Journal of Economics and Business 90 (2017) 1–16

Contents lists available at ScienceDirect

Journal of Economics and Business

Do bank failures still matter in affecting regional economic activity?

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ARTICLE INFO

Article history:
Received 29 May 2016
Received in revised form
10 December 2016
Accepted 19 December 2016
Available online 28 December 2016

JEL classifications:
R11
E2
G21
G33

Keywords:
Bank failures
Credit crunch channel
Bank balance sheet
Sector-specific state-level GDP and labor markets
Fixed-effects estimations
Panel VAR

ABSTRACT

Using a panel dataset covering all 50 states and the District of Columbia for 1984–2014, this study examines the consequences of commercial bank failures on the regional economy. Employing both single-equation panel estimations as well as panel VAR models, I find credit crunch and bank-business relationship channels to be operative at the state-level. Although the deleterious effect of bank failures is found on different measures of regional economic activity including industry-specific labor and goods markets, it is most pronounced on construction-sector employment and GDP growth rates. The findings imply when credit flows are disrupted, potential borrowers like construction companies and building contractors may not be able to secure funds to undertake investment activities, leading to a decline in employment and output growth. The results call for constant monitoring of banks by banking regulatory authorities and identifying early warning signals of bank failures to mitigate their potential real sector losses.

1. Introduction

A conspicuous feature of the recent financial crisis was a sharp escalation in bank failures across the US. More precisely, 120, 132, and 84 commercial banks failed, respectively, over the years 2009–2011. This was followed by a wave of commercial bank mergers and acquisitions, both involving the FDIC and non-government assisted (Dunn, Intintoli, & McNutt, 2015). Such spells of bank failures resulted in a significant increase in the costs to taxpayers because of the processes involved in resolving these failures. The importance of the issue has sparked a wide body of literature in examining not only the underlying determinants of recent bank failures in the US (see for example, Cebula, 2010; Cebula, Koch, & Fenili, 2011; Cole and White, 2012; Jin, Kanagaretnam, & Lobo, 2011; Li, Sanning, & Shaffer, 2011; Lu & Whidbee, 2013; Ng & Roychowdhury, 2014; Samad & Glenn, 2012 among others) but also how to improve corporate governance in affecting bank performance (Zagorchev & Gao, 2015).

However, an equally important issue that has not been studied in the wake of The Great Recession is the real sector consequences of bank failures on the regional economy. The present study evaluates the effect of bank failures on regional

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http://dx.doi.org/10.1016/j.jeconbus.2016.12.001

economic activity using state-level annual data covering all 50 US states and the District of Columbia for 1984–2014. This issue is important on several grounds. To the extent that regulatory and institutional factors play a role in influencing the channels though which bank failures affect real economic activity, the findings of this article can help policymakers modify a country's banking regulatory structure in such a way as to ameliorate the effect of bank failures (see Ramirez & Shively, 2012). For example, policies encouraging the relatively rapid replacement of failed institutions may make the regional economy more resilient in reacting to the consequences of bank failures. Moreover, identifying the sectors that are most affected by bank failures could serve as early warning indicators in minimizing the impacts of bank failures on the real economy.

This paper contributes to several strands of research at the intersection of banking and macroeconomics. The overwhelming majority of the earlier literature on the impact of bank failures uses one or two measures of real economic activity. The present study, however, contributes to the literature on the real sector consequences of commercial bank failures by estimating its impact on various disaggregated finer measures of state-level economic activity, including sector-specific labor and product markets. This is an issue that has been rarely studied on the US economy. Unlike previous studies, by covering all 50 states and District of Columbia, this paper provides a more complete picture of banking sector-real sector linkages in the largest economy of the world. Secondly, in addition to using single-equation estimation techniques, this study applies a panel vector autoregression (VAR) analysis that has been rarely used in this strand of literature. VARs not only allow us to compare and contrast the magnitude of bank failure on different facets of state-level economic activity, but also dynamically trace the duration of the impact of bank failures. Knowledge on the persistence of shocks to specific-sectors of the state economy is important to know from a policy maker's perspective to minimize the deleterious impact of bank failures on regional labor and product markets. Thirdly, this study also provides a comparison of the real sector consequences of bank failures at the regional level during the Savings and Loans (S&L) crisis of the late 1980s-early 1990s relative to that during The Great Recession.

Previewing the results, I find credit crunch and bank-business relationship channels to be operative at the state-level. Both the fixed-effects panel data estimations as well as the panel VAR models show a significant deleterious impact of bank failures on various measures of state-level economic activity including industry-specific labor and goods markets. Such pernicious effects are most pronounced on construction-sector employment and GDP growth rates.

The remainder of the paper is organized as follows. Section 2 provides a succinct survey of the earlier literature on the economic impacts of bank failures in the US. Section 3 describes the data and provides trends and patterns in bank failures. Section 4 introduces the empirical model and discusses the fixed-effects and instrumental variable results. Section 5 performs various robustness checks including a more disaggregated industry-level analysis and a comparison of the impact of bank failures during the two major post-Depression episodes of banking crisis. Section 6 uses a panel VAR framework. Finally, Section 7 concludes.

2. Extant literature

In the post-FDIC establishment era, there are two key theoretical channels through which bank failures can adversely affect real economic activity: (i) Disruption of relationships – a bank failure results in the disruption and termination of established bank–business relationships. As a result, bank-dependent firms face an increase in the cost of funds until they are able to find and establish new relationships (Ashcraft, 2005; Bernanke, 1983). (ii) A credit crunch – bank failures can induce a contraction on the supply of loans not just because some banks fail, but also because surviving banks may become much more apprehensive in their lending behavior in light of increased economic uncertainty (Bernanke, 1983; Calomiris and Mason, 2003).[1]

Existing empirical literature investigating the extent to which bank failures amplify economic contractions can be classified under two categories – either focusing on the pre-or post-Great Depression era. For the former period, Bernanke (1983) using monthly data for the interwar period (January 1919–December 1941) finds deposits of failing banks to significantly reduce growth rate of industrial production at the national level. Anari, Kolari, and Mason (2005) extend Bernanke's (1983) work by explicitly testing the role of deposit liquidation in explaining the persistence of The Great Depression. Using a VAR model, they find that the stock of deposits in failed banks is as important as the money stock in explaining output changes during the Depression. Calomiris and Mason (2003) using both state and county level data for the period 1930–32, find growth in liabilities of failed businesses to have a negative impact of state level income. More recently, Ramirez and Shively (2012) use state-level quarterly data from 1900 to 1929 to examine the impact of both bank and commercial failures. The variance decomposition over the 10-quarter horizon obtained from the state-by-state VAR models show failures to significantly increase state-level economic distress, the severity of which varies across states.

[1] Of course, the literature highlights two other channels but more relevant in a world without Federal Deposit Insurance Corporation protection: (i) Direct wealth effect – a bank failure means the loss of deposits to uninsured depositors, thereby reducing their wealth. This contraction in wealth is transmitted to the real economy in various ways, the most important of which is a reduction in consumer spending (Calomiris, 1993). (ii) Illiquidity of deposits – even if deposits are not lost, the uninsured depositor's money remains illiquid while the bank is closed or is in the process of liquidation. Because depositors are not able to access their money, spending is adversely affected (Anari, Kolari, & Mason, 2005; Rockoff, 1993). However, the establishment of FDIC has weakened these two channels.