CHAPTER 9 LITERATURE REVIEW

9.1 SUMMARY

Small businesses will remain a significant source of employment in the nation and in rural areas like Appalachia. Small businesses also appear to have beneficial impacts on employment on a county level in Appalachia. Supporting small business development is therefore a sensible policy in Appalachia. A significant number of small businesses, perhaps a majority, need access to credit to start and expand. However, access to credit contracted significantly during the Great Recession, particularly for small businesses in low- and moderate-income areas. A lack of consumer demand may also have particularly discouraged small businesses from applying for loans during the Great Recession. Barriers to access also include supply factors such as a tightening of underwriting by banks and a cutback in lending to start-ups.

Smaller banks employ “relationship” lending which is based on knowledge gained by banks through their daily interactions with small business customers. Larger banks use “transactional” lending which is underwriting based on credit scores and other quantifiable factors. Both small and large banks are important for promoting access to credit for small businesses. Small banks’ lending tended to remain stable during the Great Recession while large banks contracted their lending. However, a region cannot rely on small banks since their lending has not grown significantly during the last several years. The studies tend to agree that bank branches promote lending to small businesses as relationships with bank customers preserve lending levels even during recessions.

Consolidation presents contradictory influences on small business lending, sometimes decreasing lending and other times not decreasing lending, depending on the institutional and market context. Banks in concentrated markets appear more likely to discriminate. Alternative financial institutions can be a resource particularly in markets with high levels of consolidations or experiencing bank branch closures. The literature suggests that CDFIs have increased their lending and assets during the current recession and that RLFs target disadvantaged communities. In addition, venture funds associated with Community Development Venture Capital could be a resource since they have sizable investments in six states with Appalachian counties.

Policy recommendations reviewed in this chapter include increasing public sector efforts to support new and existing businesses rather than focusing on attracting larger businesses; supporting business development in Central Appalachia that utilizes the subregion’s natural resources like renewable energy; and specifying recommendations for the New York Banking Development District program that provides insight for other public sector efforts promoting branching in underserved areas with the aim of also increasing small business lending.

9.2 INTRODUCTION

An extensive literature on small business lending has examined the importance of small businesses to the economy, the determinants of lending to small business, and the impacts of consolidation on small business lending. This inquiry is important since small businesses represent one of the most vulnerable yet critical parts of the national economy and in the Appalachian Region.

9.3 Why is Lending to Small Businesses Important?

Small businesses with less than 500 employees constitute 99 percent of firms and employ half the workers in the private sector according to the SBA.[35] In rural America, the importance of small businesses and self-employment is magnified. According to Goetz, Fleming, and Rupasingha (2012), there is now one self-employed worker for every three wage workers in rural areas, which is higher than the ratio for urban areas (though the ratio for urban areas is catching up). They also find that higher shares of locally-owned firms are associated with higher per capita income growth on a county level, but that this relationship is more pronounced in urban than rural areas.[36]

Mojica, Gebremedhin, and Schaeffer of the West Virginia University (2009) find positive impacts of entrepreneurship on employment and population levels in Appalachia.[37] Using data from 1995 through 2005, they assess the change in the number of proprietors and firm births on changes in population and employment controlling for demographic characteristics, the education level of the labor force, population density, infrastructure, and the level of taxation. They find that population growth is positively impacted by the number of proprietors and number of firm births on a county level in Appalachia. They also find that an increase in the number of self-employed proprietors and firm births increases employment. The authors recommend government policies such as subsidies and tax breaks as a means of supporting an increase in entrepreneurship with its benefits on population and employment growth. It would seem that public policies supporting increased lending to entrepreneurs would also benefit Appalachia.

The pursuit of economic development through entrepreneurship also has its skeptics. Some critics view self-employment as low paying and as a last resort for unemployed workers (Goetz, Fleming, and Rupasingha, 2012). In order to further address the economic rewards of self-employment, Loftstrom (2009) conducts descriptive and econometric analysis focusing on low-skilled entrepreneurs defined as those with a high-school diploma or less.[38] Lofstrom notes the importance of this inquiry as the number of self-employed increased from 9.9 million in 1980 to 17.3 million in 2007. Low-skilled entrepreneurs are about 40 percent of self-employed workers in the nation.

Overall, Lofstrom finds that low-skilled entrepreneurs earn less than their counterparts that are wage and salary employees. However, the top 25 percent of earners among male entrepreneurs earn more than the top 25 percent of wage and salary employees. The highest earning women entrepreneurs are not as successful. Just the top 10 percent native born entrepreneurs earn more than the top 10 percent native born women wage and salary workers. Most entrepreneurs experience an earnings disadvantage. Depending on the specific econometric model, native born male entrepreneurs earn 17 to 26 percent less than their wage and salary counterparts. The difference is less for immigrant male entrepreneurs. Over time, low-skilled male entrepreneurs partially overcome the earnings gap. Women entrepreneurs do not fare as well, experiencing earnings that are between 22 and 40 percent less than their wage and salary counterparts, and are not able to make up the gap over 15 to 25 years.

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[35] See U.S. Small Business Administration, FAQ's available via http://www.sba.gov/sites/default/files/sbfaq.pdf
[36] Goetz, Stephen J., David A. Fleming, and Anil Rupasingha. 2012 Economic Impacts of Self-Employment, *Journal of Agricultural and Applied Economics*, 44,3(August 2012): 315-321.
[37] Mojica, Maribel N., Tesfa G. Gebremedhin, and Peter V. Schaeffer. 2009. A County-Level Assessment of Entrepreneurship and Economic Growth in Appalachia Using Simultaneous Equations. Morgantown, WV: West Virginia University, Division of Resource Management.
[38] Loftstrom, Magnus. Does Self-Employment Increase the Economic Well-Being of Low-Skilled Workers? 2009. San Francisco, CA: Public Policy Institute of California and IZA.

