



# The examination of workers' compensation for occupational fatalities in the construction industry



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## ABSTRACT

Construction is one of the most hazardous and risky industries. Construction accidents may result in numerous damages and losses. Workers' compensation is an important source for estimating the costs of construction accidents. In this article, the applicable laws for occupational injuries and the compensation statistics for construction accidents are examined to identify the characteristics of construction accident compensation in Taiwan. Accident reports during the period 1999–2011 are extracted from case reports of the Northern Region Inspection Office of the Council of Labor Affairs of Taiwan. A total of 574 occupational fatality cases in the construction industry are then analyzed to explore the significant factors for construction accident compensation using analysis of correlation coefficients (Pearson's  $r$ ) and analysis of variance (ANOVA).

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## 1. Introduction

Occupational accidents not only injure employees' lives and damage employers' human capital, but also increase the social costs of a country. The International Labor Organization (ILO) estimated that the total cost of work-related injury and illness are 4% of the gross national product of a given country (SHIN et al., 2011). Numerous studies have demonstrated that occupational accidents and work-related diseases are under-compensated (Park and Bhattacharya, 2013).

Construction is one of the most hazardous and risky industries. (Behm, 2005; Imriyas, 2009; Imriyas et al., 2007; Li and Poon, 2009; Waehrer et al., 2007). The occupational accidents in the construction industry may result in numerous damages and losses. That is, the cost associated with construction accidents is immense (Fung et al., 2010). Workers' compensation is an important source for estimating the costs of construction accidents (Friedman and Forst, 2009). A study using workers' compensation data of the United States evaluated that the direct workers' compensation costs (medical treatment and indemnity) in the construction industry was four times higher than most other industries on average (Silverstein et al., 1998; Waehrer et al., 2007). Construction contractors were economically oppressed and battered by enormous compensation over the years (Li and Poon, 2009).

Workers' compensation data has been used previously to investigate the risk of injury for construction workers. Providing information about the employee, employer, injury costs, level of impairment, and worker occupation, workers' compensation data allows for the assessment of multidimensional risk factors related to construction work (Horwitz and McCall, 2004). Some studies estimating workers' compensation data have found that industry, occupation, legal counsel, union membership, and health care costs are in connection with claim costs (Friedman and Forst, 2009).

To reduce the damages of occupational accidents, almost all industrialized countries have proposed laws for the prevention of occupational accidents and work-related diseases. It is easily predictable that these different means may have significant implications for system performance, including employers' and workers' incentives to improve workplace safety and hence impact the actual occurrence rates of occupational injuries and diseases (SHIN et al., 2011). Thus, policymakers require a high level of realization of policy effects and economic incentives (Wong et al., 2014). Nevertheless, less has been discussed about the connection between various legislation and construction accidents compensation, or whether the amount of compensation vary depending on liabilities for safety management.

In this article, the applicable laws for occupational injuries and the compensation statistics for construction accidents are examined to identify the characteristics of construction accident compensation in Taiwan. A total of 574 occupational fatality cases in the construction industry are then analyzed to explore the significant factors for construction accident compensation using analysis

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of correlation coefficients (Pearson's  $r$ ) and analysis of variance (ANOVA). In order to explore policy impact on workers' compensation, this article focuses not only on general factors, but also on some specific factors related to safety management regulations on construction sites. Further, subcontracting is prevalent in the construction industry, and it allows work on more than one phase of the project to be done at once. As all contractors are jointly responsible to compensation for occupational accidents and safety management on construction sites, number of subcontracting layers is also included.

## 2. Workers' compensation for occupational accidents in Taiwan construction industry

### 2.1. Workers' compensation for occupational accidents

In many countries, employers are legally obligated to provide employees with a safe and healthy environment. However, the payment of compensation for work injuries is quite different. In some countries (e.g. Indonesia), compensation of employment injuries is considered as the employers' responsibility and therefore employment injury schemes are normally financed by employers. In some countries (e.g. Germany, and Lebanon), employers shall have contracts with insurance companies to cover the costs of the medical treatment and the compensation for work injuries of their workers. In other countries (e.g. Mexico), the government provides a system of financial protection, including workers' compensation benefits. The Japanese government acts as the insurer, although large companies may self-insure or may use commercial carriers for extra protection.

Besides, in the United Kingdom, any employee who is injured at work is entitled to treatment from the National Health Service and to claim benefits in certain circumstances. Employees may be entitled to bring a claim for loss in the civil courts. Employers are required by law to take out compulsory insurance provided by private insurance companies against their civil liabilities. If the employee's civil action succeeds, the insurance policy will ensure that the employee is compensated (Arrigo et al., 2011).

