

The Adoption of Radio Frequency Identity Technology in Hospitals

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RFID Technology

- **Radio Frequency Identification (RFID) Technology use is expected to increase from \$965 million in 2002 to \$4.6 billion in 2007 (Hickey, 2004; Ward, 2004).**
- **RFID sales trends for supply chain applications is expected to grow 38% annually with healthcare as one of the fastest growing segments (Hickey, 2004).**

RFID Technology Continued

- RFID components include wireless radio frequency tags, readers, a host computer, and application software (Wicks et al., 2006).
- RFID tags can be *active*, *passive*, or *semi-passive* (Moeeni, 2006).
- In healthcare settings, RFID technology applications may include asset tracking and equipment monitoring, patient locator devices, pharmacy inventory controls, access control monitoring abilities (Darin & Miguel, 2006).

Research Questions

- To determine what influences the perceived ease of use and the perceived usefulness of RFID technology in healthcare organizations.
- To determine if perceived ease of use and perceived usefulness are positively related to intention to use RFID technology in healthcare organizations.
- To determine if perceived cost, perceived trust, perceived risk, perceived supplier support, and perceived technical compatibility affect intention to use RFID technology.

Technology Acceptance Model (TAM)

- TAM has been used widely to predict user acceptance and use of information technology, specifically in the workplace (Davis, 1989; Venkatesh, et al., 2003; Taylor & Todd, 1995).
- TAM describes the influence of perceived usefulness and perceived ease of use on intention to use technology (Davis, 1989).

TAM Continued

- TAM has been applied successfully to numerous areas of study; for example
 - Web site usage (Teo et al., 1999; Moon & Kim, 2001)
 - Online shopping (Chen et al., 2002; Gefen et al., 2003)
 - Cultural differences (Straub et al., 1997; McCoy & Jones, 2005)
 - Mobile commerce (Wu & Wang 2005).

Our Contribution

- We extend the TAM model to the healthcare industry.
- We include the role of suppliers in healthcare organizations with respect to intention to use RFID technology.

Proposed Model & Hypotheses

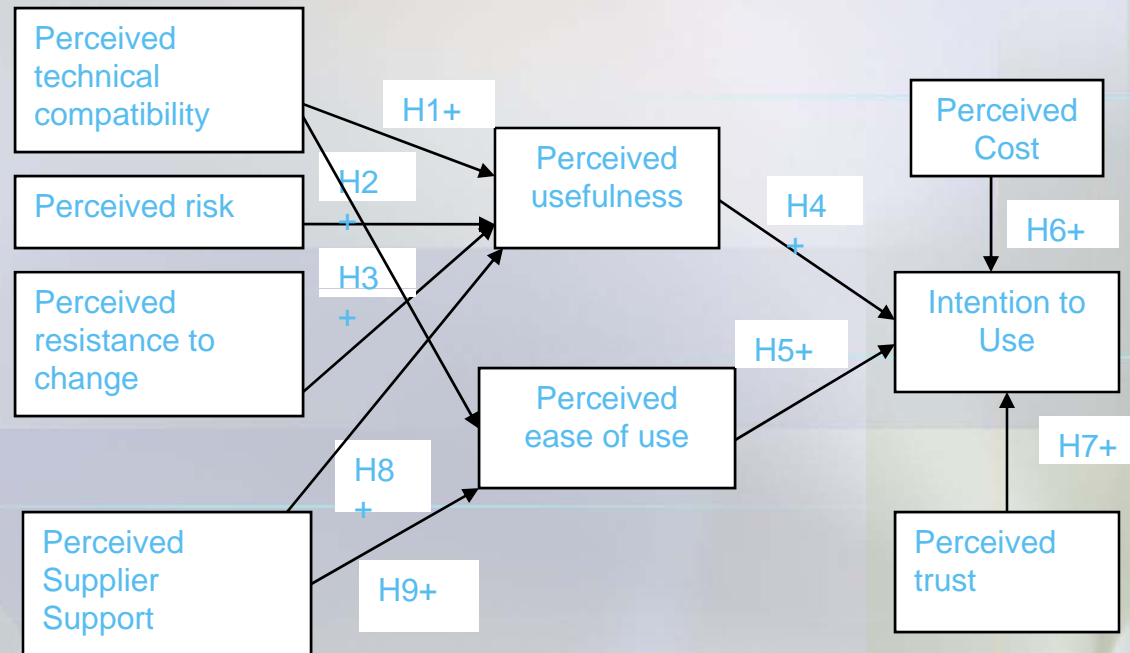


Figure 1. A theoretical model proposing influences on RFID.

Method

- Interview IT staff at several area hospitals
- Survey approximately 2000 IT managers in healthcare organizations
- Use path analysis to determine relationships

Summary

- **Summary of our initial (preliminary) findings based on the interviews that we conducted at the local hospitals.**

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