Loftstrom does not conclude that his research indicates that low-skilled entrepreneurship should be discouraged but that expectations should be realistic. In addition, he states that his research has not thoroughly examined wealth accumulation opportunities of low-skilled entrepreneurs or their impacts on job creation. Mojica and Goetz find positive impacts of entrepreneurs on job creation. Policies, including those increasing access to credit and capital, therefore remain sensible pursuits particularly in regions experiencing high unemployment and less access to large-scale employers. Indeed, access to credit is necessary for small business growth. Laderman and Reid (2010) report that 60 percent of small businesses received traditional bank loans.

9.4 Small Businesses and the Great Recession

Just like the NCRC report for ARC, Laderman and Reid (2010) report that small businesses lending declined significantly during the Great Recession from 5.2 million loans or $137 billion during 2007 to 1.6 million loans or $73 billion in 2009.[39] Laderman and Reid find that the decline in lending was greater in low- and moderate-income (LMI) neighborhoods than middle- and upper-income (MUI) neighborhoods and that the disparity in access increased. In 2007, there was 1 loan for every 13.3 small businesses in LMI neighborhoods and 1 loan for every 10.7 small businesses in MUI neighborhoods. By 2010, there was 1 loan for every 28.4 small businesses in LMI neighborhoods and one loan for every 22.6 small businesses in MUI neighborhoods. They also find that the growth in small business lending paralleled the growth of subprime lending in areas like Las Vegas and Phoenix during 2003 and 2007. During the Great Recession, many of the same areas that had experienced a surge in subprime lending also experienced a drop in small business lending as foreclosures rose (there was a statistically significant relationship between declines in small business lending and increases in foreclosure).

Chow and Dunkelberg (2011) compare the effect of the Great Recession on small businesses relative to earlier recessions using data from a survey of members of the National Federation of Independent Business (NFIB).[40] The authors compare trends over time for responses on questions related to firm sales, capital outlays, loan-seeking behavior, and perceptions of the current and future business climate to similar points in earlier recessions starting in 1971. They consistently find that small businesses are performing substantially worse in terms of sales and job creation during this recession than prior ones. The small businesses also have lower expectations and are more pessimistic about future conditions. Their analysis indicates that this is not due to a credit-crunch caused by the financial crisis, as the respondents' reported difficulty in accessing lending is not substantially worse during this recession than previous ones. Instead, they conclude that it is a lack of consumer demand that is responsible for the poor performance of small companies.

[39] Laderman, Elizabeth and Carolina Reid. 2010. The Community Reinvestment Act and Small Business Lending in Low- and Moderate-Income Neighborhoods during the Financial Crisis, Working Paper 2010-05. San Francisco, CA: Federal Reserve Bank of San Francisco.

[40] Chow Michael J. and W.C. Dunkelberg, 2011. The Small Business Sector in Recent Recoveries. A paper presented at the Federal Reserve Board conference, Washington DC, November 2011, available via http://www.federalreserve.gov/newsevents/conferences/chowdunk-20111109.pdf.

Montoriol-Garriga and Wang (2012) find that access to credit was reduced to a greater extent for small firms than larger ones.[41] They examine the effect of the Great Recession on access to credit by small firms relative to large firms. The authors find that while small firms continued to pay higher interest rates than larger firms during the recession, the spread in interest rates declined on loans for small and large firms. This effect was largest for loans issued by banks facing severe capital constraints. The authors attribute these results to greater credit rationing by banks following the recession, when small firms which were especially risky were denied credit, while those who received loans were less risky, leading to a lower spread on their loans.

9.5 Supply and Demand Barriers to Acquiring Loans

During 2010, the Federal Reserve System's Community Affairs Offices hosted 40 meetings involving small businesses, lenders, and other stakeholders in several cities across the country to discuss supply and demand for credit and capital.[42] On the supply side, small businesses and banks alike remarked that underwriting standards tightened during the Great Recession, resulting in less lending. For example, because asset values dropped, several lenders required additional collateral including more equity that small businesses needed for loans. In addition, larger banks tend to rely on credit scores for loans under $200,000 but personal and small business credit scores declined during the Great Recession. In some cases, credit scores declined simply because banks reduced credit limits on credit cards, which artificially increased debt ratios.

In rural areas, bank failures reduced access to credit. In some cases, small businesses lost the bank they relied upon and the bank that assumed the failed bank chose not to continue the relationships or the loans with the small businesses. Small businesses reported that reductions occurred in lines of credit needed to deal with cash flow difficulties, refinance loans, and small dollar loans in amounts under $200,000. In addition, participants at the Federal Reserve meetings noted that loans for start-ups have been reduced with some banks only lending to small businesses with five years of operations.

As a result of less lending from traditional banks, small businesses reported using more credit cards, which had interest rates significantly higher than their previous loans, including lines of credit. CDFIs and credit unions also noted an increase in demand from small businesses having a harder time securing loans from banks. Other small businesses turned to factoring companies and payday lenders.

On the demand side, diminished sales and weakening asset values reduced applications for loans. Reduced confidence by small businesses led to an increased demand for technical assistance. Both existing businesses and unemployed workers seeking to start businesses sought technical assistance. The phenomena of the unemployed seeking help in starting small businesses was particularly noted in a meeting occurring in Appalachia, specifically Morgantown, West Virginia.

