



UNIVERSITI PUTRA MALAYSIA

ISLAMIC BANK EFFICIENCY AND PRODUCTIVITY IN MALAYSIA

REZVAN TORABI

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**ISLAMIC BANK EFFICIENCY AND PRODUCTIVITY IN
MALAYSIA**

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**By
REZVAN TORABI**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfilment of the Requirement for the Degree of Doctor of Philosophy**

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By

REZVAN TORABI

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Chairman: Normaz Wana bt Ismail, PhD

Faculty: Economic and Management

Abstract

The present empirical study investigates the efficiency of full-fledged Islamic banks and Islamic window operations of domestic and foreign banks in Malaysia. This study measures the technical, Allocative, pure technical, scale and cost efficiency of these banks using the Data Envelopment Analysis (DEA) technique for the period 1997-2008. During this period, Islamic banking system in Malaysia has two phases of development. This is a pioneer study that analyzes the policies of central bank of Malaysia in both phases and compares the efficiency of Islamic banking industry in these phases. In general, the results show that on average, the efficiency of the Islamic banking industry increases in these phases which corresponds positively to their deposits, asset and financing growth. This could suggest that the entrance of

the second full fledged Islamic bank in the second phase and the entrance of foreign full fledged banks in the third phase had given a positive impact on the efficiency of Islamic banking industry as a whole. The findings also indicate that the full fledged Islamic banks are more efficient than Islamic windows. In the comparison of efficiency levels with respect to ownership, the foreign bank is found to be more efficient than domestic banks in full fledged banking system, however in Islamic windows, the domestic banks are found to be more efficient than foreign banks.

This study also investigates the productivity of full-fledged Islamic banks and Islamic window operations of domestic and foreign banks in Malaysia. It measures the efficiency change, technological change and total factor productivity of these banks using the Malmquist Index for the period 1997-2008. This is a pioneer study that has analyzed policies of central bank of Malaysia in both phases and has compared the productivity of Islamic banking industry in these phases. In general, the results show that on average, the productivity of the Islamic banking industry has increased in these phases which correspond positively to their deposits, assets and financing growth. This could suggest that the entrance of the second full fledged Islamic bank in second phase and the entrance of foreign full fledged banks in third phase made a positive impact on the productivity of Islamic banking industry as a whole. The findings also indicate that the mean TFP for full fledged Islamic banks is larger than the same figure for Islamic windows. The comparison of productivity levels with respect to ownership, in both systems (full fledged and Islamic windows) shows that the mean TFP for domestic banks is greater than the figure for foreign

banks. The sources of productivity growth in the Islamic banking industry as a whole show a gradual improvement in efficiency change. However, the increase in efficiency progress in the Islamic banking industry was marginally offset by the declined in technological change, which led to lower productivity growth.

The study about measurement of efficiency that describes and analyzes the determining factors of efficiency is useful. The recognition and utilization of the key factors which have significant influence on the efficiency of the firm are important. So, in this study a range of bank specific factors and regularity factors which may influence Islamic bank efficiency is considered. This study used three different methods to determine the impact of these factors on Islamic banks' efficiency, namely, OLS, Tobit and Bootstrap methods. However, there is not any difference in the results derived from these three methods. The findings suggest that, bank size; capital adequacy and loan activity are positively related to the efficiency of Islamic banks. The findings also confirm that the proxy of Credit risk as measured by the ratio of loan loss provision to total loan has negative effects on the Islamic banking efficiency.

Abstrak tesis yang dikemukakan kepada Senate Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

KECEKAPAN DAN PRODUKTIVITI BANK ISLAM DI MALAYSIA

Oleh

REZVAN TORABI

Februari 2011

Pengerusi: Normaz Wana Ismail, PhD

Fakulti: Ekonomi dan Pengurusan

Kajian empirikal ini mengkaji kecekapan Bank Islam sepenuhnya dan operasi tettingkap Islam antara bank-bank tempatan dan bank-bank asing di Malaysia. Kajian ini mengukur kecekapan teknikal, peruntukan, teknikal tulen, skala dan kos bank-bank terpilih menggunakan teknik Analisis Pengumpulan Data (DEA) bagi tahun 1997-2008. Sepanjang tempoh tersebut, sistem perbankan Islam di Malaysia telah melalui dua fasa pembangunan. Kajian ini merupakan kajian yang pertama menganalisis menganalisis dasar bank pusat di Malaysia dan membandingkan kecekapan industri perbankan Islam dalam dua fasa tersebut. Secara amnya, hasil kajian menunjukkan bahawa purata kecekapan industri perbankan Islam telah meningkat selepas melalui kedua-dua fasa pembangunan, iaitu berhubungan positif dan selari dengan pertumbuhan deposit, aset dan pembiayaan. Dapatan kajian ini mencadangkan bahawa kemasukan bank Islam sepenuhnya yang kedua dalam fasa

kedua serta kemasukan bank Islam asing sepenuhnya dalam fasa ketiga telah memberi kesan positif ke atas kecekapan industri perbankan Islam secara keseluruhannya. Dapatan kajian juga menunjukkan bahawa bank Islam sepenuhnya adalah lebih cekap berbanding dengan operasi tettingkap Islam. Bagi sistem perbankan Islam sepenuhnya, perbandingan tahap kecekapan berdasarkan pemilikan mendapati bank asing adalah lebih cekap berbanding dengan bank tempatan. Manakala bagi tettingkap Islam pula, bank tempatan menunjukkan tahap kecekapan yang lebih tinggi berbanding dengan bank asing.

