Entrepreneurship in Emerging Domestic Markets

Barriers & Innovation

Glenn Yago
James R. Barth
Betsy Zeidman

EDITORS

The Milken Institute Series on Financial Innovation and Economic Growth

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Milken Institute

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Entrepreneurship in Emerging Domestic Markets

Barriers and Innovation

Foreword by Robert E. Litan

Springer

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Guided by market-based approaches, we work to improve economic conditions and the quality of life for people in the United States and around the world. Our approach is straightforward: we put research to work, pursuing viable solutions to the gaps in access to capital markets, education and job opportunities.

Our work is rooted in the long-term trend toward three revolutions of access – the worldwide democratization of capital, health and knowledge. By improving global access in these areas to all citizens, states and nations, the Institute hopes to spur economic development and improve standards of living.

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Note from the Editors

This volume examines the crucial role entrepreneurship plays in fostering job creation and promoting economic growth, particularly in traditionally overlooked communities in the United States. Individuals with new ideas, new approaches to organizing businesses, and new products for the market are vital to generating economic development and creating wealth. Greater recognition of this fact has led to increased interest in better understanding the determinants of entrepreneurship, as well as the potential barriers limiting its ability to flourish.

The latest research in these topics is particularly important for low- and moderate-income communities, and those with high ethnic and immigrant concentrations. Entrepreneurship offers individuals in such areas the opportunity to improve their standards of living through their own efforts. In the process of improving their own lives, moreover, these entrepreneurs contribute to the overall economy. With the U.S. population undergoing rapid diversification, enabling the economic potential of these emerging domestic markets is critical to enabling the national growth.

The Federal Reserve Bank of Kansas City and the Ewing Marion Kauffman Foundation sponsored a conference November 3–4, 2005, in an effort to further our knowledge about the importance of entrepreneurship to low- and moderate-income communities. A group of experts on entrepreneurship from around the country participated in the conference, which involved the presentation and discussion of several policy-oriented papers. Most of the papers are included here and provide an up-to-date and first-rate assessment of policy actions that can alleviate the gap between those with an entrepreneurial potential and the resources necessary to make it a reality. It is hoped that the information provided here will help guide policy makers when focusing on ways to improve conditions in our emerging domestic markets. The production of this volume would not have been possible without the support of our colleagues at the Milken Institute. The Co-Editors wish to specifically acknowledge the valuable contributions of Alethea Abuyuan, Dinah McNichols, Caitlin MacLean, and Karen Giles.

James R. Barth and Glenn Yago
Milken Institute Series on Financial
Innovation and Economic Growth

Foreword

Slowly but surely, entrepreneurship is getting its proper due as a source of economic growth for the economy as a whole, and as a pathway to economic and personal independence for many individuals in our society. This book makes an important contribution to the literature by documenting the significance of entrepreneurship in low- and moderate-income communities.

The studies in this volume, by eminent experts in the field, document how entrepreneurial activity provides income to the entrepreneurs themselves (who need not be residents of these communities), and to the people they employ. But starting and growing a business is risky. Many firms fail, and individuals of low- and moderate-income face higher hurdles than others, because many lack the requisite skills, education, financial capital, and social contacts that increase a business's likelihood of success. Many of the papers in this volume provide guidance to policy makers on how to bridge these gaps so that individuals of all means have an equal shot at success in their entrepreneurial endeavors.

The Kauffman Foundation is devoted to helping the public and policy makers to appreciate and understand the contribution of entrepreneurs to the U.S. economy. The Foundation is grateful for the opportunity it had, together with the Federal Reserve Bank of Kansas City, to help sponsor the conference at which most of the papers in this volume were presented. We hope that the findings will be useful to citizens, professional researchers, and policy makers in United States and throughout the world.

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June 2007

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Barth was an appointee of Presidents Ronald Reagan and George H.W. Bush as chief economist of the Office of Thrift Supervision until November 1989 and has previously served as the chief economist of the Federal Home Loan Bank Board. He has also held the positions of professor of economics at George Washington University, associate director of the economics program at the National Science Foundation, and Shaw Foundation Professor of Banking and Finance at Nanyang Technological University. He has been a visiting scholar at the U.S. Congressional Budget Office, Federal Reserve Bank of Atlanta, Office of the Comptroller of the Currency, and the World Bank. He is a member of the Advisory Council of George Washington University's Financial Services Research Program.

Barth's expertise in financial institution and capital market issues has led him to testify before the U.S. House and Senate Banking Committees on several occasions. He has authored more than 200 articles in professional journals and has written and edited several books, including The Great Savings and Loan Debacle and The Reform of Federal Deposit Insurance. His most recent books are Rethinking Bank Regulation: Till Angels Govern, with Jerry Caprio and Ross Levine, Cambridge University Press, 2006, and Financial Restructuring and Reform in Post-WTO China, with Zhongfei Zhou, Douglas Arner, Berry Hsu, and Wei Wang, Kluwer Law International, 2007. He is also the overseas associate editor of The Chinese Banker. Barth has been quoted in publications ranging from the New York Times and Wall Street Journal to Time and Newsweek, and appeared on broadcast programs including "The McNeil/Lehrer Newshour," "Good Morning America," "Moneyline," and National Public Radio.