Participants at the Federal Reserve meetings recommended greater CRA consideration for equity investments in small businesses and grants that fund technical assistance. Also, the New Markets Tax

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[41] Montoriol-Garriga, Judit and J.Christina Wang. 2012. Rationing of Bank Credit to Small Businessess: Evidence from the Great Recession. Working Paper, available via http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2042584

[42] Addressing the Financing Needs of Small Businesses: Summary of Key Themes from the Federal Reserve System's Small Business Meeting Series (2010) available via http://www.federalreserve.gov/newsevents/conferences/sbc_small_business_summary.pdf.

Credit program could be more supportive of small business financing by encouraging more investments in entities that lend to small businesses. Finally, lenders were encouraged to make greater use of "second look" programs that employ sound and flexible underwriting.

9.6 Relationship and Transactional Lending

In general, researchers agree on the typologies of lending techniques used by large and small banks. They distinguish among asset-based lending, credit scoring, and relationship lending (Mitchell and Pearce, 2005).[43] The first two represent "transactional" lending as they are based on the "hard" or objective information about a borrower. For underwriting purposes, asset-based lending uses information about accounts receivable, inventory, and other forms of collateral. Credit scoring is based on the owner's history of using credit. In contrast, relationship lending is based on "soft" information about the potential borrower. In other words, banks rely on the subjective information about a borrower that they received out of lasting relationships rather than on financial condition of the borrowers. Another indication of relationship lending as reported by Cavalluzzo, Cavalluzzo, and Wolken (2002) is that 84 percent of the loans received by small businesses came from lending institutions located in the same city.[44] The median distance between the firm and the lender was just three miles.

Relationship lending is mainly associated with small banks whereas transactional lending is typically employed by large banks. Berger and Udell (2001) say that banks employing relationship lending should delegate more authority to loan officers than those that use objective information.[45] Small banks are better equipped to delegate authority than larger ones; smaller banks have considerably fewer loan officers, making it easier for smaller banks to manage, trust, and rely upon the quality of loan officers' decisions. Relationship lending is therefore typically done in lower volumes than transactional lending at large banks. Using automated technology such as credit scoring, transactional lending benefits from economies of scale. Large transactional lenders serve relatively high number of customers, enabling them to lower costs per borrower by spreading fixed costs over a large customer base.

Cole, Goldberg, and White (1999) provide detailed analysis of differences between relationship "character" lending and transactional "by-the-number" lending.[46] They found that large banks mostly use "by-the-number" approach and small banks use "character" information which is based on pre-existing relationships between the bank and a borrower. Using the National Survey of Small Business Finances, Cole, et al. classify small banks as those with assets under $1 billion and large banks as those with assets above $1 billion. Cole's regression analyses appear to confirm the different lending approaches of small and large banks. For example, higher debt-to-asset ratios increase the likelihood that large banks will not approve small business loans whereas small banks are not influenced by debt-to-asset ratios. Cole et al. hypothesize that small banks possess superior non-financial information about their customers and are thus able to make decisions not based purely on the numbers. In the same vein, small banks are more

[43] Mitchell, Karlyn and Douglas.K. Pearce. 2005. Availability of Financing to Small Firms using the Survey of Small Business Finance. Working paper submitted to the Small Business Administration, May 2005.
[44] Cavaluzzo, K.S., L.C. Cavaluzzo and J.D. Wolken. 2002. Competition, Small Business Financing, and Discrimination: Evidence From a New Survey. *Journal of Business*. January 2002, vol. 75, no.4
[45] Berger, A.N., R.J. Rosen and G.F. Udell. 2001. The Effect of Market Size and Structure on Competition: The Case of Small Business Lending. Chicago, IL: Federal Reserve Bank of Chicago. October 2001.
[46] Cole, R.A., L.G. Goldberg, and L.J. White. 1999. Cookie-Cutter versus Character: the Micro Structure of Small Business Lending by Large and Small Banks, in J.L. Blanton, A. Williams, and S.L.W. Rhine, ed.: *Business Access to Capital and Credit* (Federal Reserve System Research Conference, March 8, 1999).

likely to approve loans to small business customers that have deposits at their banks while large banks are indifferent to deposit relationships. It appears that small banks are able to better utilize the experience and information gained through the deposit relationship than large banks.

In a region like Appalachia with considerable numbers of mid-size and small banks under $1 billion in assets, small businesses are likely to benefit from relationships with these banks. Chakravarty and Yilmazer (2008) find that the probability of being approved for a loan increases with the amount of assets of a business and the net worth of the owner while the chances of being denied increases with the number of delinquencies and lower credit scores.[47] Interestingly, however, holding all of these factors constant, the probability of receiving a loan during a recession increases if a small business has a pre-existing relationship with the bank and the number of years of that relationship. Thus, even during recessions, relationship lending can preserve access to credit. Getting small businesses "banked" is an important step to promoting their access to credit.

The SBA reports that small banks held their lending steady during the current recession whereas very large banks contracted their lending. At the same time, the SBA cautions upon relying on small banks as a "shock absorber" during recessions since small bank lending during the last decade has not grown dramatically (SBA FAQ, 2011). While small and mid-size banks are important and are more likely to practice relationship banking, stakeholders should work with small businesses to establish relationships with branches of banks of all sizes as a means of increasing access to credit and shielding small businesses against dramatic decreases in credit.[48]

9.7 Bank Branches and Lending

Bank branches are generally found to boost small business lending. Frame, Srinivasan, and Woosley report that the number of bank branches increases the share of small business loans in a bank's portfolio. Immergluck and Smith (2001) report that their research in Chicago reveals that banks with the highest percentage of their branches in low- and moderate-income (LMI) census tracts make the highest percentage of their loans in these tracts while banks with the lowest percentage of branches in LMI tracts make the lowest percentage of their loans in LMI tracts.[49]

Goetz and Rupasingha (2011) estimate the impacts of education levels, income growth, industry mix, population density, and bank branches on the growth of self-employment.[50] They conclude that after controlling for other variables, branches per capita increased self-employment, particularly for small rural counties, for most of the years in their analysis. In particular, branches per capita increased self-employment for 2000 through 2007 but not in 2008 and 2009. The worst years of the Great Recession

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[47]Chakravarty, Sugato and Tansel Yilmazer. 2008. A Multistage Model of Loans and the Role of Relationships: A Working Paper, available via http://www.cfs.purdue.edu/csr/research/Chakravarty-research/relationships_final_FM_08%2001%2008.pdf.

