

Big Data for Disaster Management and Real estate Management in Smart Cities

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SUMMARY

Disaster Management is an important global problem as they affect any region on globe and so effective disaster management is a global challenge. Large-scale disasters e.g, the 2004 Indian Ocean earthquake and tsunami, 2015 Nepal Earthquake and multi-hazards that affect many countries.

Urban population in South Asia has increased to 130 million and over 300 million inhabitants are expected to get added to urban population and also in future cities. Price theory predicts that buyers will attempt to discount property prices for risk due to disasters if known earlier. Valuation experts estimate the value of property at risk to secure investments at the best interest of client. Disasters in general influences the market value of real estate. But there exists a large spread when it comes to discount rates. In practice valuation experts use individual loadings or discounts by using specific numbers derived from comprehensive fundamental analysis for quantifying market value. Consumer confidence in real estate will be affected by the long term looming long term effect that the threat of disaster would have on real estate.

□ Big Data is a great global opportunity for disaster management and has already demonstrated its usefulness for both dedicated sensor networks and multi-purpose sensor networks. Smart cities particularly use Information and communication technologies and so Social media data can provide “real-time” information for the government to understand the transitions and make effective decisions through multiple phases of disaster management. Social media data is a good data source for detecting and monitoring disaster events. A number of recent studies have suggested that social media data streams can be used to mine actionable data for emergency response and relief operation.

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Smart cities governance can leverage on this Big Data source to plan effective disaster management and thereby proactively preventing proactive real estate market turbulences. A proactive approach to prevent market turbulences would mean positive economic benefits to all the stakeholders involved in the economic development process. The scope of this paper is to provide for a framework to use Big Data to drive positive economic benefits in particularly disaster prone areas of the globe. This research article also investigate the nature of social media generated within the time span of a disaster on real estate and smart cities , and define a list of content categories taking into consideration the information involved in disaster phases including preparedness, emergency response, and recovery.

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