### 2.2. Various legislation for construction accident compensation in Taiwan

In Taiwan, the main applicable laws for occupational accident are Labor Insurance Act and Labor Standards Law (Labor Insurance Act, 2012; Labor Standards Law, 2011). According to Labor Insurance Act, all employers are required to purchase insurance policies that will cover obligation to their employees in the occurrence of an accident arising out of and in the course of employment. It is "a no fault liability" scheme where the employer is liable to pay even though the employee might have performed acts of faults of negligence when the accident happened (Saram and Tang, 2005). In case the insured person's death caused by occupational accident, the insured person's family could claim for a five-month funeral grant. Furthermore, either survivors' pension benefit and a ten-month occupational accident compensation, or a lump sum survivors' allowance and a forty-month average monthly insurance salary should be granted.

According to Article 59 of the Labor Standards Law, an employer shall pay compensation to a worker who is injured, sick, incapacitated or deceased owing to an occupational accident. But for the amount an employer has already paid as compensation under the provisions of the Labor Insurance Act or other applicable laws, he may be exempted therefrom. When a worker dies of occupational injury or disease, an employer shall pay funeral subsidy equivalent to five months of average wage and a lump sum survivors compensation equivalent to 40 months of average wage.

According to Labor Standards Law, when a worker dies of occupational injury or disease, an employer shall pay a 45-month as workers' compensation. The compensation is the same, whether the employer has 'fault liability' or not. Also, the individual factors of a victim, such as worker age, are not considered.

According to Labor Insurance Act, the compensation is on the basis of a worker's average monthly insurance salary. The basis of Labor Insurance Act is different from that of Labor Standards Law. A worker's average monthly insurance salary is much less than his average wage. Even if drawing death benefits from the Bureau of Labor Insurance according to Labor Insurance Act, the worker's family could be caught in an economic predicament. The worker's family will probably claim for additional compensation from the employer according to Labor Standards Law. As an employer may be exempted from the amount of benefits under the provisions of the Labor Insurance Act, the compensation under the provisions of the Labor Standards Law is much more than the amount under the provisions of the Labor Insurance Act for an employer. Consequently, an employer may prevent the worker from claiming for the benefits of occupational accident under the provisions of the Labor Insurance Act.

According to Article 79 of the Labor Standards Law, an employer who violates the provisions of Article 59 shall be punished by fine of not less NTD 20,000 but not exceeding NTD 300,000. The average compensation of 574 occupational fatality cases, whose compensation procedures have been finished, is about NTD 5,000,000 (refer to Table 1). As the fine is relatively less, an employer cannot feel so threatened to comply with Article 59. Therefore, the compensation procedures of about 29% of occupational fatality cases (232 cases) have not been finished in this study.

More compensation, without being restricted by the foregoing limitations, could be claimed under the Civil Code while an employee could prove the employer's 'fault liability' for inducing the accident (Saram and Tang, 2005). For a lawsuit is exhausting and time-consuming, the worker's family can probably refuse to file an action (Imriyas et al., 2007).

### 2.3. Statistics on compensation for occupational fatalities in Taiwan construction industry

Compensation procedures in 232 out of 806 cases have not been completed yet. These cases often undergo years of lengthy proceedings before the families receive any compensation. In some cases, the families of victims simply cannot get compensated as a result of employers and contractors engaging in fraudulent conveyance. This situation forces most families to take an amount offered by an employer or contractor in order to avoid court proceedings. Recorded compensations ranging from about NTD

**Table 1**

The compensation of occupational fatalities in the Taiwan construction industry.

Year	N	Min	Max	Mean	SD
1999	70	112,089	12,191,403	4,316,729	2,697,738
2000	56	396,315	11,889,450	4,810,962	2,542,557
2001	60	136,481	13,648,077	4,894,655	2,640,992
2002	42	981,626	12,564,808	5,304,518	3,245,262
2003	57	767,789	11,977,516	5,228,826	2,830,513
2004	52	1,051,668	14,372,796	4,910,341	2,479,449
2005	50	176,173	9,454,631	4,646,241	2,242,543
2006	64	339,259	10,155,143	4,842,921	2,215,003
2007	23	430,740	8,937,850	4,820,774	2,191,083
2008	55	165,823	9,396,613	4,550,086	2,362,633
2009	24	224,415	8,976,600	5,031,927	2,554,698
2010	21	159,815	11,341,724	4,552,228	2,658,038
Total	574	112,089	14,372,796	4,810,434	2,562,709

Note: 1 USD  $\approx$  30.100 NTD (8/1/2013).

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