

# Hinders of Cloud Computing Usage in Higher Education in Iraq: A Model Development

Hayder Salah Hashim<sup>1</sup>, Alasady Ali Salah<sup>2</sup>, Zainab Amin Al-Sulami<sup>3</sup>

<sup>1</sup> Department of Financial and Banking Sciences, University of Basrah

<sup>2</sup> Department of Computer Science, University of Basrah

<sup>3</sup> Department of Mathematics, University of Basrah

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## ABSTRACT

Cloud computing (CC) is a trendy technology that is being used in business and daily life. However, limited studies is found on higher education usage. The barriers and obstacles that confront the usage is not clear and in particular in developing countries. The purpose of this study is to examine the barriers and obstacle that confront the usage CC services in Barash University in Iraq. Using the technology organization environment framework and the internal external factor (IE-TOE), the study proposed the conceptual framework. The data was collected from academic, non-academic staff and students using convivence sampling technique. The data was analyzed using Smart PLS. The findings showed that organizational obstacle followed by technological, internal and external factors, and environmental factors are the most severe obstacles that confront the university in using CC services. Decision makers can benefit from the developed model to ease the implementation of CC

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### Corresponding Author:

**Hayder Salah Hashim,**

Department of Financial and Banking Sciences, University of Basrah. Iraq

Email: [hayder\\_alasadi@uobasrah.edu.iq](mailto:hayder_alasadi@uobasrah.edu.iq)

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## 1. INTRODUCTION

Cloud computing (CC) is a trendy technology that have been used in all aspects of life, business, and with less degree in education and in particular in developing countries [1] [2]. CC is critical for universities, students, academic staff and non-academic staff. The CC enable the scalability and support the learning and education at university level. It generally promises to increase privacy and security as well as the availability as well as the ease to access from anywhere at any time as defined in several studies, CC refers to data centers available to vast number of Internet user [3] and it is the data storge, sharing software, hardware, database, and enabling access and storge of large data [4], [5]. In a university environment and particularly, during the COVID19, the importance of CC has increased as students, academic and non-academic staff were able to use CC to fulfil their needs [6]–[9]. Academic staff can deliver their lectures and store it on the cloud while students can attend the lectures at any time and from anywhere [10]–[13]

The use of CC by university and in particular in developing countries such as Iraq is limited and this could be due to several reasons that are related to the infrastructure, regulations, organizational, individual as well as technological perspectives. After introducing the CC in 2009 and the aftermath period, the pace of development in developing countries has been moderately synchronized with the expansion of development in developed industrialized countries. In higher education, universities needs a frameworks such as CC to retain accurate records for a long time [2]. Students and academic staff need to have record of their works and be saved in an accessible manner. Information loss can be caused by a variety of factors, including equipment failure, human error, personal computer infections, equipment loss, programming defilement, and robbery [3] [4].

One of the most important benefit is the ability of CC to assess the students in supporting learning processes such as to support self-learning, where student can learn by themselves or peer learning as well as