[48] Small Business Administration, Office of Advocacy. September 2011. Frequently Asked Questions about Small Business Finance. http://www.sba.gov/sites/default/files/files/Finance%20FAQ%208-25-11%20FINAL%20for%20web.pdf.

[49] Immergluck, Dan and Geoff Smith. 2001. Bigger, Faster…But Better? How Changes in the Financial Services Industry Affect Small Business Lending in Urban Areas. Chicago, Illinois: Woodstock Institute. September 2001

[50] Goetz, Stephan J. and Anil Rupasingha. 2011. The Determinants of Rural Self-Employment: Insights from County-Level Data. A paper prepared for the Federal Reserve Bank Conference on Small Business and Entrepreneurship During an Economic Recovery, Board of Governors of the Federal Reserve System, Washington DC, November 9-10, 2011.

eliminated the positive impact of bank branching on self-employment, most likely because of the deep retrenchment in lending. As lending rebounds, however, bank branches are likely to exhibit once again their positive impact on self-employment.

Laderman and Reid (2010) reinforce the importance of branching. Laderman (2008) finds that only 10 percent of small business lending is from banks with no branches in the local market.[51] They state that lending declined in neighborhoods experiencing the loss of banks either through bank failure or consolidations. Finally, Kobeissi (2009), in a slightly different approach, finds that CRA-related small business lending increases small business start-ups on a local level after controlling for employment growth, bank deposits, University-sponsored Research and Development (R&D), and other economic variables.[52]

9.8 Impacts of Consolidation

A definitive answer regarding the impacts of consolidation on small business lending will probably never be reached. It is quite likely that the economic, institutional, and regulatory context in which mergers occur determine their influence on the level of lending in communities. Reviewing the literature, Hancook, Peek, and Wilcox (2005) hint at the possibilities of different outcomes.[53] In a study in the late 1990's, for example, Berger found that merged banks reduce their small business lending, but that other lenders in the community increased their lending in response, often replacing the lost lending of the merged banks. Similarly in the late 1990's, Peek and Rosengren (1998) concluded that the small business lending behavior of the merged bank resembled the behavior of the acquiring bank instead of the acquired bank.[54] So if the acquiring bank had conducted less small business lending, the newly merged bank was likely to reduce its level of small business lending. Other studies showed that mergers of smaller banks actually increased small business lending while mergers of larger banks had little effect.

While the impacts of bank mergers are likely to be influenced differently by economic and market characteristics, Hancock, Peek and Wilcox (2005) identify important institutional characteristics that are likely to have more uniform impacts at least for larger banks. Hancock, Peek, and Wilcox distinguish between acquisition of banks and merger of bank charters. When a bank holding company (BHC) acquires another BHC, the acquiring BHC can either absorb the acquired BHC's banks completely or let the acquired bank(s) continue lending as a separate entity. In other words, the acquiring BHC can let the acquired bank(s) remain as a separately chartered institution or it can merge the bank(s) and eliminate the charter of the acquired bank(s).

To assess the impacts of acquisitions versus mergers (of bank charters), the study looked at small business lending patterns of the 50 largest bank holding companies excluding credit card lenders. The authors used annual data for the period of 1997-2002. Among the top 50 BHCs in the country, Hancock et al. conclude that larger BHCs (in terms of asset size) tend to reduce their small business lending. In addition,

[51] Laderman, Elizabeth. 2008. The Quantity and Character of Out-of-Market Small Business Lending. Federal Reserve Bank of San Francisco Economic Review.
[52] Kobeissi, Nada. 2009. Impact of the Community Reinvestment Act on New Business Start-Ups and Economic Growth in Local Markets. Journal of Small Business Management 2009 47(4), pp. 489-513.
[53] Hancock, D., J. Peek and J.A. Wilcox. 2005. The Effects of Mergers and Acquisitions on Small Business Lending by Large Banks. Submitted to the Small Business Administration. March 2005.
[54] Peek, J., and E.S. Rosengren. 1998. Bank consolidation and small business lending: It's not just bank size that matters. *Journal of Banking and Finance*, 799-819. 1998.

the reduction is more pronounced when acquiring BHCs merge banks than when the banks are allowed to operate as separately chartered institutions.

Frame, Srinivasan, and Woosley (2001) reinforce the conclusion of Hancock et al. by finding that the share of small business loans in a bank holding company's portfolio increases with the number of subsidiary banks.[55] Frame et al. hypothesize that a subsidiary bank structure is associated with decentralized decision-making in which relationship lending is employed.

Erel (2011) reinforces the conclusion that mergers do not necessarily result in reduced lending.[56] He examines the effect of bank mergers on the mean difference in the ratio of the total (acquirer and target) bank small business loans divided by assets prior to the merger with the same ratio following the merger. The result of the analysis finds no statistically significant decrease in this ratio for the total sample, and in nearly a third of the cases, the change was actually positive. He attributes the lack of an adverse effect of bank consolidation on small business lending to changes in credit technology. Specifically, the advent of credit-scoring may have increased the amount of "hard" information on borrowers available to lenders even at great distances, reducing the need for "soft" information available only when the borrower is in close proximity to the lender. Consequently, as "hard" information becomes more useful in assessing the credit risk of borrowers, mergers in certain cases will not result in aggregate changes in small business lending.

