

## Chapter 3

# Readiness as a Novel Construct of Readiness Acceptance Model (RAM) for the Wireless Handheld Technology

**Abdul Hafeez-Baig**

*University of Southern Queensland, Australia*

**Raj Gururajan**

*University of Southern Queensland, Australia*

**Nilmini Wickramasinghe**

*Epworth HealthCare, Australia & Deakin University, Australia*

## ABSTRACT

*In this conceptual chapter we have reviewed prominent theories or models in relation to the adoption of technology for wired devices. We have identified shortcomings in these leading models in predicting adoption behaviour associated with the wireless technology. The shortcomings are particularly acute in wireless handheld technology by comparison with desk top technology in which the adoption models have been extensively studied. Here we propose “Readiness Acceptance Model” (RAM) as new conceptual model for the adoption of ICT in conjunction with wireless handheld technology. Readiness is defined as user’s ability to perceived readiness of the business in the context of organizational, technological, perceptual, behavioural, and environmental attributes for the acceptance of wireless handheld devices. In formulating the conceptual framework for RAM we incorporated variable characteristics from the nine prominent models reviewed here. We believe these considerations would allow RAM to be useful in wireless handheld technology ICT domains.*

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## **INTRODUCTION**

Scientists in the area of information systems and information technology (IT) have preoccupied in the recent decades on explaining and understanding the phenomena of adoption behaviour. One of the common objectives among all the theories and models is to understand behavior of use or intention-to-use information technology (IT). None of these theories has the ability to explain technology adoption phenomena in its own right. However, they could provide a sound background for developing a framework to explain adoption phenomena for wireless handheld technology in the globalized economy. In keeping this in mind we have reviewed nine prominent adoption models or theories (namely TRA, TPB, IDT, TAM, MM, C-TAM, SCT, and MPCU, and UTUAT).

The nine predominant theories are: Theory of reasoned action (TRA); Theory of planned behavior (TPB); Social cognitive theory (SCT); Innovation Diffusion theory (IDT); Technology acceptance model (TAM); Motivational model (MM); PC utilisation model (MPCU); Combined TAM (C-TAM) and TPB; and Unified theory of technology acceptance (UTUAT). These theories have dealt with a platform where users go to the computers. However, the emerging paradigm is the data going to users, especially facilitated by mobile devices and this domain appears to be radically different to the 'wired' domain for the following reasons:

1. The data stream in the mobile device environment is based on small devices such as the PDAs that have limited processing capabilities;
2. The data are in small sets rather than huge databases;
3. The main purpose is to facilitate data access from anywhere and thus the concept of connectivity assumes utmost significance;
4. Users know how to access the data and hence training issues assume less significance in generic applications; and
5. Affordable access cost.

For these reasons it is imperative that we revisit the theories with a view to assess their applicability to wireless handheld devices. Review of the 9 major theories may help us identify shortcomings of the theories in explaining the adoption phenomena in information system domain. These in turn may allow us to formulate new conceptual models for the adoption of wireless handheld technology in information system domain.

## **Review of Current Models**

TRA, TPB, IDT and TAM share some similarities. These theories suggest that beliefs lead to attitude, attitude toward the technology and, as a result, lead to behavioural intentions (willingness to use the technology) which reflect in usage of Information Systems / Information Technology (IS/IT). For example, one of the major constructs of Technology Acceptance Model (TAM) is Perceived Usefulness PU, and this is quite similar (individual perceived benefits can be achieved through the use of technology) to the philosophy of relative advantage mentioned in Innovation Diffusion Theory (IDT). The situation is not much different (in terms of complicity associated with the use of technology) with Perceived Ease of Use PEU and Complexity in TAM and IDT respectively. In TRA and TAM, it is assumed that individuals are free from any constraint and will act whenever they have an intention to do so. TPB assumes that

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