Self-employed individuals fatally injured at work

Individuals working for themselves, especially on farms and in retailing, typically face a higher risk of fatal injury than do their wage and salary counterparts

Martin E. Personick
and
Janice A. Windau

"His brow is wet with honest sweat.
He earns whate'er he can,
And looks the whole world in the face,
For he owes not any man."

—Henry Wadsworth Longfellow
The Village Blacksmith (1842)

Working for oneself can be rewarding for individuals, like Longfellow's smithy, who place a high value on controlling the nature and pace of their efforts and are not overly concerned about an unpredictable earnings stream. Being self-employed, however, can carry considerable safety risks and responsibilities, such as tackling hazardous work activities without adequate resources for safety training and equipment and without the oversight and guidance of government safety regulations. (See the appendix for a description of worker safety and health coverage by Federal and State agencies.) In 1993, the self-employed as a group made up about 1 in every 5 fatal injuries at work, higher than their one-tenth share of the American work force, according to the Census of Fatal Occupational Injuries and the Current Population Survey (CPS).[1] And certain groups of the self-employed faced an especially high risk of dying on the job, such as older farmers operating tractors and other vehicles and managers and proprietors tending stores, bars, restaurants, and repair shops where many robbery-related homicides occur.

This article analyzes new information on the self-employed who are fatally injured at work, such as their occupation, age, and other characteristics; the industry they worked in; and the circumstances surrounding their death. The BLS Census of Fatal Occupational Injuries is the source of these data. It cross-references death certificates, newspapers, and other reports to verify that fatal injuries were work related and to obtain key information on the "who and how" of each incident. Of the 6,271 fatal work injuries counted in the 1993 BLS census, 1,191 were identified as self-employed individuals, 4,981 were wage and salary workers, and 99 others were primarily family workers.

Martin E. Personick is an economist and Janice A. Windau is an epidemiologist in the Office of Safety, Health and Working Conditions, Bureau of Labor Statistics.

The self-employed at a glance

Although some counts of the self-employed date back to the late 19th century, the 1940 Decennial Census marks the beginning of truly systematic efforts to count and profile that worker group. In 1940, there were nearly 10 million self-employed persons operating unincorporated business enterprises. Nine-tenths of those self-employed were men, most of them working in agriculture, forestry, and fishing.[2]

In 1993, the unincorporated self-employed still numbered about 10 million, but their characteristics and share of the work force had changed dramatically since 1940. Back then, the self-employed were about 20 percent of the civilian work force; now they are 9 percent of a much larger labor pool. Services industries, moreover, have replaced agriculture as by far the leading industry of the self-employed, accounting for two-fifths of that group's workers in 1993. And the share of self-employed women has grown from one-tenth of all self-employed in 1940 to one-third in 1993; still, that is somewhat lower than their 45-percent share of all workers.[3]

The employment characteristics of today's self-employed differ in many respects from those of wage and salary workers. The following comparisons of such staffing differences shed some light on why their fatality profiles also differ and why the self-employed as a group appear to be at a comparatively high risk of fatal injury.

The self-employed tend to be older than wage and salary workers, a pattern evident over many decades.[4] This difference is especially noteworthy for workers in the oldest age group because they face a relatively high risk of fatal injury.[5] In 1993, about one-fifth of the self-employed were age 55 and older, double the proportion of wage and salary workers in this age category. The difference is even more pronounced within agriculture, where older workers are fully one-third of all the self-employed, but just one-tenth of all wage and salary workers.

Most self-employed and wage and salary workers work in service-producing industries, where, with a few notable exceptions such as transportation industries, the risk of fatal injury is relatively low for both. Staffing divergences within three goods-producing industries, however, illustrate why the self-employed as a group face a relatively higher risk of fatal injury. For example, agriculture, the industry with the highest rate of fatal injury for all workers, accounted for 13 percent of the self-employed, but just 2 percent of those working for wages and salaries. Construction, another high risk industry, engaged proportionately more of the self-employed (about one-sixth) than of all wage and salary workers (one-twentieth). And by contrast, manufacturing, an industry with a relatively low risk of fatal injury, accounted for a smaller share (one-twentieth) of the self-employed than its one-fifth share of all wage and salary workers.

