture or as nonagricultural self-employed workers would not be counted at those jobs in the payroll survey and so are not of interest here.

<sup>6</sup> Between November 1982 and May 1985, when the bulk of the 820,000 1980–85 growth in moonlighters most likely occurred, employment as measured by the payroll survey increased by about 900,000 more than in the household survey. Since May 1985, the employment gap has increased to about 1.6 million, but presumably the multiple jobholding total has also increased and can account for some of the widening in the gap between the two series.

## Employment and wage changes of families from CE Survey data

MARY F. KOKOSKI

Recent data indicate an increase in real per capita income and a decrease in the average weekly hours worked by nonsupervisory employees.<sup>1</sup> These trends would seem to imply an increase in household welfare, gross of taxes. However, labor force participation of wives has increased, implying a corresponding increase in average weekly hours worked per household.

A recent study of these issues compared market employment and wage and price changes experienced by households in the 1972 and 1980 Consumer Expenditure Interview Surveys.<sup>2</sup> Renter households, comprising a husband, wife, and children, if any, were grouped by race (white, nonwhite) and household type (by age of children). The study was limited to renter households because of problems in constructing commodity price indexes at the disaggregate (household) level. Specifically, data on owner estimates of the rental value of their residences are lacking for the 1980 sample.<sup>3</sup> The Consumer Expenditure (CE) Survey provided data on market employment status, occupation, and earned income of each household member. Current Population Survey data on median weekly earnings of full-time workers by occupation were used to construct an index of wage changes from 1972 to 1980.

Table 1 shows the market employment rates of the households in each demographic group.<sup>4</sup> Data are shown sepa-

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**Table 1. Market employment rates of renter families from 1972 and 1980 Consumer Expenditure Surveys**

Type of household	1972			1980		
	Not working	Working part time <sup>1</sup>	Working full time <sup>2</sup>	Not working	Working part time <sup>1</sup>	Working full time <sup>2</sup>
Husbands in white families with—						
No children present . . . . .	0.31	0.09	0.60	0.36	0.09	0.55
Oldest child:						
Under age 6 . . . . .	.04	.02	.94	.05	.04	.91
Age 6 to 17 . . . . .	.05	.02	.93	.06	.06	.89
Over age 17 . . . . .	.18	.04	.78	.36	.02	.62
Husbands in nonwhite families with—						
No children present . . . . .	.31	.09	.60	.36	.08	.56
Oldest child:						
Under age 6 . . . . .	.06	.04	.90	.05	.08	.87
Age 6 to 17 . . . . .	.07	.05	.88	.13	.05	.82
Over age 17 . . . . .	.23	.02	.75	.38	.08	.54
Wives in white families with—						
No children present . . . . .	.55	.11	.34	.52	.12	.36
Oldest child:						
Under age 6 . . . . .	.58	.14	.28	.35	.24	.41
Age 6 to 17 . . . . .	.59	.17	.24	.38	.21	.41
Over age 17 . . . . .	.70	.11	.19	.75	.06	.19
Wives in nonwhite families with—						
No children present . . . . .	.43	.17	.40	.41	.11	.48
Oldest child:						
Under age 6 . . . . .	.37	.10	.53	.25	.19	.56
Age 6 to 17 . . . . .	.45	.15	.40	.30	.17	.53
Over age 17 . . . . .	.59	.12	.29	.51	.05	.44

<sup>1</sup> Fewer than 35 hours per week.  
<sup>2</sup> 35 hours or more per week.

NOTE: Market employment rates do not correspond to the official BLS statistical series on labor force participation. Data are for proportion of total households in the given demographic group and sample year.

rately for husbands and wives in each of three employment status classifications (not working, working part time, working full time), and by household type. For both whites and nonwhites, the greatest proportion of husbands who worked full time were in “young” families (oldest child under age 6) and “middle” families (oldest child aged 6 to 17) in both the 1972 and 1980 samples. The proportion of husbands who worked part time was less than that of wives who worked part time. In general, larger proportions of working wives (both full- and part-time) appeared in the young and middle family groups. The largest proportions of nonworking wives were in the “older” family groups (oldest child over age 17) in both 1972 and 1980. Compared with the 1972 sample, more wives were working in 1980 in all family categories, except older white families. Interestingly, the greatest increases in the proportion of working wives were in the young and middle family types of both racial groups, that is, those families with greater household responsibilities.

