Research in International Business and Finance 36 (2016) 96–111

Contents lists available at ScienceDirect

Research in International Business and Finance

journal homepage: www.elsevier.com/locate/ribaf

Review

Efficiency in the Vietnamese banking system: A DEA double bootstrap approach

Chris Stewart[a], Roman Matousek[b], Thao Ngoc Nguyen[c,*]

[a] School of Economics, History and Politics, Faculty of Arts and Social Sciences, Kingston University, Penrhyn Road, Kingston Upon Thames KT1 2EE, United Kingdom
[b] Kent Business School, University of Kent, Canterbury, KBS Extension, Room 1.22, Kent CT2 7NZ, United Kingdom
[c] Nottingham Business School, Nottingham Trent University, Newton Building, 6th Floor, Burton Street, Nottingham NG1 4BU, United Kingdom

ARTICLE INFO

Article history:
Received 19 May 2014
Received in revised form 7 April 2015
Accepted 8 September 2015
Available online 14 September 2015

Keywords:
Banking
Efficiency
DEA
Two-stage double bootstrap method
Vietnam

ABSTRACT

This study analyses bank efficiency in Vietnam from 1999 to 2009. We use a unique data sample that allows us to capture the development of the Vietnamese banking sector over the last decade. We apply an advanced methodological approach introduced by Simar and Wilson (2007) to examine bank efficiency in Vietnam. An integral part of the analysis is to explore the determinants of bank efficiency. The results indicate that large and very large banks are more efficient than small and medium sized banks with small banks having the lowest efficiency scores in the system. Non-state owned commercial banks are more efficient than state owned commercial banks assuming overall efficiency. We also argue that banks with large branch networks and those that have been in existence for a long time are less efficient than other banks.

Contents

* Corresponding author.
E-mail addresses: c.stewart@kingston.ac.uk (C. Stewart), r.matousek@kent.ac.uk (R. Matousek), thao.nguyen@ntu.ac.uk (T.N. Nguyen).

http://dx.doi.org/10.1016/j.ribaf.2015.09.006
0275-5319/

1. Introduction

Vietnam has become one of Asia's economic success stories in recent years with average economic growth of 7.8% per annum in the last decade. After the recent global financial crisis, economic growth remains moderate and continues to come in below its potential. The Vietnamese banking system plays a key role in the economic system. The banking system is a backbone of the Vietnamese economy and contributes about 16% to 18% towards annual Gross Domestic Product (GDP). Despite the relatively long transition process of the banking system, Vietnamese banks are still undercapitalised. The regulatory reforms are rather slow, which remains a problem for its further development. Vietnamese banks operate in a challenging business environment that is characterised by tight credit margins and a large volume of non-performing loans (Dinh and Kleimeier, 2007; KPMG, 2013; SBV, 2014 and WB, 2014).[1]

Efficiency at the unit level has become a contemporary major issue, due to the increasingly intense competition, globalisation, technological innovation and increased deregulation. Therefore it is important for banking regulators and market analysts to have sufficient relevant information that aids in the identification of actual or potential problems in the banking systems and individual banks. Such information is also valuable in order to compare competitiveness and efficiency of banking systems. If there is significant inefficiency in the sector, in general, and in different groups of banks, in particular, there may be room for structural changes, increased competition and mergers and acquisitions to enhance the efficiency and productivity of the banking system, and to speed up a country's financial development and economic growth (Bonin et al., 2005; Fries and Taci, 2005; Staikouras et al., 2008; Huang et al., 2015 and Ghosh, 2015).

There have been a few empirical studies that estimate bank efficiency in Vietnam (Nguyen, 2007; Nguyen and De Borger, 2008). We contribute to this empirical literature by using an extensive panel data set of 48 Vietnamese commercial banks during the period from 1999 to 2009. Such a large sample and relatively long period allow us to capture the changes over the financial crisis. No previous study of Vietnam uses such an extensive data set that covers before and during the global financial crisis.

The objective of our study is threefold. First, we analyse bank efficiency in Vietnam by applying an advanced semi-parametric two stage method introduced by Simar and Wilson (2007). This approach enables us to obtain more reliable evidence compared to previous studies analysing bank efficiency (Barros et al., 2008). Second, we identify the determinants of bank efficiency. Third, we provide a detailed analysis of bank efficiency for different ownership structures and bank size.

Our results from the Simar and Wilson (2007) approach indicate that large and very large banks are more efficient than small and medium sized banks. Non-state owned commercial banks are more efficient than state owned commercial banks assuming overall efficiency. The number of branches and the number of years since establishment both have a negative and significant effect on efficiency.

The paper is structured as follows. The next section details developments in the Vietnamese banking system in the period from 1986 to 2009 while Section 3 provides a brief review of the previous empirical literature on bank efficiency. Section 4 focuses on methodology and data. Empirical results are presented in Section 5 and Section 6 provides a conclusion of the main findings.

2. The Vietnamese banking system during 1986–2009

From 1986 the Vietnamese banking system was transformed from a mono to two-tier banking system. The two-tier banking system has the State Bank of Vietnam as the central bank (tier 1) and four specialised state owned banks (tier 2). Order No. 218/CT dated 23rd July 1987 was the first decision on the State Bank of Vietnam operation mechanism and organisation apparatus, turning the State Bank of Vietnam's branches into public commercial banks. After that, the Council of Ministers promulgated the Decision No. 53/HDBT on 26th March 1988. The first round of the reform had been completed with the launching of new business accounting mechanisms. This reform linked banking change to inflation control. The state management of money, credit and banking services was clearly detached. The State Bank of Vietnam was only in charge of state management functions and all other banking institutes doing business. The function of the State Bank of Vietnam involved the monetary, credit and banking operation of the entire country so as to stabilise the value of the currency and promote economic growth. State owned banks became more independent and, in principle, more responsibility for their profits and losses that were not transferred to the State Bank of Vietnam as before (Kousted et al., 2005, p. 12). On 1st October 1990, the Decree-Laws on the State Bank and Decree-Laws on Banks, Credit Operatives and Finance Companies came into force and was the second round of reform, which led to the first appearance of joint stock commercial banks, joint venture commercial banks and branches of foreign banks.

In Table 1, we show a dynamic growth of commercial banks in Vietnam. With extended networks in almost all provinces and larger cities, state owned commercial banks have a competitive edge in providing banking services.[2] Although joint

[1] On 1st March 2012, the plan on the restructuring of the system of credit institutions was approved by the Prime Minister under Decision No. 254/QD-TTg. The State Bank of Vietnam Governor later signed Decision No. 734/QD-NHNN setting the plan of action for the banking sector to implement Decision No. 254. These decisions are to prevent collapse and keep banking operations under state control. The process of reorganizing, strengthening and restructuring the credit institution system helps minimize losses and expenses incurred by the state budget for tackling the problems of the system.

[2] Beside these commercial banks, there are also the Social Policy Bank and Vietnam Development Bank which are operating as non-profit institutions.