



## ARE OUR WORK PLACES SAFE ?

(Fourth of a ten part series)

While technological improvements may have contributed to gains in productivity, changes in work methods and machines used may have also exposed the workforce to greater risks in the workplace. In the past, the safety and health of workers was given lesser importance than the provision of monetary or economic benefits. Although this perspective has been gradually changing through the years, much has still to be done to ensure that the workers enjoy a safe working environment.

Injury statistics are useful to policy and decision-makers in labor administration particularly in the enforcement of health and safety standards. Further, establishments can use the data in their accident prevention programs.

This report is based on the 1991 to 1996 results of the Occupational Injuries Survey (OIS) conducted by the Bureau of Labor and Employment Statistics. The OIS covers establishments employing at least 10 workers. This fourth issue discusses the profile of injuries in the manufacturing sector.

### ESTABLISHMENTS WITH INJURIES

Manufacturing establishments with work-related injuries added up to 4,961 or about 44.2 percent out of 11,221 in 1996.



**TABLE 1. COMPARATIVE STATISTICS ON ESTABLISHMENTS WITH WORK-RELATED INJURIES IN MANUFACTURING, PHILIPPINES: 1991-1996**

(Establishments employing 10 and over.)

Year	Total Establishments	% of Establishments with Work Related Injuries to Total	% of Establishments with -Disabling Injuries to Total
1991	10,845	44.7	28.0
1992	10,554	43.6	29.3
1993	10,569	41.1	29.0
1994	11,107	37.5	29.0
1995	11,220	47.8	22.6
1996	11,221	44.2	17.9

Source of data: Bureau of Labor and Employment Statistics, Occupational Injuries Survey.

During the six year review period, 1995 posted the highest proportion of affected establishments (47.8% or 5,366). Lowest was in 1994 at 37.5 percent or 4,168 establishments. (Table 1)

In proportion to establishment population in manufacturing, establishments with disabling cases ranged from 17.9 percent to 29.3 percent.

Meanwhile, establishments with disabling injuries (with lost workdays) averaged to 3,000 from 1991-1993. These establishments accounted for more than three fifths of the establishments with work-related injuries. Lesser proportions were reported in the next three years; 42.5

percent in 1994; 47.3 percent in 1995 and 40.6 percent in 1996.

Specifically, most prone to disabling injuries were food manufacturing establishments (367 to 818). Least affected were those engaged in the manufacture of refined petroleum products, 1 to 4 establishments. (Table 2)

## **WORK-RELATED INJURIES**

The lowest number of work-related injuries in manufacturing was reported in 1991 at 109,350 while 1995 had the highest with 192,610. Nevertheless, 1995 had the least proportion of disabling cases at 15.9 percent (30,660). A year after, the number of disabling cases dropped to 28,220 though proportion-wise it increased to 18.6 percent. Disabling injuries occurred mostly in 1993 at 45,310. This year also recorded the highest proportion at 35.0 percent. The data indicate that work-related cases every year were mostly non-disabling or no workday losses. (Table 3)

Areawise, total injuries at workplaces in the National Capital Region (NCR) were observed to be a little higher than those noted in the rest of the country. However, disabling cases showed a fluctuating trend as NCR recorded higher proportions in 1991 (51.7%); 1993 (56.9%) and 1994 (59.1%). The areas outside NCR topped its counterpart in 1992 at 59.4 percent; 54.2 percent in 1995 and 54.5 percent in 1996.

## **DISABLING INJURIES**

The decline in the number of establishments with disabling cases was complemented by the decreasing

number of disabling injuries. From 30,020 in 1991, disabling injuries reached to as high of 45,310 cases in 1993 but the trend reversed as cases dropped to 30,690 cases in 1994 then to 30,660 in 1995 and contracted further to 28,220 incidences in 1996. (Table 4)

Food manufacturing consistently accounted for the most number of disabling injuries throughout the review period at 7,630 (24.9 percent) to 15,410 (38.1 percent).

Quite far behind were textile (5.5% – 10.7%). Also prone to disabling injuries were workers in wearing apparel; beverage; wood and cork products; iron and steel basic industries; fabricated metal products; electrical machinery; and transport equipment.

Least affected were petroleum refineries; and manufacturing of professional and scientific and measuring and controlling equipment and of photographic and optical instruments which reported less than 5-20 cases yearly.