About half of all self-employed and wage and salary workers held a white-collar job either within the broad occupational grouping of "managerial and professional specialty" or the classification, "technical, sales, and administrative support." Both broad groupings carry a relatively low risk of fatal injury. However, within these groupings are two occupations—managers of food serving and lodging services and sales supervisors and proprietors—for which there is an elevated risk of becoming a homicide victim during a robbery. Together, those two occupations made up a larger share (one-eighth) of self-employed workers than of wage and salary workers (one-twentieth). Self-employed workers also included relatively large shares of farmers and construction tradesworkers, two other occupations with high rates of fatal injury. But proportionately more of the wage and salary workers (one-seventh) than the self-employed (one-twentieth) were "operators, fabricators, and laborers," a comparatively high risk group that includes, for example, motor vehicle operators and construction laborers.

Self-employed workers typically work longer hours than do wage and salary workers and are paid less. The following tabulation shows the disparity between the two groups in average hours worked per week during 1993 for those on full-time schedules:[6]

	Average weekly hours	
Industry	*Self employed*	*Wage and salary*
Agricultural	54	47
Nonagricultural	48	43

The disparity is even more striking when one looks at the percentage of workers who logged more than 48 hours a week:

	Percent working more than 48 hours	
Industry	*Self employed*	*Wage and salary*
Agricultural	60	37
Nonagricultural	46	23

Thus, the average self-employed worker is exposed to work hazards for a longer period of time and also may be more subject to the effects of fatigue while operating a vehicle or hazardous machinery.[7] Finally, self-employed individuals typically earn less than their wage and salary counterparts and, thus, appear to have few extra resources to spend on safety education and equipment that often are provided by employers at little or no cost to their wage and salary workers.[8]

The fatalities

The 1993 Census of Fatal Occupational Injuries counted 1,191 fatalities among self-employed persons who had been working either on a primary *or* a secondary job at the time of their death. Although it was designed to count only "the unincorporated" as self-employed, the BLS fatality census also includes in this count some owners of incorporated businesses and members of partnerships if their corporate status could not be ascertained through normal data collection efforts. Thus, the coverage of fatalities among the self-employed in the BLS census is somewhat broader than the Current Population Survey's definition of self-employed workers (unincorporated, primary job only). Because of these differences, fatality rates for the self-employed and for wage and salary workers by various worker characteristics and types of cases are not included in this article.[9]

Still, much can be learned about the relative fatality risks of the self-employed by identifying the leading ways in which they died, the primary industries and occupations where the fatal injury occurred, and the age group of the self-employed fatally injured. Tables 1 through 3 profile these characteristics both for the self-employed and for the wage and salary worker, revealing several important differences in fatality

patterns between the two.

Fatal event and exposure. Work-related homicide led all other fatal event and exposure categories for the self-employed and ranked second to highway incidents for the wage and salary worker (table 1). Homicide accounted for a slightly larger share of fatal injuries among the self-employed fatally injured (22 percent) than among wage and salary workers (16 percent), suggesting that the risk of violent death at work is higher for the self-employed than for wage and salary workers.[10] The self-employed also were more likely to die at work of a self-inflicted injury than were wage and salary workers.

Nonhighway fatalities, except rail, air, and water incidents, were the second leading way in which the self-employed died at work. Many happened on farms and commonly involved tractors and other farm vehicles overturning on their drivers or occupants falling from and being struck by such vehicles. Some nonhighway incidents occurred off of farms (for example, on industrial premises) and in other ways, such as self-employed workers killed solely by falling from a moving vehicle or piece of mobile equipment or by colliding with other vehicles or striking stationary objects, such as trees. The whole category "nonhighway incidents, except rail, air, and water" accounted for 14 percent of the self-employed fatalities and 4 percent of all wage and salary worker deaths reported in the 1993 BLS census.

