Received: 1 April 2019 | Revised: 24 November 2019 | Accepted: 26 January 2020

DOI: 10.1002/mde.3145

RESEARCH ARTICLE

WILEY

A decomposition analysis of managerial efficiency for the insurance companies: A data envelopment analysis approach

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The insurance industry worldwide has become less fragmented through liberalization reforms. Yet, following the transformational changes, there is little empirical evidence on identifying the determinants of managerial efficiency. This paper employs a truncated regression analysis to determine the factors driving managerial efficiency of Malaysian insurers. Overall and divisional efficiencies are derived using data envelopment analysis. The decomposition analysis reveals that the observed inefficiency is mainly caused by investment capability division. The regression findings reveal that determinants of efficiency have dissimilar impacts on overall and divisional efficiencies. This study broadly supports financial liberalization as a means of promoting managerial efficiency.

1 | INTRODUCTION

Insurance markets around the world carry out dynamic reforms. On one hand, supporters of deregulation and liberalization claim that foreign competition and foreign direct investment can help enhance productivity related to domestic industries, which may lead to more efficient allocation of resources and greater overall output. On the other hand, critics argue that domestic firms may not be able to grasp efficiency advantages because they are incapable of effectively adapting foreign technologies to local production and/or because domestic firms are generally confronted with limited credit that prevent investments in new technology (Topalova & Khandelwal, 2011). Undeniably, the liberalization of the national insurance market has brought with it stiffer, but healthy competition (Luhnen, 2009b). But, notwithstanding the favorable consequences of a competitive market, it has been acknowledged that poor internal control by managers could also lead to a lowering of managerial efficiency (Hwang & Kao, 2006). In spite of the complex service process for the insurance sector and the need for operating efficiently, efficiency analysis of the insurance sector has surprisingly received little attention. Even though the insurance and banking industries share some common characteristics, the service process of these two entities differs significantly and therefore deserve separate analysis in terms of their performance.

Taken together, within the context of managerial efficiency, there is lack of research regarding the important question of what the actual nature of the insurance production mechanism is. Although recently, the research has progressively given more attention to the empirical evaluation of managerial efficiency, the literature has followed the traditional measures of efficiency evaluation; a consistent conclusion therefore remains elusive. There exist two theories to estimate the efficiency of an insurer, namely, the production approach and the financial intermediation approach. Under the production approach, financial organizations are merely providing services to customers, whereas under the intermediation approach, financial organizations are channeling the capitals between investors and borrowers. The current studies have devoted more weight to apply the production approach, which is more suitable for manufacturing companies; however, the intermediation approach has found little consideration among insurance literature (Brockett, Cooper, Golden, Rousseau, & Wang, 2004, 2005).

Further, the service process of insurers may involve multistage structures. Efficiency scores may thus be overestimated or underestimated if the performance evaluation technique used is unsuitable (Kweh, Lu, Nourani, & Ghazali @ Mohd Zain, 2018). As a traditional decision-making analysis, the data envelopment analysis (DEA) approach assumes that a production/service process as simply generating outputs from inputs is not suitable for unveiling the interior