### **➤ *Size of Establishment***

Most of the disabling cases each year affected establishments with 200 or more workers. Their annual shares of total cases ranged from 48.4 percent to 67.9 percent.

Establishments with 100-199 workers posted the least disabling cases (8.4% - 16.3%).

### **➤ *Extent of Disability***

Temporary total disabilities constituted 94.8 percent to 98.3 percent of disabling injuries during the 6-year period. Only 1.4 percent to 4.9 percent were permanent partial disabilities. Some 20-70 fatalities each year were reported in manufacturing.

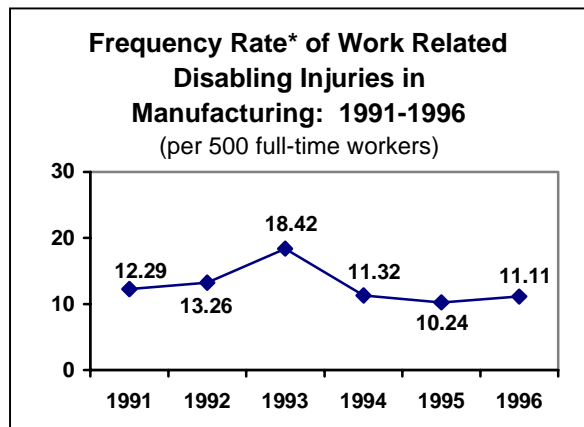
➤ **Nature of Disability**

The reported annual injuries were largely due to cuts, lacerations, punctures, avulsions (44.9% to 50.3%). Of considerable proportions were contusions, bruises, hematoma, abrasions (15.4% - 25.0%); thermal chemical burns and scalds (7.7% - 12.5%); and strains, sprains, dislocations fractures (8.9% - 11.7%).

**SAFETY PERFORMANCE**

➤ **Frequency Rate**

Increasing incidence of disabling injuries were noted in 1991-1993. From a frequency rate of 12.29 or one injury out of every 41 workers in 1991, it went up to 18.42 or one injury out of every 27 workers in 1993. Lower frequency rates were observed in the last years ranging from 10.24 to 11.32 or one injury for every 44-49 workers.

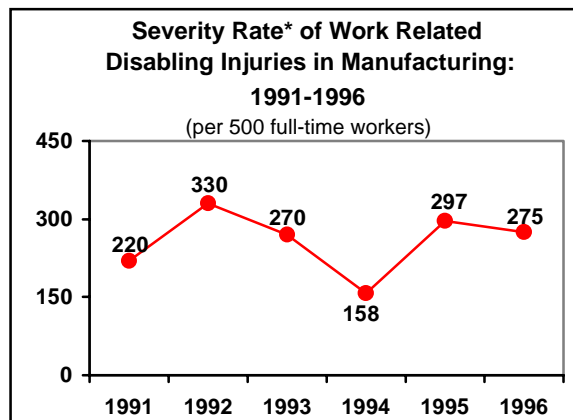


\* Frequency Rate (FR) is the number of disabling injuries per 500 full-time workers each working 2,000 hours per year. It can be translated as follows:

CY 1991: 12.29 injuries per 500 workers  
or  
1 injury per 41 workers (i.e. 500 / 12.29)

**Severity Rate**

On the average, a worker incurred less than one lost workday due to disabling injuries in 1991-1996. Specifically, these injuries resulted to 0.3 to 0.7 workday lost per worker.



\* Severity Rate (SR) is the number of lost workdays due to disabling injuries per 500 full-time workers each working 2,000 hours per year. It can be translated as follows:

CY 1991: 220 lost workdays per 500 workers  
or  
0.4 lost workdays per worker (i.e. 220 / 500)

The incidence of work-related injuries in the manufacturing sector seem relatively high as evidenced by the frequency rates. Nevertheless, these injuries are less serious since their duration was less than a day. On the other hand, there are certain industries in the sector as earlier mentioned that need closer monitoring and improvements in their safety programs at the workplace.

**FOR INQUIRIES:**

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**TABLE 2. ESTABLISHMENTS REPORTING WORK-RELATED INJURIES IN MANUFACTURING, PHILIPPINES: 1991-1996**

(Establishments employing 10 and over.)

