Determinants of efficiency in the malaysian banking sector: Does bank origins matter?

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Abstract

The paper follows Simar and Wilson's (2007) two-stage procedure to analyze the efficiency of the Malaysian banking sector. In the first stage, we employ the bootstrap Data Envelopment Analysis (DEA) method to compute the efficiency of individual banks during the period 1999–2008. We then use bootstrap regression to examine the impact of origins on bank efficiency, while controlling for the potential influence of contextual variables. The DEA results indicate that the Malaysian banking sector has exhibited increase in efficiency over the sample period. We find that banks from the Asian countries to be relatively more efficient compared to foreign banks from other regions and their domestic bank peers. In essence, the empirical evidence rejects the *home field advantage* hypothesis, but lends support to the "limited form" of the *global advantage* and the *liability of unfamiliarness* hypotheses.

1. Introduction

The importance of the banking sector is premised on the ground that banks are the main channels of savings and allocations of credit in an economy (Levine 1997; Dell' Ariccia and Marquez 2004). The banking sector provides important financial intermediation function by converting deposits into productive investments (King and

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Levine 1993a, 1993b). Unlike in other developed nations where financial markets and the banking sector works in unison to channel funds, in developing countries, financial markets are undersized and sometimes completely absent (Arun and Turner 2004). It falls on the banking sector to bridge the gap between savers and borrowers and to perform all tasks associated with the profitable and secure channeling of funds.

As in other developing economies, the banking system plays an important financial intermediary role in the Malaysian economy (Sufian, 2010b). The banking sector controls most of the financial flows and accounts for more than 70% of the financial system's total assets. Therefore, it is reasonable to expect that an efficient and profitable banking sector may help ensure an effective financial system which is conducive to economic growth and development. In this vein, Levine (1998), points out that the efficiency of financial intermediation affects a country's economic growth and at the same time, bank (financial intermediation) insolvencies could result in systemic crises and consequently negative implications on the economy. Consequently, knowledge of the underlying factors that influence the performance of the banking sector is essential for managers of the banks, the central bank, bankers association, and other financial authorities to help them formulate policies to improve the performance of the banking sector.

The purpose of the present study is to employ the DEA method to examine the efficiency of the Malaysian banking sector. The present paper contributes to the present literature in several important ways. First, the paper seeks to examine whether productive efficiency is significantly associated with the origins of the foreign banks after controlling for other internal (bank specific characteristics) and external (macroeconomic and industry specific) factors. Second, unlike the earlier studies focusing on the Malaysian banking sector (e.g., Sufian, 2010b; Matthews and Ismail, 2006; Katib and Matthews, 2000) the present study adopts the more recent DEA bootstrap method proposed by Simar and Wilson (1998, 1999, 2000). Finally, we employ the central tendency and parametric method based on bootstrap regression to investigate the potential impacts of contextual variables on the efficiency of the Malaysian banking sector.

This paper is set out as follows: In the next section we provide a brief overview of the Malaysian banking sector. We provide a brief review of the main literature in Section 3. In Section 4 we discuss the data and outline the approaches to the measurement of efficiency change. In Section 5, we present the bias-corrected DEA results and the bootstrap regression analysis results. Section 6 concludes the paper and offers avenues for future research.

2. Brief overview of the Malaysian banking sector

The Malaysian banking system can broadly be divided into the banking sector and non-bank financial intermediaries. These two groups differ from each other with respect to their activities. Out sizing non-bank intermediaries significantly, the banking sector accounts for approximately 70% of the banking system's total assets. Commercial banks are the main players in the banking sector and are the largest and most significant providers of funds. As at end–2008, it is clear from Table 1 that the commercial banking sector dominates the Malaysian financial system's assets and liabilities, with total assets and liabilities amounting to RM1600.5 billion ($462.6 billion). There were nine domestically incorporated and 13 locally incorporated foreign commercial banks in Malaysia as at end–2008.

Legally, Malaysian commercial banks enjoy the widest scope of permissible activities and are able to engage in a full range of banking services. Traditionally, Malaysian commercial banks main functions include retail-banking services, trade financing facilities, treasury services, cross border payment services, and custody services. Apart from the more traditional activities, Malaysian commercial banks are also allowed to engage in foreign exchange activities i.e., to buy, sell, and lend foreign currencies and are the only financial institutions allowed to provide current account facilities.

Despite controlling over 90% of the banking market in 1957, the foreign commercial banks' market share declined markedly after the country's Independence in 1957 to only 15.3% of the banking system's assets in 1997. The progressive decline of the foreign banks' market share was the result of government policy to encourage the development of the domestic banking sector. Foreign commercial banks have been prohibited to open new branches since 1971 and the last foreign bank allowed entry into the market was Bank of Nova Scotia in 1973. All foreign banks granted licenses after 1971 have had to remain one branch banks.

Banking regulations in place since 1994 require all existing foreign branch banks to be incorporated locally. Furthermore, all non-resident controlled companies are required to source a minimum of 50% of their domestic credit needs from a Malaysian owned bank. For regulatory purposes, any off-premises automated teller machine