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He has published in the Journal of Money Credit and Banking, the Review of Industrial Organization, the Journal of Banking and Finance, Management Science, and the Review of Economics and Statistics. Dr. Jackson is currently on the editorial advisory board of the Journal of Small Business Management. In July 2004, Dr. Jackson provided expert testimony before the U.S. House of Representatives on the deregulation of credit unions. In 2005, he served as editor of a special issue of the Journal of Small Business Management on "Small Firm Finance, Governance, and Imperfect Capital Markets" and also in 2005 was selected to serve a three-year term as a Filene Research Fellow.

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Litan has had a distinguished career in public service. He served on the staff of the Council of Economic Advisers (1977–79), as Deputy Assistant Attorney General in the Antitrust Division of the Justice Department (1993–95), and Associate Director of the Office and Management and Budget (1995–96). He also has been a consultant to the Treasury Department on financial policy issues.

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Entrepreneurship in Low and Moderate Income Communities

Kelly D. Edmiston[1]

Over the last several decades, numerous programs and policies have been established to assist low and moderate income families.[2] Some of these endeavors, especially those targeting the very poor, have made substantial improvements in the lives of those they have touched. Historically, however, most of these efforts to assist low and moderate income people have had little impact beyond the provision of basic needs, such as food, clothing, and shelter. Advocates have recognized this, and increasingly efforts are being made to generate more sustainable improvements in the financial well-being of low and moderate income people by assisting them in creating and maintaining wealth (Sherraden, 1991). Examples of these endeavors include home ownership programs and individual development accounts. Another important way one can create wealth is through entrepreneurship.

Although a consensus definition does not exist, most would agree that an entrepreneur is one who starts a business and accepts (most of) the risk associated with owning that business. Some believe that one must bring an innovative product or service to market to be considered an entrepreneur, but others would consider any self-employed person to be an entrepreneur.[3] In the low and moderate income context, it is probably best to use a broad definition, which would include self-employed people generally.

Evidence suggests that entrepreneurship is a viable alternative to wage and salary employment (or unemployment) for many low and moderate income

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[1] The views expressed in this chapter are those of the author do not necessarily reflect the views of the Federal Reserve Bank of Kansas City or the Federal Reserve System.

[2] Low income refers to families earning less than 40 percent of area median income (metropolitan statistical area median income for those living in metropolitan areas and state median income for those living in nonmetropolitan areas). The earnings of moderate income families lie between 40 percent and 80 percent of area median income.

[3] See, for example, Evans and Leighton (1989) and Blanchflower and Oswald (1998).

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people. An analysis of data from the Panel Study of Entrepreneurial Dynamics (PSED) suggests that 38 percent of nascent entrepreneurs, defined as those who are actively involved in the creation of new business ventures, live in low and moderate income households.[4] Of these, about 45 percent live in low income households. Roughly eight percent of nascent entrepreneurs live in households with below poverty-level income.

Entrepreneurship may yield a double dividend in low and moderate income communities. Many of the retail and services establishments available in higher income areas, such as grocery stores, often are not available to low and moderate income people because they tend not to be located in low and moderate income places, and many low and moderate income people face transportation challenges (Cotterill and Franklin, 1995). Entrepreneurial activity not only provides income to the entrepreneurs and perhaps others in the community, but also provides needed goods and services. The entrepreneurs themselves do not need to be low and moderate income people for the community to profit from this double dividend, however. Benefits also arise from the location of entrepreneurial enterprises developed and operated by higher income people, but located in low and moderate income communities.

Additional gains may also arise from increased entrepreneurship. Self-employed people on average have higher incomes than wage and salary workers (Fronczek, 2005), and self-employment may be an important component of upward mobility. Further, many report nonpecuniary benefits: self-employed people tend to report having more control over their lives and more often report being highly satisfied with their lives than do wage and salary workers (Blanchflower, 2004).[5] And of course, self-employment may be the only reasonable option to earn income for many low and moderate income people.

Although the benefits from entrepreneurship in low and moderate income communities are many, numerous hurdles also exist. For example, low and moderate income people hold little of the nation's wealth. Wealth can be critical for entrepreneurial success because it may provide start-up capital, provides a financial safety net during the transition from wage and salary employment, and may serve as a positive signal to other potential investors (Kim et al., 2004). Although there is some debate, research largely suggests that the lack of financial capital is a major impediment to entrepreneurship (Kim et al., 2004; Dunn and Holtz-Eakin, 2000; Evans and Jovanovic, 1989).