Indicator	1991	1992	1993	1994	1995	1996
<b>Total Establishments</b>	<b>10,845</b>	<b>10,554</b>	<b>10,569</b>	<b>11,107</b>	<b>11,220</b>	<b>11,221</b>
<b>Establishments with Work-Related Injuries</b> <sup>1</sup>	<b>4,843</b>	<b>4,602</b>	<b>4,341</b>	<b>4,168</b>	<b>5,366</b>	<b>4,961</b>
<b>Establishments with Disabling Injuries</b>	<b>3,032</b>	<b>3,088</b>	<b>3,062</b>	<b>1,771</b>	<b>2,538</b>	<b>2,013</b>
Food	583	818	751	470	522	367
Beverage	46	68	41	41	40	38
Tobacco	13	11	12	13	13	8
Textile	126	131	218	116	183	83
Wearing Apparel	116	290	283	122	267	114
Leather and products of leather, leather substitutes and fur	21	14	7	42	37	9
Footwear, except rubber, plastic or wood footwear	8	108	44	3	5	43
Wood and cork products	246	169	136	29	165	184
Furniture and fixtures	302	156	94	51	41	158
Papers and paper products	74	32	121	78	60	78
Printing, publishing and allied industries	20	129	116	93	153	65
Industrial chemicals	71	47	59	68	81	35
Other chemicals	130	37	100	31	66	40
Petroleum refineries	*	1	3	4	1	2
Miscellaneous products of petroleum and coal	8	0	0	*	0	5
Rubber products	45	34	36	33	74	45
Plastic products	36	88	153	62	148	53
Pottery, china and earthenware	6	8	8	14	3	7
Glass and glass products	4	8	4	27	3	9
Cement	16	13	29	12	30	14
Other non-machinery mineral products	31	125	51	11	63	42
Iron and steel basic industries	92	95	95	52	81	148
Non-ferrous metal basic industries	8	23	4	2	4	3
Fabricated metal products	425	128	190	102	142	167
Machinery	266	212	226	80	93	73
Electrical machinery, apparatus, appliances and supplies	146	175	142	62	96	97
Transport equipment	166	115	65	126	103	86
Professional and scientific and measuring and controlling equipment not elsewhere classified and photographic and Optical instruments	3	0	1	8	2	4
Furniture and fixtures primarily of metal	3	0	17	*	0	0
Other manufacturing industries	21	53	56	19	61	36
<b>Establishments with Non-Disabling Injuries</b>	<b>3,286</b>	<b>2,771</b>	<b>2,515</b>	<b>3,687</b>	<b>4,721</b>	<b>4,467</b>

\* No responding establishments.

<sup>1</sup> Establishments with disabling (with lost workdays) and non-disabling injuries will not add up to total as an establishment may have both kinds of injuries.

Source of data: Bureau of Labor and Employment Statistics, Occupational Injuries Survey.

**TABLE 3. WORK-RELATED INJURIES BY AREA IN MANUFACTURING,  
PHILIPPINES: 1991-1996**  
(Establishments employing 10 and over.)

Indicator	1991	1992	1993	1994	1995	1996
<b>Total Work-Related Injuries</b>	<b>109,350</b>	<b>142,550</b>	<b>129,560</b>	<b>147,090</b>	<b>192,610</b>	<b>151,850</b>
National Capital Region (NCR)	57,260	70,070	66,610	93,370	105,220	78,230
Outside NCR	52,100	72,480	62,950	53,720	87,390	73,620
<b>Disabling Injuries</b>	<b>30,020</b>	<b>40,490</b>	<b>45,310</b>	<b>30,690</b>	<b>30,660</b>	<b>28,220</b>
National Capital Region (NCR)	15,510	16,420	25,800	18,150	14,040	12,830
Outside NCR	14,510	24,070	19,510	12,540	16,620	15,380
<b>Non-Disabling Injuries</b>	<b>79,330</b>	<b>102,060</b>	<b>84,250</b>	<b>116,400</b>	<b>161,950</b>	<b>133,630</b>
National Capital Region (NCR)	41,750	53,650	40,810	75,220	91,180	65,400
Outside NCR	37,590	48,410	43,440	41,180	70,770	58,240

*Note: Details may not add up to total as these were rounded-off to nearest tens.*

*Source of data: Bureau of Labor and Employment Statistics, Occupational Injuries Survey.*

**TABLE 4. SUMMARY STATISTICS ON DISABLING INJURIES  
IN MANUFACTURING, PHILIPPINES: 1991-1996**  
(Establishments employing 10 and over.)