The few studies that examine the impacts of mergers on small business lending in low- and moderate-income tracts generally find that mergers and acquisitions decrease small business lending in these tracts. Reviewing the literature, Immergluck and Smith (2001) state that Samolyk and Richardson (2001) find that banks involved in mergers have smaller growth rates of lending in low- and moderate-income tracts than banks not involved in mergers.[57] From 1996 to 1998, the merging banks' share of small business loans in low- and moderate-income tracts was lower than banks not involved in mergers. Interestingly and importantly, Immergluck and Smith (2001) report that merging banks tend not to decrease their lending in low- and moderate-income census tracts in geographical areas covered by their CRA exams; the decrease in lending in low- and moderate-income tracts occurs in areas outside the scope of the CRA exams. Regulatory enforcement via CRA exams and the merger application process can mitigate decreases in lending as a result of mergers and in some cases may actually increase lending after mergers.

9.9 DISCRIMINATION

The research generally concludes that while discrimination may not be widespread, it occurs in certain loan markets and to certain borrowers. Mitchell and Pearce (2005) using data from the 1998 Survey of Small Business Finances (SSBF) employ a new approach in that they examine possible discrimination in relationship versus transaction lending and by lender type (banks and non-bank finance companies). They state that many researchers regard line of credit lending as "quintessential" relationship loans since line of credit lending represents a sustained commitment on the part of the bank to make periodic loans to

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[55] Frame, W.S., A. Srinivasan and L. Woosley. 2001. The Effects of Credit Scoring on Small Business Lending. *Journal of Money, Credit, and Banking.* Vol. 33, No. 3. August 2001.
[56] Erel Isil. The Effect of Bank Mergers on Loan Prices: Evidence from the United States. *The Review of Financial Studies*, 24(4). Pages 1068-1101. 2011.
[57] Samolyk, K.A. and C.A. Richardson. 2001. The Impact of Bank Consolidation on CRA Business Lending. Chicago, Illinois: Federal Reserve Bank of Chicago.

borrowers over a specified time period. Only banks with close relationships with businesses are likely to engage in line of credit lending according to observers. Accordingly, line of credit lending is classified in regression equations as “relationship” loans while “one-shot” deals or transaction loans are commercial mortgages, motor vehicle loans, equipment loans, and capital leases. Mitchell and Pearce construct variables that reflect the degree of market concentration (as measured by the Herfindahl-Hirschman(HHI) index) and variables that capture characteristics of the small businesses including gender, ethnicity, creditworthiness, history of bankruptcy, and asset levels.

Mitchell and Pearce find that African-American and Hispanic business owners are less likely to have bank transaction loans than whites after controlling for market and business characteristics, but that there is no statistically significant difference in the likelihood of receiving a bank line of credit (relationship lending). Also, minorities are more likely to have transaction loans from non-banks. In line with the observation that discrimination is not uniform, the authors could not detect discrimination against Asians and women. The counter-intuitive finding that minorities are less likely to receive transaction loans suggests that smaller banks employing relationship lending may remain an important source of lending for minorities. Moreover, the trend for large banks to engage in transaction lending may decrease, not increase access to credit for minorities. Cole et al. also found that smaller banks are more likely to make loans to African-Americans than large banks with assets above $1 billion.

Cavaluzzo, Cavaluzzo and Wolken (2002) assess the interplay of discrimination and market concentration. In the seminal Economics of Discrimination, Gary Becker hypothesized that discrimination is more likely in highly concentrated markets lacking significant competition. In less competitive markets, firms can get away with discrimination while in more competitive markets the discriminating firms are likely to lose out in the competitive race against firms more willing to hire or serve minorities. Supplementing data from the 1993 National Survey of Small Business Finances with creditworthiness data obtained from Dun and Bradstreet, Cavaluzzo, et al. examined the connection between demographic characteristics of small business borrowers, market concentration, and the ability to access credit.

A series of regression analyses revealed that increases in market concentration as measured by HHI indices result in African-Americans and women being more likely to experience denials of loan applications. Additionally, results show that African-Americans and women are more likely to have unmet credit needs (as measured by a fear to apply because of possibilities of discrimination or actual rejection) when market concentration increases. Finally, a one percentage increase in concentration as measured by an HHI index causes an 11.40 basis point increase in the price of a line of credit for Hispanic small businesses.

A legacy of disparate treatment could be the differences in using loans and credit card financing by gender and race. The SBA reports that women are more likely than males to start businesses without seeking financing. In addition, women-owned businesses are about half as likely as male-owned businesses to obtain business loans from banks. This places women-owned firms are at a double disadvantage because a business’ relationship with a bank includes general business technical assistance. Likewise the SBA reports that Hispanic and African-American owners are more likely to rely upon credit cards than other businesses. This puts them at a disadvantage because a relationship with a bank leads to non-credit lending which is less expensive (SBA FAQ, 2011).[58]

9.10 CDFIs

The diversity of CDFIs complicates efforts to describe what they do and the impacts that they have (Benjamin, Rubin, and Zielenbach 2004).[59] Most of the early research on CDFIs, therefore, is descriptive, ranging from case studies to summaries of financial and investment data. More recently, two datasets have allowed for more quantitative and detailed description of the industry. Even so, the majority of the literature focuses on institutional characteristics rather than on transaction level analysis of lending patterns.

