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Banks total factor productivity change in a developing economy: Does ownership and origins matter?

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ABSTRACT

This paper employs the Malmquist Productivity Index (MPI) method to analyze the productivity of the Malaysian banking sector during the period 1995–2004. The empirical findings indicate that the Malaysian banking sector has exhibited productivity regress due to technological regress rather than efficiency decline. We find that the foreign banks have exhibited productivity regress, while their domestic peers have exhibited a marginal productivity increase. During the period under study, productivity levels seems to be positively associated with the stock exchange listed banks, but is negatively related to foreign ownership. In essence, the findings provide support to the home field advantage and the "limited form" of the global advantage hypotheses. On the other hand, the empirical findings seem to reject the 'liability of unfamiliarness' hypothesis.

1. Introduction

Does ownership matter? And how does it affect banking firms' performance? Banking firms have heterogeneous ownership, corporate, market, and risk characteristics (Isik & Hassan, 2003). While the choice of ownership: foreign, local, public, private, state, etc. is important in the context of non-bank firms, it becomes crucial in the context of a bank (Boubakri, Cosset, Fischer, & Guedhami, 2005) and is an essential element for the development of a healthy banking system in developing countries (Lang & So, 2002).

By applying frontier efficiency techniques, a growing number of studies have examined the relationship between bank ownership structure and differences in frontier efficiency.[1] However, most of the available studies on the ownership-performance relationship have concentrated mainly on the U.S. or other developed countries (Pi & Timme, 1993; Berger & Mester, 1997; Lang & So, 2002). Evidence from developed countries is not transferable to developing countries, which often lack a well-defined market for corporate control and possess weak property rights (De, 2003). Furthermore, evidence from the U.S. may not be comprehensive due to the lack of state owned banks in the country (Altunbas et al., 2001).

As is the case in virtually all emerging markets, banks are the dominant financial institutions in Malaysia. Banks control most of the financial flows and possess more than 70% of the financial system's total assets. Therefore, detecting the extent and sources of inefficiency (waste of resources) is the first step for policymakers to improve the performance of the banking sector.

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[1] See Altunbas, Evans, and Molyneux (2001), Isik and Hassan (2003), Havrylchyk (2006), Grigorian and Manole (2006), and Weill (2007) among others.

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The period under the study, which corresponds to the period of economic liberalization in Malaysia, is a perfect setting for examining performance differences of various ownership forms. A study of this type may be important for policy and research concerns. Nevertheless, an in depth study may also be useful for policymakers that face resistance against the relaxation of entry barriers, as earlier studies have found that inefficiencies of state owned institutions in many countries only became apparent when these institutions are forced to compete with new domestic and foreign entries (D'Souza & Megginson, 1999).

The aim of this paper is to gain further insight to a significant determinant mostly associated with bank performance, namely ownership structure (Stijn & Simeon, 1999; Thomsen & Pedersen, 2000; Gedajlovic & Shapiro, 2002). In this paper, we investigate the following: Firstly, we examine whether there exists a positive and significant association between foreign ownership and bank productivity. Earlier evidence suggests that foreign banks outperform domestic banks in developing and transition countries (e.g. Bonin, Hasan, & Wachtel, 2005; Micco, Panizza, & Yanez, 2004; Claessens, Dermiguc-Kunt, & Huizinga, 2001) although not so in less developed countries (Claessens et al., 2001). In light of these findings, this study is particularly interesting given that some of the banks in our sample originate from less developed countries (e.g. Thailand, China). Secondly, we examine whether banks that are linked or related to the government tend to be less productive compared to banks with other forms of ownership. In general, government ownership of banks has been associated with poor bank performance and negative outcomes (Berger, Bonime, Goldberg, & White, 2004; Berger, Clarke, Cull, Klapper, & Udell, 2005; Micco et al., 2004). Thirdly, we determine the validity of the commonly held belief that public listed banks perform better than their privately held counterparts. Finally, we explore the *home field* and *global advantage* hypotheses suggested by Berger, DeYoung, Genay, and Udell (2000) by classifying the foreign banks operating in Malaysia according to their countries of origin.

This paper is set out as follows: Section 2 provides a brief overview of the Malaysian financial system. Section 3 reviews the main literature, while in Section 4 we outline the approaches to the measurement of productivity changes as well as the method to estimate the determinants of productivity of Malaysian banks. Section 5 discusses the results, and finally we conclude in Section 6.

2. The Malaysian banking system

As in other developing economies, the banking system plays an important intermediary role in the Malaysian economy. Unlike in developed nations where financial markets as well as the banking system work in unison to channel funds, financial markets in developing nations are undersized and sometimes completely absent. It falls on the banks to bridge the gap between savers and borrowers and to perform all tasks associated with the profitable and secure channeling of funds.

The Malaysian financial system can broadly be divided into the banking system 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 system accounts for approximately 70% of the financial system's total assets. It can be divided further into three main groups namely the commercial banks, finance companies, and the merchant banks.

Commercial banks are the main players in the banking system, and are the largest and most significant providers of funds within it. As at end-2004, there were 10 domestically incorporated and 13 locally incorporated foreign commercial banks in Malaysia. 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. From Table 1 it is clear that the commercial banking sector dominates the Malaysian financial system's assets and liabilities, with total assets and liabilities amounting to RM761,254.8 billion ($200,330.2 billion) as at end-2004.

Finance companies form the second largest group of deposit taking institutions in Malaysia. The numerous, relatively small finance companies provide installment credit to consumers and small businesses, with funding sourced from time and savings deposits. There were 10 domestically incorporated finance companies in Malaysia as at end-2004. Traditionally, finance companies specialize in consumption credit, comprised mainly of hire purchase financing, leasing, housing loans, block discounting, and secured personal loans. The companies are allowed to accept savings and fixed deposits from the public, but are prohibited from providing current account facilities. They are not allowed to engage in foreign exchange transactions, in contrast to their commercial bank counterparts. During the second half of the last decade, the finance companies began to expand their traditional role in retail financing to include wholesale banking as well.

Prior to the Asian financial crisis in 1997, the finance companies' assets and liabilities increased from RM531 million ($183.7 million) in 1970 to reach a high of RM152.4 billion ($40,101.8 billion) in 1997 (columns 3 and 4 of Table 1). Their assets and liabilities however declined gradually to RM123.6 billion ($32,525.5 billion) in 1998 and to RM109,409.8 billion ($28,792.1 billion) in 2000, before increasing again in 2001 to reach a post-crisis high of RM141,911.0 billion ($37,345 billion) in 2003. Due to further consolidation in the Malaysian financial sector, the finance companies' assets decreased again to reach a low of RM68,421.1 billion ($18,005.6 billion) in 2004.

Merchant banks emerged in the Malaysian banking scene in the 1970s, marking an important milestone in the development of the country's financial system. As the country's small businesses prospered and grew into large corporations, banking needs became larger and more sophisticated, requiring more bulk financing and complex banking services. Merchant banks filled the need for such services by complementing the facilities offered by commercial banks, which were at