Highway incidents and persons struck by objects other than vehicles or mobile equipment were the two other event and exposure categories to account for at least one-tenth each of the self-employed fatality total. About half of the highway fatalities resulted from collisions between vehicles or mobile equipment; most of the rest were noncollision incidents resulting from vehicles jackknifing, overturning, or running off the highway. Falling objects, such as trees and construction materials, also pose a notable hazard for the self-employed. Unlike the other major categories of fatal events, highway incidents appear to pose a lower fatality risk for the self-employed than for wage and salary workers.

Table 1. Fatal work injuries among self-employed and wage and salary workers, by event or exposure, 1993

[In percent]

Event or exposure[1]	Self-employed	Wage and salary
Number	1,191	4,981
Percent	100	100
Transportation incident	34	41
Highway	11	22
Collision between vehicles, mobile equipment	5	12
Noncollision	4	6
Jack-knifed, overturned	3	4
Nonhighway (farm, industrial)	14	4
Noncollision	13	4
Overturned	9	2
Fell from and struck by vehicle, mobile equipment	2	1
Aircraft	3	5
Worker struck by vehicle	3	6
Water vehicle	3	2
Railway	1	2
Assault and violent act	29	19
Homicide	22	16
Shooting	19	13
Stabbing	1	2
Self-inflicted injury	6	3
Contact with object, equipment	20	16
Struck by object	12	8
Falling object	7	5
Caught in or compressed by equipment or object	6	4
Running equipment, machinery	3	2
Caught in or crushed in collapsing materials	2	2
Fall	8	10
From roof	2	2
From ladder, scaffold, staging	2	2
Exposure to harmful substance or environment	7	10
Contact with electric current	3	6
Exposure to caustic or noxious substance	2	2
Oxygen deficiency, including drowning, submersion	2	2
Fire and explosion	2	4

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

NOTE: Total for a major event category may include data for subcategories not shown separately. Percentages may not add to totals because of rounding.

Occupation of the fatally injured. Farm operator and manager was, by far, the occupation with the largest number of self-employed fatal injuries reported by the 1993 BLS census. (See table 2.) That farming category accounted for three-tenths of the 1,191 self-employed fatalities, triple its one-tenth share of the 10 million unincorporated self-employed reported in the 1993 CPS. The following tabulation shows the various types of fatal events and exposures that occurred to the self-employed in farming and other agricultural occupations such as groundskeepers and gardeners:

Farming fatalities:	
Number	413
Percent	100
Transportation incident	49
Nonhighway (for example, tractor rollover)	34
Other	15
Contact with object or equipment	34
Struck by object	17
Caught in or compressed by equipment or object	13
Other	4
Exposure to harmful substance or environment	7
All other events	10

Sales occupations accounted for about one-sixth of all self-employed fatalities. Most of the fatalities to self-employed salesworkers were robbery-related homicides involving shop-

keepers and other proprietors of small businesses. Sales supervisors and proprietors, in fact, were especially risky occupations for the self-employed, accounting for 13 percent of all fatal work injuries among those who work for themselves, yet making up about 8 percent of the employment total for the unincorporated self-employed. By contrast, sales supervisor and proprietor occupations had roughly the same share (about 2 percent) of both the fatality and employment totals for wage and salary workers.[11]

The classification "executive, administrative, and managerial" is the remaining occupational group having at least one-tenth of the fatality total for the self-employed. Like sales occupations, many workers in this group were homicide victims; but most were not, as the following tabulation of fatal events for self-employed executives, administrators, and managers points out:

Fatalities to executives, administrators, and managers:	
Number	168
Percent	100
Assault and violent act	45
Homicide	35
Self-inflicted injury	10
Transportation incident	19
Highway	9
Aircraft	5
Other	5
Contact with object or equipment	14
Fall	11
Exposure to harmful substance or environment	9
Other	2

Other characteristics of the fatally injured. More than nine-tenths of both classes of workers who were fatally injured were men, well above their shares of the Nation's employment. (See table 3.) Men are fatally injured more often than women primarily because of differences in the jobs men and women hold. By race, whites dominate employment and fatality counts, but Asians, Pacific Islanders, and races other than white or black appear to have a higher risk of a fatal injury on the job than the average self-employed or wage and salary worker.[12] A partial explanation for their higher risk may be that, compared with blacks and whites, they are employed disproportionately in jobs in which the risk of violent death is relatively high. Homicide accounted for four-fifths of fatal on-the-job injuries to the self-employed who were not black or white and for about half of the wage and salary workers of these minority races. By contrast, homicide accounted for 22 percent of all self-employed workers and 16 percent of wage and salary workers dying on the job. (See table 1.)

