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**THE EXPANDED ROLES OF QUANTITY
SURVEYOR IN ASSESSING THE USAGE OF
BIG DATA**

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ABSTRACT

Big data is the process of gathering large amounts of data and analyzing it thoroughly to generate significant findings. By extracting the vast amount of data acquired, a few possibilities in the form of valuable insights may be produced. Despite this, full research focusing on the potential application of big data, particularly in the construction sector, has not been done. Therefore, the expanded roles of Quantity Surveyors in assessing the usage of big data have become increasingly significant in the field of construction and project management. The research aim to establish the big data roles in the Quantity Surveyor profession. This study also focused on identifying the roles of big data in Quantity Surveying field, determine the challenges faced by QS in exposing of big data and suggest QS preparations to adopt and operate the big data technology. A quantitative approach is used in this research and the data collected by using questionnaires survey to Quantity Surveyors consultant in Selangor, which allowed for comprehensive data collection. The key findings indicate that Quantity Surveyors acknowledge the advantages of big data and recognize its potential to enhance their practices. However, challenges such as the lack of awareness, limited expertise, and data quality management existed. Therefore, it is important for Quantity Surveyors to invest in information technology infrastructure, gaining necessary skills, and establish data management protocols. This study emphasizes the need for professional development and the integration of big data practices in the Quantity Surveying profession to harness its full potential. Further research and collaboration are recommended to overcome existing challenges and drive innovation in the field of both Quantity Surveying and big data.

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CHAPTER 1

INTRODUCTION

1.1 RESEARCH BACKGROUND

The fourth industrial revolution (IR4.0) have sparked a lot of attention in recent years, and it was predicted to achieve headway locally and internationally if they become part of various governments' major initiatives (Idris, 2019). During this revolution, there has been a big change in terms of technology and the nature of jobs. Kong et al., (2020) defined that IR4.0 is the current face of the information era that introducing new advanced technologies into production, such as Cyber-Physical System (CPS), the Internet of Things (IoT), Cloud Computing, Cognitive Computing and Artificial Intelligence (AI), which will transform the way goods are manufactured, developed, transported, utilized, and operated.

Big data is quickly becoming a component of practically every industry. Big data is the process of gathering large amounts of data and analyzing it thoroughly to generate significant findings. In the age of disruptive digital technologies, the speed with which data is generated and accumulated is remarkable (Munawar et al., 2022). Companies are currently implementing a big data initiative, globally. As stated by Maaz et al., (2018b), big data has been acclaimed as the leader of the new technological revolution. High-profile newspapers, industry leaders, and government reports have all stated that investing in big data has paid off financially. Big data has given many opportunities in multi-industries, prominently in manufacturing, healthcare, and retail industry.

By adopting the big data in manufacturing sector, it can assist in product, market, and risk forecasting. This statement is supported by Columbus (2014), Chartered Global Management Accountant (2014) and Gutierrez (2017). According