

Introduction for Volume 8, Issue 3

This issue contains 6 papers. There are 4 contributions written in English and 2 contributions in Chinese with English abstracts. The papers can be divided into four topics: risk assessment, financial risk mitigation strategy, risk perception and risk analysis.

There are two papers in risk assessment. The paper “Assessing the Influence of Environmental Factors on Spatial Soil Erosion Risk based on the Certainty Coefficient Method” by Jun Wang, et al., assessed the spatial relationships between soil erosion risk and the environmental factors affecting soil erosion. The research is significant for monitoring future land use/cover changes, including agricultural expansion and deterioration of forest resources. The results indicate that soil erosion is highly correlated to specific slope categories, elevation zones, distance to rivers, land use/cover type, stratum lithology, soil types and annual 24h maximum rainfall. The second paper “Study and Application on Risk Assessment Method of Coal Worker Pneumoconiosis Based on Logistic Regression Model” by Qian Zhang, et al., research the risk assessment method of coal-worker's pneumoconiosis caused by coal dust exposure, predict the incidence of coal-worker's pneumoconiosis, and provide technical basis for occupational risk management. In this study, a practical quantitative approach was proposed to assess the risk of coal-worker's pneumoconiosis caused by coal dust exposure. This method could be applied in evaluations of occupational disease hazard in construction projects and help to control and manage the risk of coal-worker's pneumoconiosis.

There is two papers in financial risk mitigation strategy. The first paper “Study on the Relationship between Financial Development and Poverty Alleviation in Guizhou Province Based on Kuznets Curve” by Jianchun Yang, et al., used Granger causality test and regression analysis to analyze the relationship between financial development and poverty alleviation in Guizhou province. The results present that the relationship between financial development and poverty alleviation follows the Kuznets inverted U-curve, which means that financial development may have positive effects on poverty alleviation in the early stage and then have negative effects on poverty alleviation in later stage. Based on this, in-depth analysis was conducted and development suggestions were put forward. The second paper “Research on the SME's Collateral Credit Rationing under Loan Risk Compensation Mechanism” by Changbing Yang, et al., discusses the function of loan risk compensation in the collateral credit rationing model. According to the derivation of my model, we find when the bank have some requirements on interest and collateral, at the same time, we add the loan risk subsidy variable into the above model, loan risk subsidy can lower the bank's collateral requirements for the enterprise, therefore, we can conclude that loan risk compensation can effectively alleviate the credit rationing faced by enterprises.

There is one paper in risk perception. The paper “A Description of Earthquake Risk Perception in Intelligent Mathematics” by Chongfu Huang, proposes an framework of intelligent mathematics, which consists of factor space, information diffusion, and internet of intelligences. This paper demonstrates how to use intelligent mathematics to describe earthquake risk perception. The concept of earthquake risk is described in the factor space, and the knowledge of earthquake risk is formed in association learning based on information diffusion. Different knowledge systems precipitate different acquired consciousnesses. The security instinct affects the perception of risk. For a region, the risk consciousnesses of the stakeholders could be integrated with the internet of intelligences to form a consensus of the earthquake risk perception.

There is one paper in risk analysis. The paper “Analysis of Ultraviolet Radiation Characteristics and Related Factors in Huangshan Scenic Area” by Jianyong Xu, et al., analyzes the relationship between the daily, monthly and seasonal variation characteristics of ultraviolet radiation intensity and its related meteorological elements by Using the ultraviolet observation data of Huangshan Scenic area from March 2017 to February 2018. The results show that the diurnal variation of ultraviolet radiation intensity in Huangshan Scenic Area is normal distribution at noon; the monthly average ultraviolet radiation intensity reaches the maximum in April and May; the ultraviolet radiation intensity in all seasons is above 4, and the largest in spring. Autumn and winter

are second, and summer is the smallest. Cloud amount, relative humidity and air pressure are all significantly negatively correlated with UV radiation intensity, and cloud amount, especially low cloud amount, is the most critical factor affecting UV radiation intensity.

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Editors-in-Chief

Prof. Chongfu Huang
Beijing Normal University
No.19 Xijiekouwai Street
Beijing 100875, China
Email: hchongfu@126.com

Prof. Gordon Huang
Faculty of Engineering and Applied Science,
University of Regina
Regina, Sask S4S 0A2, Canada
Email: gordon.huang@uregina.ca