Chapter 3
Enhancing Islamic Banking and Finance in Southeast Asia Through the Application of Artificial Intelligence:
An Exploration of Banking's Best Practices

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ABSTRACT

The disruption of innovations in the banking sector continues to indicate a positive trend among bankers and customers. The innovations of technology that stand with speediness and fast track transaction effectively support the spread in using banking system without barriers. Recently, the financial services industry continues to be surprised by the latest technology's innovation that is known as artificial intelligence. By looking into the ecosystem for the future sustainability of Islamic banking and finance in Southeast Asia, Islamic financial services may learn and adopt several best practices of A.I. from global banking practices. With a focus on the Islamic financial services industry in Southeast Asia, an exploration on the readiness of such industry and advantages of artificial intelligence are made. This research depends on the qualitative investigation from documentary materials. The leadership of Islamic banks shows their readiness in accepting artificial intelligence.

INTRODUCTION

Reaching towards 2020, the financial services industry continues to face disruption from technological innovations. The innovations of technology offer a different spectrum in strategy and mechanism in the system of banking and finance. Their advantages of speediness and fast track transactions that lead to a global market without any barriers of time and space are applauded as essential for unlimited business opportunities and profit-making initiatives. Recently, the financial services industry continues to be inundated with the latest technology's innovation that is known as artificial intelligence or can also be known as A.I. It is treated as an essential tool for banks' survival in facing the advancement of technology, increasing costs, customers' demands, handling the data of customers, management and services, compliance risks, and analysing the trend in the market (Engel, 2018).

Based on the Global Review of Commercial A.I. (Digital Finance Institute, 2018), there is a strong indication that artificial intelligence is transforming the financial services industry. Such a transformation can be largely detected from the financial services where artificial intelligence directly impacts banking service delivery and employment. Currently, approximately 75% of global trades are being handled by algorithmic trading systems (Digital Finance Institute, 2018). While, it is estimated that 5% of the financial transactions will be dealt by autonomous software by the year 2020 (Digital Finance Institute, 2018), this percentage is predicted to increase steadily around the globe.

There is a positive trend among bankers, practitioners, and customers at large in facing the disruption of technological innovations. Based on statistics, the artificial intelligence and robotics market was valued at US$ 10.7 billion in 2014 and estimated to reach US$ 153 billion by 2020. The artificial intelligence market alone is considered to be valued at US$ 70 billion with an estimation to grow to US$163 billion by 2020 (Mackenzie, 2015). Moreover, it is identified that Asia is the most advanced in the use of artificial intelligence through their financial services (Digital Finance Institute, 2018). Among the countries in Asia, China is leading the advancement through the introduction of Ant Fortune by the Ant Financial which is also Alibaba Co.'s finance affiliate. The Ant Fortune is a wealth management application that deals with an investment portfolio building. The investment portfolio building is done step by step by artificial intelligence while matching investment requests with products. The artificial intelligence in Ant Fortune also combines other activities with wealth management mechanisms (Finews Asia, 2016). However, Ant Financial's achievement cannot represent the banking sector since the said company is a fintech company. Additionally, they emphasise on using the conventional based banking strategy, instead of Shariah compliance based.

By looking into the ecosystem for the future sustainability of Islamic banking and finance in Southeast Asia, Islamic banking and finance may learn and adopt several best practices of artificial intelligence from global banking practices. An exploration of the advantages of artificial intelligence and readiness of the Islamic financial services industry in Southeast Asia must be looked into without fail, albeit complying with Shariah. This research looks into the attitudes of Islamic banks' leadership in Southeast Asia in accepting artificial intelligence. Based on the secondary data collected by previous studies, this research depends on the qualitative investigation from documentary materials from the Islamic and conventional banking industry. It also identifies the trend of leadership in the said industry in facing the disruption of technology.

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