

# **Diagnosis and monetary quantification of occupational injuries by indices related to human capital loss: Analysis of a steel company as an illustration**

許昭俊

Jau-Juan Sheu;Jing-Shiang Hwang;Jung-Der Wang

摘要

## **Abstract**

Prevention of occupational injuries is an important task of human resource management. In this study, new indices of human capital loss of occupational injury including cumulative injury rate, proportion of potential workdays lost, and potential salary lost were applied to the analysis of registry data of occupational injuries from 1986 to 1994 of a steel company in Taiwan. In addition, we compared these indices with disabling frequency rate and severity rate. The results showed that the average disabling frequency rate and cumulative injury rate of the whole company were 4.12 and 0.41, respectively; and the average disabling severity rate and proportion of potential workdays lost of the whole company were 563 and  $229 \times 10^{-6}$ , respectively, during 1986-1994. There was no consistent improvement in occupational safety in this period. The average potential salary lost of the whole company was more than US\$ 2 million per year with a discount rate of 0.04, which was equivalent to 92 times of average annual income of a worker. The major monetary loss were due to non-traffic injuries of operators and traffic injuries of non-operators, which amounted to US\$ 145 and 152 per person per year. As the new indices can provide additional information on lifetime occupational risk and human capital loss in monetary values, we concluded that they may be useful supplementary tools for monitoring and analyzing occupational injury data in a company.