The rudimentary indexes of occupational wage changes between 1972 and 1980 are shown below:

Occupational group	Index (1972 = 100)
Professional and technical workers . . . . .	174.5
Managers and administrators . . . . .	173.4
Salesworkers . . . . .	175.5
Clerical workers . . . . .	173.6
Craft and kindred workers . . . . .	188.4
Operatives, except transport . . . . .	189.9
Transport operatives . . . . .	184.9
Nonfarm laborers . . . . .	179.5
Private household workers . . . . .	170.2
Other service workers . . . . .	170.2
Farm workers . . . . .	205.0

Wages and salaries increased most quickly for farm workers, operatives, craftworkers, transport operatives, and nonfarm workers. The lowest rates of change occurred for private household and other service workers.<sup>5</sup> Grouping these occupational categories by their relative indexes of wage change provides the following categorization.

**Table 2. Occupational distribution of renter families from the 1972 and 1980 Consumer Expenditure Surveys**

[In percent]

Type of household	White collar <sup>1</sup>		Blue collar <sup>2</sup>		Service <sup>3</sup>		Farm <sup>4</sup>	
	1972	1980	1972	1980	1972	1980	1972	1980
Husbands in white families with—								
No children present . . . . .	45.3	48.3	43.0	42.4	9.2	8.9	2.5	0.4
Oldest child:								
Under age 6 . . . . .	35.7	32.5	55.1	59.2	6.1	7.8	3.2	.6
Age 6 to 17 . . . . .	31.6	32.7	57.3	60.8	5.2	5.8	5.9	.7
Over age 17 . . . . .	35.5	22.5	51.3	67.4	9.2	10.2	4.0	.0
Husbands in nonwhite families with—								
No children present . . . . .	19.6	33.3	72.6	51.4	7.8	9.7	.0	5.6
Oldest child:								
Under age 6 . . . . .	28.6	35.3	59.2	58.8	12.2	5.9	.0	.0
Age 6 to 17 . . . . .	23.9	35.4	56.7	59.8	10.5	4.9	9.0	.0
Over age 17 . . . . .	11.1	10.5	72.2	79.0	16.7	5.3	.0	5.3
Wives in white families with—								
No children present . . . . .	74.5	70.2	10.4	15.5	14.3	14.4	.8	.0
Oldest child:								
Under age 6 . . . . .	64.8	58.9	16.6	21.0	18.6	20.1	.0	.0
Age 6 to 17 . . . . .	44.4	42.4	26.6	31.8	27.4	25.4	1.6	.5
Over age 17 . . . . .	41.5	33.3	22.0	41.7	36.6	25.0	.0	.0
Wives in nonwhite families with—								
No children present . . . . .	53.7	56.1	12.2	17.5	31.7	19.3	2.4	7.0
Oldest child:								
Under age 6 . . . . .	58.3	49.2	19.4	33.9	22.2	16.9	.0	.0
Age 6 to 17 . . . . .	30.8	42.2	23.1	21.9	33.3	35.9	12.8	.0
Over age 17 . . . . .	37.5	9.1	12.5	36.4	37.5	54.6	12.5	.0

<sup>1</sup> White-collar occupations include professional, technical, sales, and clerical workers, and managers and administrators. These occupations had average wage increases over the period.  
<sup>2</sup> Blue-collar occupations include craft and kindred workers, operatives, and nonfarm laborers. These occupations had above-average wage increases over the period.  
<sup>3</sup> Service occupations include private household and other service workers. These occupations had low wage increases over the period.  
<sup>4</sup> This occupation had high wage increases over the period.

NOTE: Because of rounding, sums of totals may not equal 100. Data are for proportion of total households in the given demographic group and sample year.

