

Industry 4.0: the importance of innovation in adopting cloud computing among SMEs in Malaysia

ABSTRACT

Small and medium-sized enterprises (SMEs) are commonly perceived as an essential part in boosting and stabilising global economic growth. Accordingly, they are expected to contribute a notable 50% to Malaysia's Gross Domestic Product (GDP) by 2030, which is projected relative to their present contribution (38%). In the context of Malaysian businesses, however, SMEs especially have yet to embrace the latest technology revolution sufficiently. The country is currently in the midst of the third industrial revolution (i.e. automation), while some are still deep within the second industrial revolution. This is a particularly worrying observation as only a few industries in the country are capable of adopting the pillars of Industry 4.0, which is further characterised by a percentage of business owners that remain hesitant to embrace technologies such as cloud technology. To bridge this significant gap, the analysis carried out in this research adopted the technology acceptance model (TAM) developed by Davis (1989) and Rogers' Diffusion Innovation Theory (1995), incorporating the contexts of technology and innovation among SMEs in Malaysia. To this end, survey questionnaires were employed to collect data among domestic manufacturing and services SMEs, following which the structural equation model (SEM) was employed. By using Smart-PLS, an assessment was carried out to ascertain the important factors of innovation towards adopting cloud computing among SMEs in Malaysia.

Keyword: Cloud computing; Industry 4.0; Innovation; SMEs