Creating Opportunity by Connecting the Unconnected
Mobile phone based Agriculture Market Information Service for Farmers in Bangladesh

av

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Abstract


This thesis is framed within the research area of Information and Communication Technologies for Development (ICT4D), which is concerned with how ICT can make a difference to the lives of the poor. This study focuses primarily on mobile phones and how they can be used as part of an Agriculture Market Information Service (AMIS) in order to provide crucial information to farmers in Bangladesh. AMIS principally collect, manage and disseminate agricultural market prices and related information through various processes and media. These services are mainly used by farmers. The research question of how mobile phone-based AMIS can be designed and deployed in order to improve opportunities for farmers in Bangladesh is investigated through a design science research approach in four steps; understanding the scope and challenges related to AMIS in least developed countries; diagnosing the situational realities of farmers of Bangladesh; understanding the process of adopting mobile phones and investigating market information practices and preferences in a rural context; and finally designing and implementing a mobile phone based AMIS and evaluating the efficiency and effectiveness of it for the farmers of Bangladesh.

In this thesis, development is viewed in terms of bringing about an increase in farmers’ capability set directed towards the utilization of resources for the purpose of production and trade. Information and knowledge are important drivers of development and poverty reduction: ICT can create new opportunities to expand the availability, exchange, and impact of information and knowledge.

This thesis contributes to ICT4D research and practice through empirical findings, the design of an AMIS, test results, and the development of analytical tools. Its major contributions include an increased understanding of farmers’ attitudes and preferences towards the use of technology in general, and mobile phones in particular, and a broader understanding of ICT for human development in the context of poor rural regions.

Keywords: ICT4D, agriculture market information service, design science research, mobile phones, farmers, technology acceptance, artifact design, Bangladesh, least developed countries.

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