Limited Adoption of Internet-Based Technologies in Accounting and Methods for Promotion: Perception of Banking Professionals

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Internet-based technologies (e.g., big data, blockchain, artificial intelligence, cloud computing, internet of things, robotic process automation) have formed revolutions in many fields. The adoption of these technologies is limited in the accounting field, and it is viewed that it will influence the role of the traditional accountant and the accounting process. With the limited empirical investigations on why these technologies are minimally adopted in accounting, this study attempted to identify: (1) what internet-based technologies are used within the banking sector in Sri Lanka; and (2) how the banking professionals perceive the underlying reasons for the limited adoption of internet-based technologies in accounting. In doing so, a multiple case study approach is adopted by the researcher and respondents from two large licensed commercial banks were interviewed. Seventeen on-line interviews (with 4 managers, 7 staff in accounting and 6 staff in information technology - IT) were conducted using a semi-structured interview guide and the interviews ranged between 45 to 70 minutes. An inductive approach was used in analyzing the data, while the Institutional theory and Technology acceptance model were used as theoretical lenes. Automation and digitization is not new to both banks. Apart from that, artificial intelligence (AI), robotic process automation (RPA), cloud computing (CC) and data analytics (DA) are used at varying levels within the two banks. AI is applied in terms of machine learning for anti-money laundering attempts and supporting decision making. RPA is still in research and development stage and there are attempts for providing solutions for everyday banking needs of customers and repetitive tasks in documentation. The use of Cloud based software are limited due to security reasons; however, with the Covid-19 pandemic, and the emergence of work from home, banks have started to adapt cloud-based software. One bank has a data analytics unit that handles all analytic related tasks. There is a gap between the technical knowledge and experience on the use of technology between the accounting professionals and the IT professionals. This gap inhibits the application of technology into accounting processes. Automation is accepted to a great extent within the accounting process; however, there is a slow pace of acceptance for many of these advanced technologies despite the possibility of having more efficient and reliable information with less reconciling time. The accounting professionals' tolerance level of the influence made by IT staff on the accounting processes, the felt pressure on accepting technologies for which the technical know-how is limited, and the already institutionalized accounting practices are influencing this slow pace of acceptance and adoption. As per findings, these technologies are at the pre-institutionalization stage and for them to fully institutionalize, improving the level of IT skills and incorporating it into the skill set of accounting professionals as a priority skill, more rationalization/theorizing, visualizing positive outcomes, interest group advocacy together with an increase in both

the perceived usefulness and perceived ease of use among IT and accounting professionals together with the banks' management is required. The findings facilitate the promotion of internet-based technologies within banks and open avenues for new research.

Keywords**:** *Accounting, Artificial Intelligence, Cloud Computing, Data Analytics, Robotic Process Automation*