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Title : Impact of Antecedent Factors on Collaborative Technologies Usage Among Academic Researchers in Malaysian Research Universities

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Research collaboration through the use of collaborative technologies has the huge potential to improve research publication performance. In order to ascertain optimal usage of collaborative technologies in Malaysian research universities, the main objective of this study is therefore to investigate significant antecedents or drivers to usage of collaborative technologies. The research objectives addressed by this study include (a) the investigation of the relationships between each of these antecedent factors of personal innovativeness in IT, task-technology fit, perceived management support, subjective norm and perceived peer usage with perceived usefulness and individual usage; and (b) the investigation of the relationship between perceived usefulness and individual usage of collaborative technologies for research collaborations. Renowned technology acceptance theories and models, namely the Technology Acceptance Model (TAM) (Davis, Bagozzi & Warshaw, 1989), the Theory of Planned Behavior (Ajzen, 1985; Ajzen, 1991), the Task-Technology-Fit model (TTF) (Goodhue & Thompson, 1995) and the Technology-Organization-Environment (TOE) model (Tornatzky & Fleischer, 1990; Zhu & Kraemer, 2005) were used to form the broad hybridized research model of this study. The research model assessed the antecedents of collaborative technologies usage by looking at three critical contexts of technological, organizational, and social perspectives. The model also investigates the mediating effect of perceived usefulness on individual usage. The study used questionnaire survey method as its main data assessment instrument. Data analysis was conducted on data

collected from 156 academic researchers from the five Malaysia research universities namely; Universiti Kebangsaan Malaysia (UKM), University of Malaya (UM), Universiti Sains Malaysia (USM), Universiti Teknologi Malaysia and Universiti Putra Malaysia (UPM). The study employed the extensive quantitative approach of the structural equation modeling (SEM) method to evaluate the research model and to test the hypotheses. The main findings of this study are that (a) personal innovativeness, task-technology fit and perceived peer usage are significant predictors of individual usage of collaborative technologies; (b) perceived managerial support and subjective norm were found not to be significant predictors to perceived usefulness and individual usage; and (c) perceived usefulness is a significant mediator to individual usage in that perceived usefulness had fully mediated personal innovativeness while partially mediated peer usage. This study is perhaps one of the first to address the collaborative technologies usage in these five research universities in Malaysia using a broad extensive hybrid model to investigate influences of antecedent factors on collaborative technologies usage. The results provide practical insights on how the Malaysian higher education sector and other research organizations of not-for-profit structure could enhance on their collaborative technologies usage.