The CDFI Data Project: Providing Capital, Building Communities, Creating Impact reports are a series of annual papers with data on approximately 500 CDFIs, with the most recent edition being FY 2008. The reports are based on data from the Common Data Project, with voluntary submissions from participating institutions, most of which are CDFIs. In addition to an industry summary, the report contains data on the major sub-categories of CDFIs: community development banks; community development credit unions; community development loan funds; and microenterprise funds. The data include the numbers and sizes of CDFIs, the sectors they finance, and the impact of CDFI investment.[60]

Fabiani and Greer (2007)[61] provide an overview of the CDFI industry with their analysis of data submitted by 223 CDFIs for the Community Investment Impact System (CIIS) in FY 2003, the first year that CIIS became operational. In that year, the CDFIs only reported institution level data, and so the report is limited to that level of analysis. The study examined the differences in characteristics among the different types of CDFIs, and how they vary among the different communities they serve.Bershadker et al. (2007)[62] use institutional level CIIS data to provide a longitudinal analysis of CDFI performance for FY 2005 to FY 2007. They find that approximately 11 percent of CDFIs reported making loans in Appalachia in the three years covered in the report. Over 60 percent reported making loans in rural areas, while only about 50 percent reported making loans in major urban areas.[63]

Beginning in FY 2005, the CIIS dataset included transaction level data as well, allowing for finer quantitative analysis of lending patterns and performance. For example, Cowan et al. (2008)[64] merged

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[58] Small Business Administration, Office of Advocacy. September 2011. Frequently Asked Questions about Small Business Finance. http://www.sba.gov/sites/default/files/files/Finance%20FAQ%208-25-11%20FINAL%20for%20web.pdf

[59] Benjamin, Lehn, Julia Sass Rubin, and Sean Zielenbach. 2004. Community Development Financial Institutions: Current Issues and Future Prospects, *Journal of Urban Affairs* 26(2):177-195.

[60] The most recent report is available online at http://opportunityfinance.net/store/product.asp?pID=177.

[61] Fabiani, D., and J. Greer. 2007. Growth, Diversity, Impact: A Snapshot of CDFIs in FY 2003. Washington, DC: Community Development Financial Institution Fund, U. S. Department of the Treasury.

[62] Bershadker, Andrew, Michael Bzdil, James Greer, and Supapol Siris. 2007. Three year Trend Analysis of Community Investment Impact System Institutional Level Report Data, FY 2003-2005. Community Development Institutions Fund. December 2007.

[63] A comparison of the institution level data on lending in Appalachia with the transaction level data on the location of the project shows that more institutions report lending in Appalachia than report loans for projects in Appalachia.

[64] Cowan, Spencer M., Danielle Spurlock, Janneke Ratcliffe, and Haiou Zhu. 2008. Community Development Financial Institutions and the Segmentation of Underserved Markets. Center for Community Capital Working Paper, August 27, 2008.

the transaction and institution level data to examine whether the composition of the ownership of CDFIs affected its lending patterns. They found that minority controlled CDFIs were significantly more likely to lend in minority census tracts, which suggests that willingness to lend is affected by the relationship between the institution and the community.

A more recent look at the CDFI industry is Swack, Northrup, and Hangen (2012)[65], which looks at data from 592 CDFIs, including all CDFI credit unions and banks, and about half of CDFI loan funds. The data are from regulatory reports, loan applications submitted to the CDFI Fund, and key informant interviews. The study covers the period from 2005 to 2010 and focused on capitalization, liquidity, and risk management. The authors found that CDFIs increased both assets and their loan portfolios in response to the recession, with both CDFI credit unions and CDFI banks growing faster than their non-CDFI counterparts. The report observes that, ". . . true to their mission, CDFIs appear to be 'stepping into the breach' to attempt to close gaps faced by constituents who cannot access traditional market capital."

9.11 Venture Funds

While a small number of venture funds are also CDFIs, most venture funds are traditional, for-profit investors that make equity investments in small businesses. Those investments have long been recognized as critical for start-ups and for expansion of existing businesses (Barkley and Markley 2001).[66]

The *National Venture Capital Association Yearbook* (2011)[67] provides a comprehensive overview of the industry, with comparative data for past years. For example, it documents the negative impact that the recent recession has had on venture capital firms, with capital under management down 38 percent from the peak in 2005. It also shows the concentration of venture capital, with over 80 percent of investment in only five states, up from 71 percent in those same states in 2000 (Barkley and Markley 2001). Two of the states, New York and Pennsylvania, have counties in the Appalachian Region.

Rubin (2010)[68] observes that the economic characteristics that attract traditional venture fund investments, such as highly concentrated investment opportunities and supporting infrastructure, are not found in rural or poor communities.[69] As a result, such communities tend to attract little conventional venture fund investment. That situation, she suggests, has led to the founding of Community Development Venture Capital (CDVC) - venture firms with a combined economic and social mission. One study (Rubin 2008)[70] found that CDVC funds invested over 80 percent of their capital in 10 states,

[65] Swack, Michael, Jack Northrup, and Eric Hangen, 2012. CDFI Industry Analysis Summary Report. Durham, NH: Carsey Institute.
[66] Barkley, David L., and Deborah M. Markley. 2001. Nontraditional Sources of Venture Capital for Rural America, *Rural America* 16(1):19-26.
[67] Prepared for the National Venture Capital Association by Thomson Reuters, available online at www.nvca.org. The yearbook is updated annually and is available online.
[68] Rubin, Julia Sass. 2010. Venture Capital in Underserved Communities, *Urban Affairs Review*, 45(6):821-835.
[69] Another paper that describes reasons for the lack of traditional investment in rural areas is Brown-Graham, Anita, and William Lambe. 2008. Measures and Methods: Four Tenets for Rural Economic Development in the New Economy. Carsey Institute Paper 46.
[70] Rubin, Julia Sass. 2008. Community Development Venture Capital in Rural Communities. A paper presented at the CDFI Fund Research Conference, Washington, DC, June 2008.

with over 55 percent of the overall investment in six states with counties in the Appalachian Region.[71] Building on an earlier paper (Rubin 2006),[72] Rubin also examines the evolution of CDVC firms and notes recent developments which have led to the decline in the number of new CVDC firms and the negative impact that has had on investment in targeted communities.