As mentioned earlier, older workers face a higher risk of fatal injury than do younger workers. This is especially true for the self-employed, 55 years and older. They made up more than two-fifths of all self-employed fatally injured in 1993, well above their one-fourth share of all employment for the unincorporated self-employed. Those self-employed, aged 65 years and older faced an even higher fatality risk, accounting for nearly one-tenth of the employment, but nearly one-fourth of the fatal injuries of the self-employed. Wage and salary workers also face higher risks with increasing age.

Agricultural industries accounted for more fatalities among the self-employed than any of the other major industry divisions. (See table 3.) Agriculture includes crop and livestock production as well as services performed on a contract or fee basis, such as crop harvesting, veterinary medicine, and landscaping. These agricultural activities are

Table 2. Fatal work injuries among self-employed and wage and salary workers, by occupation, 1993

[In percent]

Occupation[1]	Self-employed	Wage and salary
Number	1,191	4,981
Percent	100	100
Managerial and professional	17	10
Executive, administrative, and managerial	14	5
Manager, food serving and lodging establishment	3	1
Professional specialty	3	4
Writer, artist, entertainer, athlete	1	1
Technical, sales, and administrative support	17	12
Sales occupation	16	7
Supervisor, proprietor	13	2
Technical and administrative support	2	5
Service	2	10
Farming, forestry, fishing	42	8
Farm operator and manager	29	1
Farmworker and supervisor	4	3
Timber cutting and logging	3	2
Fisher	3	1
Precision production, craft, and repair	12	19
Mechanic and repairer	4	5
Vehicle repairer	2	3
Construction trade	6	10
Nonsupervisory worker	4	8
Carpenter	1	2
Electrician	1	1
Operator, fabricator, laborer	10	37
Transportation and material moving operation	8	22
Motor vehicle operator	7	17
Truck driver	4	14
Cab driver and chauffeur	2	2
Material moving equipment operator	1	3
Handler, helper, laborer	1	11
Military occupation	—	2

[1] Based on the 1990 Occupational Classification System developed by the Bureau of the Census.

NOTE: Totals for major occupational categories may include data for subcategories not shown separately. Percentages may not add to totals because of rounding. Dash indicates that the category is not applicable.

highly risky and account for about one-third of the fatal work injury total of the self-employed, but only about one-eighth of their employment total. Wage and salary workers in agriculture also face fatality risks much higher than their 2-percent share of wage and salary employment would suggest. Interestingly, workers, 55 years and older are a clear majority of the self-employed fatally injured in agricultural industries, but are a small fraction of wage and salary workers dying in that industry.

Retail trade establishments, such as grocery stores and restaurants, had contrasting risk patterns by class of worker. Their share of the self-employed who were fatally injured (18 percent) was slightly larger than their 15-percent share of the unincorporated self-employed in 1993. But wage and salary workers in retail trade faced below-average risks of fatal injury (11 percent share of the wage and salary fatality total and 17 percent of wage and salary employees). Part of the difference may reflect the elevated risk of robbery-related homicide faced by the self-employed when working alone in retail businesses during evening hours.

Services industries are relatively safe workplaces both for the self-employed and for wage and salary workers. Both groups had about a one-eighth share of total fatalities, which is well below the shares (ranging from 25 percent for wage and salary workers to nearly 40 percent for the self-employed) of their employment totals. For the self-employed, "automotive repair, services, and parking" was the services industry reporting the most fatal injuries in 1993; 44 out of 147 deaths in all services. For wage and salary workers, business services, such as armored car and personnel supply firms, led all other services industries; they reported 172 out of 604 service industry deaths.