Indicator	1991	1992	1993	1994	1995	1996
<b>TOTAL DISABLING INJURIES</b>	<b>30,020</b>	<b>40,490</b>	<b>45,310</b>	<b>30,690</b>	<b>30,660</b>	<b>28,220</b>
<i>By Minor Industry</i>						
Food	7,710	15,410	12,360	7,630	10,440	8,310
Beverage	1,100	1,260	1,280	1,280	840	1,370
Tobacco	200	330	320	260	700	140
Textile	3,200	2,810	2,780	3,270	2,370	1,550
Wearing Apparel	1,020	2,160	5,870	1,980	3,270	930
Leather and products of leather, Leather substitutes and fur	60	880	160	120	320	120
Footwear, except rubber, plastic or wood footwear	50	970	90	50	40	100
Wood and cork products	1,680	1,420	1,760	140	1,340	1,050
Furniture and fixtures	1,420	800	580	500	420	1,170
Papers and paper products	540	290	390	560	590	1,350
Printing, publishing and allied industries	60	210	1,630	280	450	410
Industrial chemicals	400	460	450	410	420	380
Other chemicals	330	250	490	120	230	190
Petroleum refineries	*	a	20	a	a	10
Miscellaneous products of petroleum and coal	10	0	0	*	0	10
Rubber products	680	790	490	430	500	300
Plastic products	850	1,700	1,560	1,230	1,010	880
Pottery, china and earthenware	170	220	270	230	20	310
Glass and glass products	80	110	90	230	160	180
Cement	710	140	330	90	230	420
Other non-machinery mineral products	670	830	530	310	440	190
Iron and steel basic industries	660	2,450	4,380	1,280	2,730	3,350
Non-ferrous metal basic industries	30	40	30	10	10	10
Fabricated metal products	2,840	1,330	3,470	990	510	1,360
Machinery	1,400	2,280	1,700	470	670	530
Electrical machinery, apparatus, appliances and supplies	2,800	1,580	2,280	1,050	1,680	2,020
Transport equipment	1,020	1,470	1,790	7,590	1,050	1,410
Professional and scientific and measuring and controlling equipment not elsewhere classified and photographic and optical instruments	a	0	a	20	a	10
Furniture and fixtures primarily of metal	10	0	90	*	0	0
Other manufacturing industries	330	270	130	150	220	170

*Note: Details may not add up to total as these were rounded-off to nearest tens.*

\* No responding establishments.

a Less than 5 cases.

**TABLE 4. SUMMARY STATISTICS ON DISABLING INJURIES  
IN MANUFACTURING, PHILIPPINES: 1991-1996 (cont'd.)**

(Establishments employing 10 and over.)

<b>Indicator</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
<b>By Establishment Size</b>						
10-99 workers	9,080	17,180	10,380	10,730	7,270	7,420
100-199 workers	3,340	3,720	7,390	3,000	2,580	2,610
200 or more workers	17,600	19,590	27,530	16,960	20,810	18,190
<b>By Extent</b>						
Fatal	30	70	40	20	70	50
Permanent Total Disability	20	60	10	10	30	30
Permanent Partial Disability	560	570	860	630	1,490	510
Temporary Total Disability	29,400	39,790	44,000	30,030	29,060	27,630
<b>By Nature</b>						
Cuts, lacerations, punctures, avulsions	14,060	20,300	21,550	13,790	15,430	13,900
Contusions, bruises, hematoma, abrasions	6,140	8,010	7,000	7,660	5,180	4,440
Strains, sprains, dislocations, fractures	2,660	4,290	4,310	3,110	3,210	3,290
Burns and scalds (thermal/chemical)	2,450	4,580	5,650	2,370	2,450	2,950
Crushing, spinal, cranial injuries	330	1,440	1,140	1,020	840	620
Amputations, loss of body parts	280	140	350	130	330	370
Foreign body in the eye and other eye Injuries	3,600	1,430	3,050	2,430	2,100	2,370
Electrocution, electric shock	70	30	210	40	80	90
Asphyxiation, poisoning	60	40	90	10	80	20
Other injuries	370	240	1,960	130	950	170
<b>By Area</b>						
National Capital Region (NCR)	15,510	16,420	25,800	18,150	14,040	12,830
Outside NCR	14,510	24,070	19,510	12,540	16,620	15,380

*Note: Details may not add up to total as these were rounded-off to nearest tens.*

*Source of data: Bureau of Labor and Employment Statistics, Occupational Injuries Survey.*