9.12 Revolving Loan Funds

A revolving loan fund (RLF) combines public- and private-sector capital into a pool that is then transferred either as a below-market interest rate loan or grant to state and local government agencies or non-profit organizations that then lend the money at below-market rates to local businesses (Pulsipher 2006).[73] They serve businesses that may have difficulty securing credit from commercial lenders, primarily start-ups and businesses looking to expand. RLFs can provide gap financing and help those businesses leverage the RLF funding for additional private-sector loans.

Mikesell and Wallace (1996)[74] also note that RLFs can meet some of the demand for venture capital by start-up businesses in rural areas, but they are critical of the model because it is not financially sustainable without periodic infusions of new public funds. They suggest making more market rate loans and tighter standards for lending to improve the sustainability of RLFs.

Walker et al. (2002)[75] examine the performance and impact of loans from RLFs receiving funding from the Department of Housing and Urban Development. The study is based on nearly 1,000 loans made with Community Development Block Grant or Section 108 funds. They looked at the extent of lending, the types of communities where the loans were made, loan performance, and the results in terms of jobs created and leveraging of private-sector investment. They found that more than half of the loans are to communities with poverty rates above 20 percent and about one quarter are to minority-owned businesses. About 25 percent of the loans defaulted, amounting to about 13 percent of the principal loaned.

The National Association of Development Organizations Research Foundation and the Development District Association of Appalachia (2010)[76] provide a more recent look at RLFs. They mix data on RLFs with specific examples, including companies in Appalachia, of how RLF funding has helped businesses develop and expand. They also note the need for improvement and modernization of the various federal programs that provide funding in order to meet the changing business environment in the current economy, as well as recommendations on ways that RLFs can improve their operations.

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[71] Pennsylvania (16.8%), Tennessee (12.8%), Ohio (9.3%), Kentucky (6.8%), West Virginia (6.3%), and New York (4.1%).

[72] Rubin, Julia Sass. 2006. Financing Rural Innovation with Community Development Venture Capital: Models, Options and Obstacles. *Community Development Investment Review* 2(4):15-27.

[73] Pulsipher, Ian. 2006. Revolving Loan Funds for Small Business Development, *National Conference of State Legislatures Legisbrief*, 14(1).

[74] Mikesell, James J., and George B. Wallace. 1996. Are Revolving Loan Funds a Better Way to Finance Rural Development? Agriculture Information Bulletin No. 724-05, U. S. Department of Agriculture.

[75] Walker, Christopher, Martin D. Abravenal, Patrick Boxall, Roger C. Kormendi, Kenneth Temkin, and Marsha Tornovich. 2002. *Public-sector Loans to Private-sector Businesses: An Assessment of HUD-supported Local Economic Development Lending Activities.* Washington, DC: The Urban Institute.

[76] National Association of Development Organizations Research Foundation and the Development District Association of Appalachia. 2010. Public Sector Business Loan Funds: Views and Recommendations from Practitioners.

9.13 ANGEL INVESTORS

Angel investors are the most informal and private source of capital for growing companies. The Center for Venture Research[77] is one key source for data on angel investors. The Center estimates that 57,120 entrepreneurs received $26.0 billion in angel investments in 2007, and that there were 258,200 individual angel investors that year. Angel investors felt the impact of the recession, as evidenced by the fact that investment declined to $20.1 billion in 2010, but the number of entrepreneurs receiving funding increased to 61,900. There were a total of 265,400 active angel investors that year.

Another source of data on angel investors is the Angel Capital Association (ACA),[78] a voluntary organization of individual angel investors and angel investor groups, with around 6,000 individual members. Shane (2008a)[79] notes that groups that are members of ACA are self-selected and probably differ from the universe of angel investors in significant ways. For example, all of the members are accredited investors, meaning they meet the Security and Exchange Commission's criteria for angel investing. Many angel investors, however, are not accredited. Based on the 2007 ACA survey of its members, the angel groups in ACA range in size from 3 to 280 individuals, with an average of 48 individual members. They prefer to invest at the early or seed stage of business development, and 44 percent will only make investments within a 4 hour drive.

Morrissette (2007)[80] provides a summary of earlier literature on angel investors. He discusses the demographics of the investors, the characteristics of the investments they make, how they find investment opportunities, and the motivation for their investments. He also summarizes the differences between angel investors and venture capital investors, noting that angels invest approximately 11 times as much as venture capitalists.

Using multiple data sources, Shane (2008b)[81] examines the role of angel investing as a source of capital for businesses. He reviews existing literature showing that many angel investors only make a single investment in their lifetime and many spend little time monitoring or working with the company they invested in. He notes that angels strongly prefer to invest in corporations rather than individual entrepreneurs and estimates that fewer than 16,000 companies sought an angel investment within a three year period. He also examines the type of investments that angels make and finds that about 40 percent is debt rather than equity.