Like retail trade, construction industries manifest contrasting risk patterns by type of worker. But in the construction industry, it is the wage and salary worker, rather than the self-employed individual, who faces relatively high fatality risks on the job.[13] Construction makes up 16 percent of all wage and salary workers fatally injured, triple its 5-percent share of the employment total for that worker group. By contrast, the industry's share of the self-employed fatally injured (11 percent) was slightly lower than its 15-percent employment share, suggesting that the fatality rate is lower for self-employed construction workers than for the average self-employed worker.

Relatively low fatality risks for the self-employed in construction partly reflect their favorable mix of relatively safe construction work, such as carpentry and painting.[14] Differences in work experience and the amount of actual construction work performed are other factors that might help explain why the self-employed in the construction industry typically face a lower risk of fatal injury than do the wage and salary worker, even within the same trade.

Summary findings

Data from the 1993 Census of Fatal Occupational Injuries and 1993 Current Population Survey show that the self-employed as a group sustain a larger share of all fatal work injuries than their share of total employment would suggest. Compared with wage and salary workers, the self-employed as a group show relatively high risks of fatal injuries, partly reflecting their disproportionate employment in hazardous industries like agriculture and construction and their tendency to be older workers, who are more prone to a fatal injury. In construction, the fact that the self-employed appear to be at less risk than wage and salary workers offsets, in part, the industry's contribution to the risk differences between the two working groups. Many occupational groups of the self-employed also tend to be at relatively high risk, especially farmers and shopkeepers.

Table 3. Fatal work injuries among self-employed and wage and salary workers, by sex, age, race, and major industry, 1993

[In percent]

Characteristic	Self-employed	Wage and salary
Number	1,191	4,981
Percent	100	100
Sex and age		
Men	95	92
Women	5	8
Both sexes:		
Under 35 years	16	39
35 to 44 years	22	26
45 to 54 years	20	19
55 years and older	42	17
55–64 years	19	12
65 years and older	23	5
Race		
White	85	80
Black	6	12
Asian or Pacific Islander	5	3
Other or unspecified	4	5
Major industry		
Agriculture	36	6
Under age 55	15	4
55 years and older	21	1
Nonagricultural (private)	64	81
Forestry and fishing	4	1
Mining	1	3
Construction	11	16
Manufacturing	5	14
Transportation and public utilities	7	16
Wholesale trade	2	5
Retail trade	18	11
Finance, insurance, and real estate	2	2
Services	12	12
Government	—	13

NOTE: Percentages may not add to totals because of rounding. Dash indicates that the category is not applicable.

The Census of Fatal Occupational Injuries contains rich sets of information about how deadly incidents occur. Such deadly patterns differed by type of worker. The self-employed were more likely to become a homicide victim than were wage and salary workers. The next most common ways in which the self-employed died at work were tractor rollovers and other nonhighway events, being struck by trees and other nonvehicular objects, and highway incidents. The latter deadly events led all others for wage and salary workers, followed by homicides, being struck by objects, and falls from elevations. Clearly, safety and health practitioners who study these fatalities in greater depth could gain valuable insights into the safety and health problems of the self-employed and their wage and salary counterparts. □

Footnotes

[1] For a comprehensive account of the 1993 BLS Census of Fatal Occupational Injuries, see Guy Toscano and Janice Windau, "The changing character of fatal work injuries," *Monthly Labor Review*, October 1994, pp. 17–28.

The 1993 employment data are based on the Current Population Survey (CPS), conducted for the Bureau of Labor Statistics by the Bureau of the Census. The CPS estimates about 10 million self-employed operating unincorporated businesses in 1993. In addition, there were about 3 to 4 million incorporated self-employed that year counted in the CPS as "other wage and salary workers." The self-employed as a percent of the total work force (about 120 million in 1993) increases slightly to almost an eighth if both groups of self-employed are combined, still less than their share of all fatal injuries at work.

[2] See Joseph D. Phillips, *The Self-Employed in the United States* (Urbana, IL, University of Illinois, 1962), p. 28.