Wage increase	Occupational group	Occupations
High .....	Farm workers	Farm workers
Above average ..	Blue collar	Craft and kindred workers, operatives, and non-farm laborers
Average .....	White collar	Professional, technical, sales, and clerical workers, and managers and administrators
Low .....	Service	Private household and other service workers

In table 2, the working husbands and wives in the 1972 and 1980 sample households are disaggregated into these broader occupational categories. Most of the working husbands were employed in blue-collar occupations with above-average wage increases, while the wives tended to work in white-collar (average wage increases) and service (low increases) occupations. However, in many of the household categories, more wives were working in the blue-collar group in the 1980 sample than in the 1972 sample.

Because the Consumer Expenditure Survey is now conducted on a continuing basis, further research on family welfare is planned and will focus on the effects of changes in the family's market labor, earned income, expenditures, and prices. □

—FOOTNOTES—

<sup>1</sup> See, for example, Paul Ryscavage, "Reconciling divergent trends in real income," *Monthly Labor Review*, July 1986, pp. 24–28. Historical data on average weekly hours are contained in *Employment and Earnings*, a monthly publication of the Bureau of Labor Statistics.

<sup>2</sup> See Mary F. Kokoski, "Indices of household welfare and the value of leisure time," *The Review of Economics and Statistics*, forthcoming. For

more information on the Consumer Expenditure Interview Survey, see *The Consumer Expenditure Survey, 1980–81*, Bulletin 2225 (Bureau of Labor Statistics, 1985); and Michael Carlson, "The 1972–73 Consumer Expenditure Survey," *Monthly Labor Review*, December 1974, pp. 16–23.

<sup>3</sup> These reported estimates are used to calculate the expenditure weight for the consumption of housing services under the rental equivalence approach in the Consumer Price Index. The sample also includes only households in which neither husband nor wife was retired or over age 60.

<sup>4</sup> This measure of labor force participation does not correspond to the official BLS statistical series on labor force participation, which is produced from different data by other procedures.

<sup>5</sup> These indexes of wage change cannot be used to compare welfare across occupational groups because the base levels of wage and salary payments differ across these groups.

## Occupational wages in textile manufacturing, June 1985

The top wage earners in the Nation's textile mills were loom fixers and maintenance electricians, according to a June 1985 occupational wage survey. The survey, conducted by the Bureau of Labor Statistics, covered 210,735 production and related workers—nearly 200,000 in cotton and manmade fiber mills and 11,000 in wool yarn and broadwoven fabric mills. Wage data—averages and earnings distributions—were developed separately for more than three dozen occupational classifications in each industry, as well as for nonsupervisory production and related workers as a group. Pay levels varied by location, union status, type of mill, and type of fiber processed. (See table 1.)

In cotton and manmade fiber mills, pay averages in the occupations studied ranged from \$8.46 an hour for electricians and \$8.27 for loom fixers to \$5.12 for janitors.<sup>1</sup> Yarn winders and ring-frame spinners, numerically the largest

**Table 1. Number and average hourly earnings<sup>1</sup> of production workers in yarn and broadwoven textile mills by selected characteristics, United States and Southeast region, June 1985**

Characteristic	United States <sup>2</sup>				Southeast <sup>3</sup>			
	Cotton and manmade mills		Wool yarn and broadwoven mills		Cotton and manmade mills		Wool yarn and broadwoven mills	
	Workers	Earnings	Workers	Earnings	Workers	Earnings	Workers	Earnings
All production workers .....	199,719	\$6.35	11,016	\$6.37	183,760	\$6.34	5,120	\$6.57
Type of area:								
Metropolitan areas <sup>4</sup> .....	81,838	6.34	4,777	6.30	67,812	6.31	578	5.96
Nonmetropolitan areas .....	117,881	6.36	6,239	6.42	115,948	6.37	4,542	6.65
Type of mill:								
Yarn or thread mills .....	83,279	6.00	1,439	5.60	77,876	6.01	652	6.00
Weaving mills .....	17,704	6.55	1,585	6.59	15,551	6.55	1,031	7.09
Integrated mills .....	98,736	6.61	7,992	6.46	90,333	6.59	—	—
Labor-management contract coverage:								
Establishments with—								
Majority of workers covered .....	24,776	6.73	2,128	6.93	20,633	6.70	—	—
None or minority of workers covered .....	174,943	6.30	8,888	6.24	163,127	6.30	4,692	6.48

<sup>1</sup> Wage data are straight-time hourly earnings which exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Cost-of-living pay increases (but not bonuses) were included as part of the workers' regular pay. Excluded were performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses.

