

Factors Affecting the Implementation of Cloud Computing Adoption in Jordanian Food Industry Companies Based on TOE Framework

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ABSTRACT

This study employs the Technology Organization Environment (TOE) framework that explain how adoption of technology and implementation are affected by factors in organization and proposes cloud computing adaption within Jordanian food industries, which is influenced through a variety of factors, including accessibility, firm size, governmental influence, and customer behavior. The study used a quantitative research design, with a questionnaire survey gathering primary data from eight Jordanian food industry companies listed on the Amman Financial Market. The study's population included 310 managers, with a sample size of 294 managers, resulting in a 95% response rate. After analyzing the data extensively using Smart PLS, the study concluded that cloud computing accessibility played a positive role in enhancing the adoption effect of this technology, and the size of the company and customer behavior are effective in increasing the level of adoption.

KEYWORDS

Accessibility, Contains Cloud Computing, Firm Size and Customer Behavior, Government Effect

INTRODUCTION

Cloud computing is becoming an essential resource for companies such as those in the food industry, due to its ability to increase productivity, competitiveness, and overall performance (Alam, 2020). The level of cloud computing being embraced in Jordan is still very low and especially in the small and medium size food business entities (Alnassar, & Baashirah 2024) . The technology-organization-environment (TOE) framework helps in analyzing factors influencing cloud computing, but cloud computing adoption in Jordanian food industry businesses is a activity involving technical issues (Bello et al., 2021; Odeh et al., 2024).

The suggestion of the TOE model provides an overall approach for addressing the questions of cloud computing in the food industry in Jordan. Such technological factors as perceived usefulness, accuracy of the information provided, and quality of service can all affect the adoption of cloud computing (Abualoush et al., 2022; Yaseen et al., 2023). Several factors such as the factor that influences the ability of integrating cloud computing including the business's technological readiness,

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resources availability, and management support hinders the integration process. Additionally, some legal issues like legal policies and environment play a role in the adoption of cloud computing in the setting. The TOE framework offers key ideas for the process of applying cloud computing in the Jordanian food sector. There are numerous interdependencies decision makers need to understand in order to successfully apply the cloud model and enhance productivity and growth within the sector, as well as how their decisions could contribute to Jordan's development (Gharaibeh & Gharaibeh, 2022; Obeidat et al., 2022).

The awareness of cloud computing's importance in terms of enhancing industries' effectiveness and competitiveness remains on the rise, and the food industries in Jordan comprised mainly of medium-sized enterprises, face challenges with the implementation of solutions the platform of cloud computing. The present study addresses lack of information about the stated specific factors that affect the successful implementation of the cloud environment in this industry, particularly from the aspects of the TOE theoretical perspective (Al Khatib et al., 2024; Al-Tarawneh, 2023; Khalayleh et al., 2022). This gap explains the significance of studying the major problems and opportunities that hinder and promote cloud computing applications in food organizations in Jordan. The results of this study will assist in developing strategies and promoting technology in the long run within this important domain. This gap also highlights the need to develop a more complete study to address the identified challenges and possibilities affecting the use of cloud computing in Jordanian food businesses in order to guide future strategic decisions that facilitate the long-term technology growth in this field (Sunyaev & Sunyaev, 2020).

There are various definitions of cloud computing. The definition of cloud computing according to National Institute of Standards and Technology (NIST) is: the broad concept of providing computing and storage services on demand and across the internet. It can also be described as a solution that enables IT managers to easily access and release computing services as needed, allowing them to respond to changing business requirements (Gai et al., 2020). Furthermore, it would be seen as a pattern of computing whereby scalable IT-related competences are offered as a service via the internet to different external clients through virtualized and interconnected computers that distribute resources according to service-level agreements that are arranged between the clients and the service provider. It could similarly be defined as a pool of highly flexible and abstracted substructures capable of facilitating end-user applications charged by usage (Alam, 2020; Chandran et al., 2016).

LITERATURE REVIEW

The Concept of Cloud Computing

Cloud computing technologies will be critical to the future of information systems, which can cut the price of IT services while enhancing reliability and flexibility (Haji et al., 2020). Furthermore, it is considered a possible solution for enhancing enterprises' IT competitiveness and performance (Alam, 2020). There are three service models for cloud computing. infrastructure as a system is the first. It is referred to as the foundational level of cloud services and provides clients with network-based infrastructure services, such as hardware and software (Alsanea et al., 2014). The second stage of cloud computing is called platform as a service. It provides online contact to all of the resources required to create an application. Customers can access libraries and programming languages using the tools provided for software design, development, testing, deployment, and hosting (Saraswat & Tripathi, 2020). Correspondingly, software as a service (SaaS) is the third service model. It is well recognized for supplying users with a piece of applications via a network, such as the internet, which allows them to install the program and utilize the application whenever and wherever they have a network connection. (Hussein Alghushami et al., 2020). Furthermore, it aids in removing of outdated systems, allowing businesses to expand their software into other international regions, and it provides agile application modifying by requiring the service provider hosting the software systems to perform updates that appear to occur without any scheduled downtime. There are numerous hurdles to the

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