[3] See Phillips, *The Self-Employed*, for 1940 data and the Current Population Survey, 1993 annual averages.

[4] For an analysis of age differences between the self-employed and workers paid wages and salaries, see Eugene H. Becker, "Self-employed workers: an update to 1983," *Monthly Labor Review*, July 1984, pp. 14–18. Current data are from the CPS, 1993 annual averages.

[5] The fatality rate was 7 per 100,000 workers, aged 55 to 64 and 15 per 100,000 workers, 65 years and older. These compare with a rate of 5 per 100,000 workers, ages 25 to 34. For more information on serious injuries affecting older workers, see Martin Personick and Janice Windau, "Characteristics of older workers' injuries," *Fatal Workplace Injuries in 1993: A Collection of Data and Analysis*, Report 891 (Bureau of Labor Statistics, June 1995), pp. 23–27.

[6] The hours at work data are from unpublished tabulations of Current Population Survey, 1993 annual averages.

[7] See *Factors that Affect Fatigue in Heavy Truck Accidents*, Safety Study NTSB/SS-95/01 (Washington, National Transportation Safety Board, January 1995).

[8] For a discussion of earnings levels by class of worker, see Theresa J. Devine, "Characteristics of self-employed women in the United States," *Monthly Labor Review*, March 1994, especially pp. 29–32.

[9] Even when the incorporated self-employed and individuals who work as wage and salary workers in their primary job, but who are self-employed in their second job, are included in the self-employed's employment figures, the fatality share for the self-employed is greater than their employment share. And the fatality-rate gap would narrow somewhat between the self-employed and wage and salary workers when the longer hours of the self-employed are considered.

[10] Because the overall fatality rate is higher for the self-employed than for wage and salary workers, the risk premium for the self-employed is somewhat larger than the overall premium for fatal event and exposure categories that make up an equal or larger share of all self-employed fatalities than of wage and salary workers. For example, let us assume an overall fatality rate of 10 per 100,000 self-employed and 5 per 100,000 wage and salary workers. Applying the homicide shares to each overall rate, the 22-percent share for the self-employed results in a homicide rate of 2.2 per 100,000 self-employed; the 16-percent share for wage and salary workers results in a 0.8-rate per 100,000 workers.

Moreover, the self-employed may also face a relatively higher risk for certain other events and exposures, like fatal falls, when such events are a slightly larger share of the wage and salary fatality total than of the self-employed fatality total. Using the same overall fatality rates, the self-employed fatality rate for falls would be about 0.8 per 100,000 workers (8 percent of an overall rate of 10 per 100,000 workers), compared with 0.5 for wage and salary workers (10 percent of a rate of 5 per 100,000 workers).

[11] Employment by occupation and class of worker appears in unpublished tabulations from the Current Population Survey, 1993 annual averages.

[12] Employment by race and class of worker appears in unpublished tabulations from the Current Population Survey, 1993 annual averages. The tabulations show that races other than white or black were 4 percent of the self-employed and 2 percent of the wage and salary employment totals that year. Shares of fatal work injuries held by "races other than white or black" were well above the employment shares for this group in 1993.

[13] This pattern also holds for an important subset of occupations in the construction industry—construction trades. This subset excludes two risky jobs in the construction industry—construction helpers and laborers—which employ far more wage and salary workers than self-employed individuals. Table 2 shows that construction trades composed 6 percent of all self-employed fatalities, which compares with 11 percent of total employment for the unincorporated self-employed in 1993. By contrast, those trades were 10 percent of the fatality total for wage and salary workers, well above their 3-percent share of total employment for those workers.

[14] Risk differences in construction between the two classes of workers in part are explained by differences in staffing patterns among individual construction trades. Within the construction trades category, the self-employed are mostly employed as carpenters or painters, two trades having a relatively low risk of fatal injury; those two trades are only a third of all wage and salary workers in construction trades. Electricians, electrical power installers and repairers, and structural metal workers, by contrast three occupations with relatively high fatality risks, together are about 20 percent of total wage and salary worker employment in all construction trades, but only 5 percent of the self-employed total for all construction trades.

