

Mitigating Supply Chain Risk for Sustainability Using Big Data Knowledge: Evidence from the Manufacturing Supply Chain

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Abstract : The sustainable supply chain is gaining popularity among practitioners because of increased environmental degradation and stakeholder awareness. On the other hand supply chain, risk management is very crucial for the practitioners as it potentially disrupts supply chain operations. Prediction and addressing the risk caused by social issues in the supply chain is paramount importance to the sustainable enterprise. More recently, the usage of Big data analytics for forecasting business trends has been gaining momentum among professionals. The aim of the research is to explore the application of big data, predictive analytics in successfully mitigating supply chain social risk and demonstrate how such mitigation can help in achieving sustainability (environmental, economic & social). The method involves the identification and validation of social issues in the supply chain by an expert panel and survey. Later, we used a case study to illustrate the application of big data in the successful identification and mitigation of social issues in the supply chain. Our result shows that the company can predict various social issues through big data, predictive analytics and mitigate the social risk. We also discuss the implication of this research to the body of knowledge and practice.

Keywords : big data, sustainability, supply chain social sustainability, social risk, case study

Conference Title : ICECC 2017 : International Conference on Environment and Climate Change

Conference Location : Rome, Italy

Conference Dates : May 04-05, 2017