

**Abstract for POSTER**  
titled  
**“Cell phones for Development Project: A Work-in-Progress”**

**1.0 Background**

This project funded by the University of Tennessee (UT) advances the dissertation research (Potnis, 2010) titled “Mobile Technologies & Socio-economic Opportunities for Disadvantaged Women: A Study of Information Behavior in a Developing Nation Context”, which was conducted during 2008-09. Information and communication technologies (ICTs) have been championed by the United Nations and others as one of the key media to open up socio-economic opportunities for disadvantaged populations. Studies lead us to believe that after being introduced to ICTs, users’ information behavior changes, enabling them to benefit from socio-economic opportunities. Using Wilson’s (1997) Revised General Model of Information Behavior (Model), the dissertation research had explored the role of cell phones – the fastest spreading information and communication technology (ICT) – in shaping the information behavior of disadvantaged population, with its implications on socio-economic opportunities.

To identify one of the most disadvantaged cell phone owner and user groups, the dissertation research had applied stratified purposive sampling with 6 filters: (i) citizens of India, the country with the highest number of citizens living under the poverty-line defined by the Government, (ii) resident in rural context with less socio-economic opportunities compared to urban context, (iii) “backward class”, (the term was coined and defined by the Government of India) disadvantaged population from socio-economic and education perspective, (iv) female in male-dominated society, (v) individuals with daily income less than a dollar (the poverty-line defined by the World Bank), and (vi) cell phone owners and users.

As a result of the group-administered surveys completed by 100 respondents in the first phase, unmarried girls (UMG) and women married for more than 20 years (MW) had emerged as two groups

with distinct information behavior. In the second phase, 12 UMG and 10 MW were interviewed on the phone in Marathi, their native language. Software-aided analysis had refined the Model's construct from *context of information needs* to *context of communication and information needs*, which also acts as the main controller of information behavior for respondents. The dissertation research had proven that change in information behavior was an indispensable, intermediate stage between access to cell phones, and the use of cell phones for exploring socio-economic opportunities.

## **2.0 Theoretical Lenses for Work-in-progress Project**

This UT-funded project titled "Cell phones for Development" advances the research theme of the dissertation research synthesized above. At the 33<sup>rd</sup> Research Symposium, researcher aims to seek feedback on this ongoing project studying the role of information acquired over cell phones in the development experienced by disadvantaged women from rural and urban slums in India. Development of disadvantaged women will be observed based on their socio-economic opportunities, empowerment, enhanced productivity, freedom to make decisions, political freedom, safety and security, and enhanced social status (Sen, 1999). In addition, the current project assesses the role of information in development using theoretical lenses from Informatics (gender digital divide & information asymmetries), Information Systems (acceptance and use of technology), and Management (cell phone-enabled self-development behavior).

## **3.0 Project Overview (Research Questions, Unique Features, & Applications)**

This work-in-progress project has three main goals, namely, (a) to donate new cell phones to 50 needy, disadvantaged women from rural and urban slums in India, (b) to track usage of cell phones by women and their immediate family members living with them, and (c) to make sense of implications of various uses of cell phones the behavioral evolution of new users in the period of 36 weeks. This project explores the following research questions: 1. What is the impact of access to cell phones over

disadvantaged women's lives? 2. How do cell phones contribute to disadvantaged women's development? 3. What skills, resources, conducive factors, & qualities are required by participants to use cell phone for their development? 4. How do women acquire skills, resources, & training required to use cell phone for their development? 5. How do women act on information acquired over their cell phones for progressing toward development? 6. What are the challenges & barriers faced by women in using their cell phones for the development? 7. How could cell phones fit better to women's needs, interests, & requirements for their development? 8. What is the relationship between gender digital divide and information divide? And, 9. What are the environmental implications of access and usage of cell phones by disadvantaged women from a developing nation?

Unique features of this project are as follows: (a) Philanthropic Approach: the poorest of the poor women are benefited by new cell phone; (b) Multi-theoretical Analysis: Lenses from FOUR distinct disciplines are borrowed to study cell phone-enabled development; those disciplines with specific theoretical lenses are: (i) Informatics: Gender Digital Divide (ITU, 2009), Information Asymmetries (Heeks, 2007), (ii) Information Systems: Unified Theory of Acceptance & Use of Technology (Venkatesh et al., 2003), (iii) Management (self-development behavior): Model of Development Behavior (Maurer et al., 2001), and (iv) Development: Sen's "Development as Freedom" Concept (1999); (c) this project is a micro-level (person-centric) study; (d) it has multi-staged data collection & analysis, where surveys will be distributed to 300 disadvantaged female cell phone users from rural and urban slums (existing cell phone users) each; at the same time, diaries will be given to 50 new users of cell phones from rural and urban slums; (d) Methodologically, diary writing exercise fills gap between small ethnographic studies & large-scale surveys. Thus this ambitious socio-technical research inquiry compares cell phone-mediated development experienced by female cell phone users from the following groups: (a) Rural (325 women) vs. Urban (325 women) & (b) New (50 women) vs. Existing owners (600 women).

This research project would serve as a reference for crafting policy and designing dollar-aided strategies for sustainable development, using mobile technologies. The private sector could apply research findings for better human-centered designs and interfaces of mobile technologies, and improve marketing to boost the sale in developing nations. Moreover, four distinct academic disciplines will be enriched by research findings, enhancing the overall understanding about the role of cell phones in the development of disadvantaged women from developing nations.

## References

Heeks, R. (2007). *m-Development: Current Issues and Research Priorities*. Manchester, UK: Information, Technology and Development, Development Informatics Group, University of Manchester.

ITU. (2009). *Measuring the Information Society*. Geneva, Switzerland: ITU.

Maurer, T. J., Pierce, H. R., & Shore, L. M. (2002). Perceived Beneficiary of Employee Development Activity: A Three-Dimensional Social Exchange Model. *The Academy of Management Review*, 27(3), 432-444.

Potnis, D. (2010). *Mobile Technologies & Socio-economic Opportunities for Disadvantaged Women: A Study of Information Behavior in a Developing Nation Context*. Dissertation, State University of New York - University at Albany, Albany, NY.

Sen, A. (1999). *Development for Freedom*. New York: Knopf.

Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, 27(3), 425-478.

Wilson, T. (1997). Information Behaviour: an interdisciplinary perspective. *Information Processing and Management*, 33, 551-572.