

Oral Defense Announcement

University of Missouri – St. Louis Graduate School

An oral examination in defense of the dissertation for the degree
Doctor of Business Administration with an emphasis in Strategic Management

Prakash B. Shahi

M.S. Electrical Engineering, 2001, Washington University in St. Louis,
B.A. Economics, 1998, Berea College

Factors Influencing the Adoption of Smart-home Appliances: Users' Perspectives

Date: July 18, 2022
Time: 9:00 a.m. to 11:00 a.m.
Place: 106 ABH

Abstract

Smart appliances will be a significant part of the annual \$300 billion smart-home markets by 2025. Their use is expected to grow at a compounded annual growth rate of 31% for the foreseeable future. Currently, 12-16% of households use smart-home products in the U.S., including thermostats, TVs, refrigerators, coffee machines, garage door openers, and vision-equipped doorbells. Smart appliances provide significant benefits to us over traditional appliances. Smart appliances simplify our lives by automating various tasks in our homes and allowing us to monitor and control them remotely from our offices, grocery stores, and wherever we may be.

Despite the usefulness and popularity of some smart appliances, recent research has shown that their adoption rate may not be increasing as expected. Every day, manufacturers are rushing to make appliances smarter and increase their usefulness. However, if the manufacturers do not address consumers' concerns about their smart appliances, they may not readily be adopted solely based on their usefulness. Using the UTAUT (universal theory of acceptance and use of technology) framework, this research qualitatively explores the critical factors antecedent to consumers' adoption behavior of smart appliances.

The findings from this research have expanded the application of UTAUT to address the adoption of smart-home appliances. Further, to aid the adoption process, this research makes important suggestions to practitioners involved in developing, manufacturing, and marketing smart appliances: the need to focus on interoperability, the need to lower the consumers' effort, and the need to handle consumers' data ethically. Additionally, the research also offers remedies to counteract consumers' resistance to the adoption of smart appliances: providing an acceptable level of automation and connectivity in appliances.

Defense of Dissertation Committee

Joseph Rottman, D.Sc., Chairperson
Dinesh Mirchandani, Ph.D., Committee Member
Douglas Smith, Ph.D., Committee Member