<sup>2</sup> Includes data in addition to those shown for Southeast.

<sup>3</sup> The Southeast region includes Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

<sup>4</sup> Metropolitan Statistical Areas as defined by the U.S. Office of Management and Budget through June 1983.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria.

occupations, averaged \$5.89 and \$5.92 an hour, respectively. Weavers operating shuttleless looms averaged \$7.50 an hour, compared with \$7.32 for weavers on conventional looms. (See table 2.)

Earnings data for the occupations studied separately in wool textile mills are presented for three major categories—woolen, worsted, and the combination of woolen and worsted occupations. Among the woolen occupations, average hourly earnings were highest for loom fixers (\$7.96) and lowest for yarn winders (\$5.81); the worsted jobs registered averages from \$8.53 for loom fixers to \$5.54 for cloth menders. For the combination jobs, the range was from more than \$8 an hour for shuttleless loom fixers, carpenters, electricians, and maintenance machinists to \$5.55 for janitors.

Textile worker pay and employment moved in opposite directions between August 1980, when a similar survey was conducted, and June 1985.<sup>2</sup> Pay levels were up 25 percent in cotton and manmade fiber mills and 30 percent in woolen mills. During this period, the wage and salary component of the Bureau's Employment Cost Index for all nondurable manufacturing rose 29 percent.

Employment, however, declined sharply over the period—down 21 percent in the cotton-manmade fiber sector and 23 percent in woolen mills. Among the regions studied separately, employment losses in cotton-manmade fiber mills reached 40 percent in the Southwest, 21 percent in the Middle Atlantic and Southeast, and 11 percent in New England. In woolen mills, employment dropped 23 percent in New England and 12 percent in the Southeast. At the time

**Table 2. Average straight-time hourly earnings<sup>1</sup> of workers in selected occupations, by type of mill, yarn and broadwoven textile mills, United States and Southeast region, June 1985**

Department and occupation	United States <sup>2</sup>			Southeast <sup>3</sup>	
	Cotton and manmade fiber mills	Wool yarn and broadwoven mills		Cotton and manmade fiber mills	Wool yarn and broadwoven mills—worsted occupations
		Woolen occupations	Worsted occupations		
<b>Carding and drawing</b>					
Card grinders .....	\$7.23	\$6.60	—	\$7.25	—
Card tenders (finishers) .....	5.78	6.04	\$6.45	5.78	—
Drawing-frame tenders .....	6.07	—	—	6.07	—
Opener tenders .....	5.53	—	—	5.51	—
Slubber tenders .....	6.49	—	6.00	6.49	\$6.50
Texturing-machine operators .....	6.32	—	—	6.35	—
<b>Spinning</b>					
Doffers, spinning frame .....	6.45	6.05	5.55	6.45	6.71
Section fixers .....	7.37	7.21	7.21	7.39	7.17
Spinners, frame .....	45.92	6.49	5.82	45.92	6.12
<b>Spooling, winding, and twisting</b>					
Twister tenders, ring frame .....	5.95	5.94	5.62	6.00	6.01
Uptwisters (manmade fibers) .....	5.54	—	—	5.54	—
Winders, yarn .....	5.89	5.81	5.61	5.90	5.98
<b>Slashing and warping</b>					
Slasher tenders .....	6.44	—	—	6.44	—
Warper tenders .....	6.32	6.60	7.04	6.26	6.81
<b>Weaving</b>					
Battery hands .....	5.59	56.94	(5)	5.56	—
Doffers, cloth .....	5.71	—	5.69	5.70	5.69
Loom fixers .....	8.27	7.96	8.53	8.27	8.75
Tying-in machine operators .....	7.01	6.52	6.91	6.97	6.94
Weavers, shuttle looms .....	7.32	6.42	7.76	7.29	—
Weavers, shuttleless looms .....	7.50	7.19	7.06	7.49	7.00
<b>Clothroom</b>					
Inspectors, cloth .....	5.79	6.42	6.00	5.76	6.49
Menders, cloth .....	6.07	6.18	5.54	5.56	5.98
<b>Maintenance and miscellaneous</b>					
Electricians .....	8.46	58.19	(5)	8.45	58.63
General maintenance workers .....	7.30	—	—	7.42	—
Janitors, porters, or cleaners .....	5.12	55.55	(5)	5.07	55.51
Power-truck operators .....	5.73	56.10	(5)	5.71	55.98
Forklift .....	5.76	56.02	(5)	5.75	55.98
Truckers, hand .....	5.43	56.20	(5)	5.38	56.21