APPENDIX: The Census of Fatal Occuptional Injuries

Definitions. For a fatality to be considered within the scope of the program, the decedent must have been employed (that is, working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job. These criteria are generally broader than those used by Federal and State agencies administering specific laws and regulations. Fatalities that occur during a person's commute to or from work are excluded from the census counts.

Data presented in this article include deaths occurring in 1993 that resulted from traumatic occupational injuries. An injury is defined as any intentional or unintentional wound or damage to the body resulting from acute exposure to energy, such as heat or electricity or kinetic energy from a crash, or from the absence of such essentials as heat or oxygen caused by a specific event or incident or series of events within a single workday or shift. Included are open wounds, intracranial and internal injuries, heatstroke, hypothermia, asphyxiations, acute poisonings resulting from a short-term exposure (limited to the worker's shift), suicides and homicides, and work injuries listed as underlying or contributory causes of death.

Information on work-related illnesses are excluded from the BLS census because of the latency period of many occupational illnesses and the resulting difficulties associated with linking illnesses to work. Partial information on fatal occupational illnesses, compiled separately, is available for 1991 through 1993 in BLS Report 891.

Measurement techniques and limitations. Data for the Census of Fatal Occupational Injuries are compiled from various State and Federal administrative sources—including death certificates, workers' compensation reports and claims, reports to various regulatory agencies, and medical examiner reports—as well as news reports. Multiple sources are used because studies have shown that no single source captures all job-related fatalities. Source documents are matched so that each fatality is counted only once. To ensure that a fatality occurred while the decedent was at work, information is verified from two or more independent source documents, or from a source document and a followup questionnaire. Approximately 30 data elements are collected, coded, and tabulated, including information about the worker, the fatal incident, and the machinery and equipment involved.

Because some State laws and regulations prohibit enumerators from contacting the next-of-kin, it was not possible to independently verify work relationship (whether a fatality is job related) for 277 fatal work injuries in 1993; however, the information on the initiating source document for these cases was sufficient to determine that the circumstances of the incident was likely to be job related. Data for these fatalities, which primarily affected the self-employed, are included in the Census of Fatal Occupational Injuries counts. An additional 49 fatalities submitted by the States were not included because the initiating source document had insufficient information to determine work relationship, which could not be verified by either an independent source document or a followup questionnaire.

States may identify additional fatal work injuries after data collection closeout for a reference year. In addition, other fatalities excluded from the published count because of insufficient information to determine work relationship may be subsequently verified as work related. States, therefore, have up to 1 year to update their initial published State counts. This procedure ensures that fatality data are disseminated as quickly as possible and that no legitimate case is excluded from the counts. As data collection methods improve, future fatal work injury counts may become more complete.

Federal/State agency coverage. The Census of Fatal Occupational Injuries include data for all fatal work injuries, whether they are covered by the Occupational Safety and Health Administration (OSHA) or other Federal or State agencies or are outside the scope of regulatory coverage. Thus, any comparison between the BLS census counts and those released by other agencies should take into account the different coverage and definitions being used.

Several Federal and State agencies have jurisdiction over workplace safety and health. OSHA and affiliated agencies in States with approved safety programs cover the largest portion of America's workers. However, injuries and illnesses occurring in several other industries, such as coal, metal, and nonmetal mining, and transportation on water, rails, or in the air, are excluded from OSHA coverage because they are covered by other Federal agencies, such as the Mine Safety and Health Administration, the U.S. Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration. Fatalities occurring in industries regulated by Federal agencies other than OSHA accounted for about 11 percent of the fatal work injuries in 1993.

Fatalities occurring among several other groups of workers generally are not covered by any Federal or State agencies. These groups include self-employed and unpaid family workers, which together accounted for about 21 percent of the fatality total; laborers on small farms, making up about 5 percent of that total; and State and local government employees in States without OSHA-approved safety programs, about 4 percent. (About half of the States have approved OSHA safety programs which include State and local government employees in their coverage.)