Kajian ini turut mengkaji produktiviti bank Islam sepenuhnya dan operasi tettingkap Islam di bank-bank tempatan dan bank-bank asing yang terdapat di Malaysia. Kajian ini mengukur perubahan kecekapan, perubahan teknologi dan jumlah produktiviti faktor bank-bank tersebut menggunakan Indeks Malmquist bagi tahun 1997-2008. Kajian ini merupakan kajian yang pertama menganalisis dasar bank pusat di Malaysia dalam dua fasa serta membandingkan produktiviti industri perbankan Islam bagi tempoh tersebut. Secara amnya, hasil kajian menunjukkan bahawa purata produktiviti industri perbankan Islam telah meningkat selepas melalui kedua-dua fasa ini dan berhubungan positif dengan pertumbuhan deposit, aset dan pembiayaan. Dapatan kajian ini mencadangkan bahawa kemasukan bank Islam sepenuhnya yang kedua dalam fasa kedua serta kemasukan bank Islam asing sepenuhnya dalam fasa ketiga telah memberi kesan positif ke atas produktiviti industri perbankan Islam secara keseluruhannya. Dapatan kajian juga menunjukkan bahawa purata TFP bagi bank Islam sepenuhnya adalah lebih tinggi berbanding

dengan TFP bagi tettingkap Islam. Dalam perbandingan tahap produktiviti berdasarkan pemilikan bagi kedua-dua sistem (sepenuhnya dan tettingkap Islam), purata TFP bank tempatan adalah lebih tinggi daripada TFP bank asing. Sumber pertumbuhan produktiviti dalam industri secara keseluruhannya juga menunjukkan peningkatan dalam perubahan kecekapan. Walau bagaimanapun, peningkatan kemajuan kecekapan dalam industri perbankan Islam terjejas sedikit akibat penurunan perubahan teknologi yang menyumbang kepada pertumbuhan produktiviti yang lebih perlahan.

Kajian mengenai pengukuran kecekapan yang menerangkan dan mengkaji faktor penentuan kecekapan adalah sangat penting untuk pengenalpastian serta penggunaan faktor utama yang mempunyai pengaruh yang signifikan ke atas kecekapan firma. Selaras dengan itu, kajian ini telah mengenal pasti beberapa faktor khusus dan faktor kenalaran yang mungkin mempengaruhi kecekapan bank Islam di Malaysia. Kajian ini menggunakan tiga kaedah yang berbeza iaitu model OLS, Tobit dan Bootstrap untuk menentukan kesan faktor-faktor tersebut ke atas kecekapan bank Islam di mana keputusan empirikal mendapati bahawa ketiga-tiga kaedah memberikan keputusan yang sama. Dapatan mencadangkan bahawa saiz bank; kecukupan modal dan aktiviti pinjaman mempunyai hubungan positif dengan kecekapan bank Islam. Dapatan juga mengesahkan bahawa proksi untuk risiko kredit seperti yang diukur melalui nisbah peruntukan kerugian pinjaman kepada jumlah pinjaman menunjukkan kesan yang negatif ke atas kecekapan bank Islam.

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I certify that a Thesis Examination Committee has met on 2 August 2011 to conduct the final examination of Rezvan Torabi on his thesis entitled “ Islamic Bank Efficiency and Productivity in Malaysia” in accordance with the Universities and University College Act 1971 and the Constitution of the Universiti Putra Malaysia [P. U. (A) 106] 15 March 1998. The committee recommends that the student be awarded the Doctor of Philosophy.

Members of the Thesis Examination Committee were as follows:

Muzafar Shah Habibullah, PhD

Professor
Faculty of Economic and Management
University Putra Malaysia
(Chairman)

Mansor bin Ibrahim, PhD

Professor
Faculty of Economic and Management
University Putra Malaysia
(Internal Examiner)

Law Siong Hook, PhD

Associate Professor
Faculty of Economic and Management
University Putra Malaysia
(Internal Examiner)

Rezaul Kabir, PhD

Professor
University of Twente
Netherlands
(External Examiner)

SHAMSUDDIN SULAIMAN, PhD

Professor and Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: August 2011

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Doctor of Philosophy.

The members of the Supervisory Committee were as follows:

Normaz Wana BT Ismail, PhD

Lecturer

Faculty of Economic and Management
Universiti Putra Malaysia
(Chairman)

Rusmawati Binti Said

Lecturer

Faculty of Economic and Management
Universiti Putra Malaysia
(Member)

Suhaila BT Abdul Jalil

Lecturer

Faculty of Economic and Management¹
Universiti Putra Malaysia
(Member)

HASANAH MOHD GHAZALI, PhD

Professor and Dean

School of Graduate Studies

Universiti Putra Malaysia

Date:

DECLARATION

I declare that the thesis is my original work except for quotations and citations, which have been duly, acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or other institutions.

REZVAN TORABI ZIARATGAHI

Date: 22 February 2011

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