<sup>1</sup> Wage data are straight-time hourly earnings which exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Cost-of-living pay increases (but not bonuses) were included as part of the workers' regular pay. Excluded were performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses.

<sup>2</sup> Includes data for regions in addition to those shown separately. The comprehensive report on the study provides data for additional regions and occupations.

<sup>3</sup> The Southeast region includes Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

<sup>4</sup> Data are limited to ring frame spinners in cotton and manmade fiber mills.

<sup>5</sup> Averages relate to combination (woolen and worsted) occupations; data were not published for separate categories.

NOTE: Dashes indicate that no data were reported or that data did not meet publication criteria.

of the June 1985 survey, textile employment was heavily concentrated in the Southeast (nearly 90 percent of the total), was located largely in nonmetropolitan areas, and was comprised of mostly nonunion workers.

The 1985 survey also reported on the incidence of employee benefits. Virtually all production workers were in mills providing paid holidays and vacations. In cotton-manmade fiber mills, workers typically received between 6 and 8 holidays annually, and between 1 and 3 weeks of vacation pay, depending on their length of service. Provisions in the woolen mills were slightly more liberal—6 to 10 paid holidays and between 1 and 4 weeks of vacation pay were typical. In both textile sectors, retirement pension plans and various insurance plans—including life, hospitalization, surgical, basic medical, major medical, and accidental death and dismemberment coverage—also were available to a majority of the workers.

For each industry, separate reports for selected States and areas of industry concentration are available from the Bureau of Labor Statistics or any of its regional offices. A comprehensive report, *Industry Wage Survey: Textiles, June 1985*, Bulletin 2265 (Bureau of Labor Statistics, 1986), may be purchased from the Superintendent of Documents, Washington, DC 20402, or from the Bureau of Labor Statistics, Publications Sales Center, P.O. Box 2145, Chicago, IL 60690. □

—FOOTNOTES—

<sup>1</sup> Wage data contained in this article are straight-time hourly earnings which exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Cost-of-living pay increases (but not bonuses) were included as part of the workers' regular pay. Excluded were performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses. For survey purposes, Virginia is included in the Southeast region.

<sup>2</sup> For a report on the 1980 survey, see *Industry Wage Survey: Textile Mills and Textile Dyeing and Finishing Plants, August 1980*, Bulletin 2122 (Bureau of Labor Statistics, 1982).

## Pay in synthetic fibers manufacturing in the Southern region

Production and related workers in synthetic fibers manufacturing plants in the South averaged \$10.03 an hour in September 1985, according to a study by the Bureau of Labor Statistics<sup>1</sup>. Virtually all of the 42,292 workers covered by the survey earned between \$5 and \$14 an hour; the middle 50 percent earned from \$8.67 to \$11.29. All but 1 percent of the workers were paid time (rather than piece) rates, nearly always under formal plans providing single rates for specific occupations.

The survey covered establishments producing two principal types of synthetic fiber suitable for further manufacture

on textile processing machinery: cellulosic fibers, such as rayon and acetate; and other synthetic organic fibers (noncellulosic), such as nylons, acrylics, and polyesters. Manufacturers of cellulosic fibers often produced noncellulosics as a secondary product, but noncellulosic fiber plants generally did not produce cellulosic fibers.