DeGennaro (2010)[82] examines the role of angel groups, as opposed to individual angel investors. He notes that groups offer advantages to both the investors who join and to the entrepreneurs in whom they invest. For example, groups can pool capital to make larger investments and have a wider range of

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[77] Sohl, Jeffrey. 2011. The Angel Investor market in 2010: A Market on the Rebound. Center for Venture Research, and Sohl, Jeffrey. 2008. The Angel Investor Market in 2007: Mixed Signs of Growth. The Center for Venture Research data are available online at http://paulcollege.unh.edu/cvr-analysis-reports.

[78] www.angelcapitalassociation.org.

[79] Shane, Scott. 2008a. Angel Groups: An Examination of the Angel Capital Association Survey. Available at SSRN: http://ssrn.com/abstract=1142645.

[80] Morrissette, Stephen G., 2007. A Profile of Angel Investors, *The Journal of Private Equity*, 10(3): 52-66.

[81] Shane, Scott. 2008b. The Importance of Angel Investing in Financing the Growth of Entrepreneurial Ventures. Small Business Administration, Office of Advocacy. Parts of this report were included in Shane, Scott A., 2009, *Fools Gold? The Truth Behind Angel Investing in America*. New York, NY:Oxford University Press.

[82] DeGennaro, Ramon P., 2010. Angel Investors: Who They Are and What They Do; Can I Be One, Too?, *The Journal of Wealth Management*, 13(2): 55-60.

experience with which to judge potential investments. For the investees, the wider range of experience within the angel group also means that it can mentor the entrepreneur more effectively.

9.14 Policy Recommendations for Rural Small Business Development

Markley and Dabson (2008) examine the role state policy has had in promoting entrepreneurship in Kentucky.[83] The authors argue that economic development policies in the state have traditionally emphasized attracting existing businesses rather than fostering the creation of new companies or the growth of existing ones; such strategies have limited effect because it is unlikely that Kentucky or other states will be able to outbid low-cost international competitors such as China in attracting large firms. The authors make several broad recommendations, including 1) an increase in the resources devoted to small business development versus those devoted to attracting investment from large employers; 2) increased coordination among state agencies, universities, and local governments in the planning and support of small business development programs; 3) accountability programs to track the effectiveness of existing small business programs with the aim of improving their implementation and assuring they meet the needs of local entrepreneurs; 4) creating financial institutions, including micro-enterprise centers, which can provide seed money to local start-ups.

Economic Transition in Central Appalachia: Ideas for the Appalachian Regional Development Initiative (2010) makes several recommendations concerning policies that can help Central Appalachia transition from a mining-based economy to one based on sustainable ecological practices and the creation of green jobs.[84] Among the recommendations is that ARC develop metrics that identify regions in the most need of government assistance; engage community-based organizations in the formulation and implementation of economic development strategies; provide access to capital and education necessary to promote investment in energy efficient buildings by homeowners and local governments; provide financing for the development of renewable energy (wind, solar, etc.) initiatives which can make use of the natural advantages afforded by the region's environment; promote sustainable forest initiatives, small-scale agriculture, and land restoration by owners of small-to-medium sized plots, which the report argues would promote the development of the region by enhancing its advantages with respect to tourism.

In addition to reviewing recommendations specific to small business development in Appalachia, it is useful to review a report *(10 Years In: A Review of the Banking Development District Program)* by New York State on its Banking Development District (BDD) program subsidizing bank branches in underserved areas since expanding bank branches appears to promote lending to small businesses. The report was based on surveys of participating banks as well as community organizations.[85]

One issue for Appalachia is that the great majority of the BDDs are urban; 25 are in New York City and four are in Buffalo. The remaining nine are in Albany, Cayuga, Jefferson, Nassau, Oneida, Onondaga, Orange, and Rockland counties. Of these counties, none are in Appalachia. The report discusses that the

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[83] Markley D. and B. Dabson. 2008. Creating a System of Support for Entrepreneurs and Small Businesses in Kentucky: Insights and Policy Recommendations. A paper by the Rural Policy Research Institute for the Mountain Association for Community Economic Development, August 2008.
[84] Mountain Association for Community Economic Development and Kentuckians for the Commonwealth. 2010. *Economic Transition in Central Appalachia: Ideas for the Appalachian Regional Development Initiative.* 2010.
[85] New York State Banking Department. 2010. 10 Years In: A Review of the Banking Development District Program, available via http://www.dfs.ny.gov/banking/bdd.htm.

relatively few branches outside of New York City is due to a lack of awareness of the program in upstate New York.

The New York report offers a number of recommendations to facilitate the financing of bank branches benefiting from the program. For example, options should be expanded to collateralize loans made by participating banks. Also, a two year maturity on the certificate of deposits received by BDD branches is too short and undermines branch profitability. The report recommends a ten year maturity. In addition, the report argues that there should be no limit to the number of times a bank can apply for renewal to the program given the length of time that it might take the subsidized branch to become profitable.

The report also discusses a number of operational issues. For example, banks argue that allowing multiple branches within a single district or creating overlapping boundaries for the BDDs would undermine their profitability, especially in rural areas where demand is limited. The report, however, favored allowing multiple branches in a single district as it would encourage the provision of more services to underserved communities. The report recommends that overlapping districts would be approved on a case-by-case basis.

Community groups argue that more low-cost banking services could be provided by BDD banks. The report agrees, suggesting that the Banking Department should encourage the creation of new services. The report also maintains that a requirement of participating banks to provide financial education to customers would benefit both the bank and customers by mitigating the possibility of default and encouraging the provision and use of financial services, particularly to small businesses. The report suggests that banks partner with a specialized third party organization to provide educational services. The issue of small business loans is not discussed directly by the report. A BDD program should include goals for small business lending and financial education for small business owners as well.

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