

## Abstract

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**Project Code : TRG6080015**

**Project Title : Exploring Incentive Mechanisms for Mobile Crowdsourcing**

**Investigator : Jurairat Phuttharak  
Prince of Songkla University**

**E-mail Address : jurairat.b@psu.ac.th**

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The rapid adoption of mobile devices enables capture and transmission of a variety of sensor and user-contributed data, creating a new data collection paradigm and a wide range of services, often termed as mobile crowdsourcing. However, we are still investigating factors contributing towards the effectiveness of such systems. One key factor to succeed in mobile crowdsourcing applications is the incentive mechanism, which motivates people to contribute to a crowdsourcing effort. In this research, we conducted field experiments that compared the effectiveness of non-monetary and monetary incentive mechanisms, using both quantitative and qualitative methods. The focus was on an exploration of how these mechanisms motivate users' performance in a mobile crowdsourcing environment. In the experiment, we developed a smart zoning application that allows users to share areas of the cities they perceived as safe or unsafe. The results from this study contributes to research in mobile crowdsourcing for urban understanding. Taken together, these results suggest that payment-related incentives can not only engage people's interest in project participation but also help improve their work performance in terms of productivity and quality. Notably, a fixed-price financial reward mechanism is best suited for short period data collection and achieving data quality. Also, referral incentive mechanisms, if properly designed, have the potential to extend user coverage, both spatially and temporally. These results can be helpful with regard to the formulation of guide- lines on how to create and organize effective payment-based incentives for crowd involvement in cities.

**Keywords : Mobile Crowdsourcing, Incentive Mechanisms, Crowdsourcing**