Three-fourths of the cellulosic fiber workers and one-fifth of the noncellulosic workers were in establishments having collective bargaining agreements covering a majority of the production workers. The major union was the Amalgamated Clothing and Textile Workers Union (AFL-CIO).

Eighty-five percent of the workers were employed in plants primarily producing noncellulosic fibers. They averaged \$10.41 an hour; the remaining workers, who were in plants primarily producing cellulosic fibers, averaged \$7.91. (See table 1.)

Pay levels were also tabulated by type of area, size of establishment, and union status. Surveywide, wages averaged 12 percent higher in metropolitan areas than in nonmetropolitan areas (\$10.62 compared with \$9.50) and in establishments with at least 1,000 employees than in smaller plants (\$10.21 compared with \$9.10).<sup>2</sup> Plants with fewer than 20 workers were excluded from the study. In establishments in which a majority of the workers were covered by labor-management agreements, the pay averaged \$10.21, 2 percent more than the \$9.96 recorded in nonunion plants. The higher paying noncellulosic fiber industry accounted for all of the workers in metropolitan areas and four-fifths of those in large plants (at least 1,000 employees), but for less than one-tenth of the unionized workers estimated by the survey.

Twenty-seven occupations, accounting for one-half of the cellulosic fiber workers and two-thirds of the noncellulosic fiber workers, were selected to represent the industries' wage structures, workers' skills, and manufacturing operations.

Among cellulosic fiber plants, occupational pay levels ranged from \$6.59 an hour for throwers (who twist rayon or acetate yarn) to \$9.57 an hour for general maintenance mechanics. Pay levels of other maintenance workers, generally the highest paid occupational group, ranged from \$8.04 an hour for machinists to \$8.77 an hour for pipefitters. Chemical operators, numerically the largest occupation, averaged \$8.03 an hour, compared with \$8.68 for spinners using the dry process.

Among noncellulosic fiber plants, average earnings ranged from \$7.93 an hour for yarn winders and material handling laborers to \$13.06 an hour for general maintenance mechanics. Dry-process spinners, numerically the largest job studied separately in noncellulosic plants, averaged \$10.63 an hour, 6 percent more than their counterparts using the wet process (\$10.05). Chemical operators averaged \$10.96 an hour.

Where comparisons were possible, occupational averages were always higher in noncellulosic fiber manufacturing plants than in cellulosic fiber plants. The average wage

**Table 1. Number of workers and average hourly earnings<sup>1</sup> in selected occupations in synthetic fibers manufacturing by principal product, Southern region,<sup>2</sup> September 1985**

Department and occupation	All establishments		Principal product				Department and occupation	All establishments		Principal product			
	Number of workers	Average hourly earnings	Cellulosic fibers		Noncellulosic fibers			Number of workers	Average hourly earnings	Cellulosic fibers		Noncellulosic fibers	
			Number of workers	Average hourly earnings	Number of workers	Average hourly earnings				Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
All production workers . . . . .	42,292	\$10.03	6,354	\$7.91	35,938	\$10.41							
<b>Maintenance</b>													
Carpenters . . . . .	79	10.23	25	8.66	54	10.95							
Electricians . . . . .	345	11.10	88	8.59	257	11.96							
General mechanics . . . . .	4,100	12.80	307	9.57	3,793	13.06							
Instrument repairers . . . . .	885	12.36	59	8.71	826	12.62							
Machinists . . . . .	174	11.06	42	8.04	132	12.03							
Maintenance trades helpers . . . . .	15	6.59	—	—	—	—							
Pipefitters . . . . .	183	9.68	133	8.77	50	12.10							
<b>Chemical preparation</b>													
Chemical operators, cellulosic . . . . .	564	8.03	564	8.03	—	—							
Chemical operators, noncellulosic . . . . .	2,528	10.96	—	—	2,528	10.96							
<b>Spinning</b>													
Jet handlers . . . . .	367	9.15	89	7.95	278	9.53							
Spinners, dry process . . . . .	6,911	10.48	525	8.68	6,386	10.63							
Spinners, wet process . . . . .	1,019	9.08	—	—	759	10.05							
<b>Finishing</b>													
Creel tenders . . . . .	526	8.56	—	—	491	8.74							
							<b>Finishing</b>						
							Drawtwist operators . . . . .	1,383	\$8.90	—	—	1,359	\$8.92
							Throwers (twisters) . . . . .	384	6.78	365	\$6.59	—	—
							Tow operators . . . . .	2,559	9.27	—	—	2,450	9.30
							Warper operators . . . . .	924	8.75	318	7.82	606	9.24
							Washer operators . . . . .	56	8.60	44	7.33	—	—
							Yarn winders . . . . .	793	7.44	—	—	562	7.93
							<b>Inspecting and testing</b>						
							Laboratory assistants . . . . .	840	10.63	82	7.90	758	10.92
							Physical test operators . . . . .	1,042	9.30	131	7.38	911	9.58
							<b>Material movement and handling</b>						
							Material handling laborers . . . . .	643	7.96	—	—	572	7.93
							Power-truck operators . . . . .	419	9.06	113	8.27	306	9.35
							Forklift operators . . . . .	384	9.07	96	8.22	288	9.36
							Stock clerks . . . . .	235	9.98	52	8.18	—	—
							<b>Custodial</b>						
							Guards . . . . .	139	8.77	24	7.81	115	8.97
							Guards I . . . . .	31	8.18	8	8.28	—	—
							Janitors . . . . .	275	7.89	103	7.77	172	7.96

