

The paper examines factors that most importantly affect customer adoption of ATMs in Ghanaian banking industry. The study was a cross-sectional survey that employed the use self administered questionnaire to collect data from a sample of 256 respondents through personal contact. Through confirmatory factor analysis approach using AMOS 18.0, the findings indicate that, two items of perceived ease of use, four items of perceived benefits and two items of perceived barriers critically affect the adoption of ATMs in the research context. Given that the research model is theoretically grounded and indicates high goodness-of-fit indices, factor loadings, validity and reliability, it offers practitioners the basis for developing effective customer driven strategies for delivering ATM services. In spite of the limitations of the study, the findings also confirm and further our understanding of factors affecting consumer adoption of technology in electronic banking. Index Terms—banking industry, Automated Teller Machine, Ghana, perceived benefits, perceived ease of use, perceived, barriers, self-service, TAM, Confirmatory factor analysis.