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Technology Diffusion - A Social Network Perspective

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ABSTRACT

Information Systems (IS) research on technology acceptance has mainly explored user acceptance at the individual level, with the prominent framework being the Technology Acceptance Model (TAM). Research involving TAM and other similar frameworks has tended to be user-centric with primary focus on individual attributes that could influence user perceptions towards the technology. This study focuses on technology diffusion at the organizational level, in particular the process of technology related knowledge dissemination, organizational learning, and the influence of the social context in which implementation and acceptance takes place, for complex large-scale integrated systems such as Enterprise Resource Planning (ERP). To address these issues and to complement the findings of the current individual-centric acceptance research, this study adopts a social network perspective towards technology diffusion within an organization. It is expected that technology diffusion within and across organizational units will be subject to and influenced by the characteristics of interpersonal relations embodied in the network structure. Thus, organizational units having close, diverse, and dense ties among its members would have rapid and efficient information flows that serve to lower knowledge barriers and facilitate organizational learning; hence, we can expect a faster, smoother and more efficient diffusion process. Data for this study will be collected at four points in time from over 1500 users spread across 200 organizational units of a large southeastern university that is currently replacing its present administrative computing systems using the SAP portfolio of ERP solutions.