<sup>1</sup> Excludes premium pay for overtime and for work on weekends, holidays, and late shifts. Incentive payments, such as those resulting from piecework or production bonus systems, and cost-of-living pay increases (but not bonuses) were included as part of the workers' regular pay. Excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses.

<sup>2</sup> The Southern region, as used in this study, consists of Alabama, Delaware, District of Columbia, Florida, Georgia, Kentucky, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

NOTE: Dashes indicate that data did not meet publication criteria. Data for overall classifications may include data for subclassifications not shown separately.

advantage for noncellulosic workers ranged from 2 percent for janitors (\$7.96, compared with \$7.77) to 50 percent for maintenance machinists (\$12.03, compared with \$8.04).

Also where comparisons could be made, occupational averages in noncellulosic fiber plants were typically 6 to 16 percent higher in metropolitan areas than in nonmetropolitan areas and 20 to 30 percent higher in plants with 1,000 workers or more than in those employing fewer workers. Data resulting from similar comparisons for cellulosic fiber plants did not meet publication criteria.

All production and related workers covered by the survey were in establishments providing paid holidays and paid vacations. Ten to twelve holidays annually were typical as were 1 to 5 weeks of vacation pay, depending on years of service.

Various health and insurance plans were available to virtually all workers. With the exception of major medical coverage, employers typically paid the entire cost of these health plans and, where applicable, dependents were also included.

Retirement pension plans (in addition to Social Security) covered virtually all workers, while less than one-tenth of the workers were under plans limited to retirement sever-

ance pay. Employers typically paid the entire cost of these retirement plans.

A comprehensive bulletin on the study, *Industry Wage Survey: Synthetic Fibers, September 1985*, Bulletin 2268, may be purchased from the Bureau of Labor Statistics Publication Sales Center, P.O. Box 2145, Chicago, IL 60690, or the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The bulletin provides additional information on occupational pay, such as earnings distributions, and on the incidence of employee benefits in synthetic fibers manufacturing in the South. □

#### —FOOTNOTES—

<sup>1</sup> The survey was limited to the South, where more than 95 percent of the workers in synthetic fibers manufacturing are employed. Wage data are straight-time hourly earnings, which exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Incentive payments, such as those resulting from piecework or production bonus systems, and cost-of-living pay increases (but not bonuses) were included as part of the workers' regular pay. Excluded are performance bonuses and lump-sum payments of the type negotiated in the auto and aerospace industries, as well as profit-sharing payments, attendance bonuses, Christmas or yearend bonuses, and other nonproduction bonuses.

<sup>2</sup> Metropolitan Statistical Areas as defined by the U.S. Office of Management and Budget through June 1983.