Human capital also presents a problem in low and moderate income communities. Educational attainment among low and moderate income people

[4] All figures reflect calculations by the author using data from the PSED. For data and documentation, visit http://www.psed.isr.umich.edu/main.php (accessed May 17, 2006).

[5] Of course, as Blanchflower notes, self-employment people also work under a lot of pressure and report that they find their work stressful, come home from work exhausted, are constantly under strain, lose sleep over worry, and place more weight on work than they do on leisure.

is significantly lower than that of higher income households (Zhan and Schreiner, 2004). Low and moderate income people also tend to have less work experience.[6] Research suggests that human capital, in the form of both education and work experience, is positively related to the survival and performance of new ventures (Brush and Manolova, 2004; Cooper and Gimeno-Gascon, 1992).

Many other obstacles to entrepreneurship exist for low and moderate income communities as well, not the least of which is a declining economy in many urban areas. Although several promising efforts to promote entrepreneurship and support small business owners in low and moderate income communities have been implemented in the last several years, the idea of fostering entrepreneurship in low and moderate income communities has received little attention in academic circles. In an effort to stimulate research, encourage discussion, and begin to frame the issues, several leading scholars were brought together for a conference to explore the possibilities that entrepreneurship might offer for low and moderate income communities. The conference, which was held November 3–4, 2005 in Kansas City, Missouri, was jointly sponsored by the Federal Reserve Bank of Kansas City and the Ewing Marion Kauffman Foundation. This volume is a collection of original essays prepared for the conference, as well as comments from discussants and remarks from panelists.

One way to think about entrepreneurship in low and moderate income communities is to consider the role of entrepreneurship in revitalizing depressed areas, which often are heavily populated by low and moderate income people. This is the path followed by Tim Bates.

In many of the great industrial centers of the 20th century, established firms constituting the economic base of the area – firms serving national and international markets, which provide the "*raison d'etre* for the regional economy" – have lost their competitive edge, due in large part to an increasingly globalized economy and relatively cheap labor over seas. Reduced money flows from outside the area also result in dimmer fortunes for local suppliers that service the base industries and for the many, mostly smaller firms that service local needs, such as food, housing, and medical services.

As the local economy becomes depressed, "bright young people" and established professionals often depart to seek attractive opportunities in expanding regions. Physical capital often is drained from the area as well, as factories and other facilities become underutilized or closed down altogether. The flight of human capital and erosion of physical capital simply exacerbate the problem, and a downward spiral often ensues. Finally, public infrastructure tends to decay and public service delivery suffers as local governments face declining resources.

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[6] For data, see http://pubdb3.census.gov/macro/032002/perinc/new05_001.htm (accessed May 19, 2006).

Bates argues that often local government attempts to revitalize depressed areas contribute to further deterioration. There is little "hard evidence" that enterprise and empowerment zones, and to some degree tax incentives in general, achieve their stated goals – one only has to look at Detroit, which is "blanketed" by a variety of such incentives. Worker training and education make sense as a tool for easing the transition of workers into sectors where labor demand is increasing, but these are "people based" rather than "place based" policies, and the effect is to enhance the workers' mobility, which often means an escape from stagnant and declining areas to expanding areas where job opportunities are readily available.

Revitalization of a depressed area requires an entrepreneur to re-deploy its underutilized resources. This can be most directly accomplished by strengthening the region's economic base. But if the market for the base product is large and stable, and the product is highly standardized, the strategy is not going to work. Rather, what is needed are circumstances in which small, innovative, entrepreneurial firms can compete at this level. These include a small, but highly viable market for a product that is highly differentiated (as opposed to standardized) and for which the weight and bulk to value ratio is high, where speed of delivery is important and applicable supplier industries are competitive.

Echoing Bates, Zoltan Acs and Kadri Kallas argue that the role of the entrepreneur is to shift resources yielding a low return into activities that yield a high return and a personal gain to the entrepreneur. In the absence of entrepreneurs, resources continue to be employed in activities yielding low returns, which leads to an "ossified economy" where resources are under-utilized. Empirical evidence supports the notion that entrepreneurship can be a critical factor in economic growth. Acs and Kallas refer to findings of a 2004 paper Acs wrote with Catherine Armington, which suggest that a one standard deviation increase in the rate of new firm formation (from 3.5 to 4.5 per thousand in the labor force) yields a one-half standard deviation increase in the employment growth rate, from 2.1 percent to 2.85 percent.

Unfortunately, while entrepreneurship can provide a substantial boost to economic growth in general, its prospects for revitalizing low and moderate income communities are not very promising. Acs and Kallas assert that a major conclusion of his literature survey is that "entrepreneurship may not play an important role in poor communities." The majority of microentrepreneurs who start off poor remain poor.

The chief problem, it seems, is that many low and moderate income people simply lack the requisite skills to be successful entrepreneurs. Many of the deficiencies that prevent entry into white-collar employment, such as language and technical skills, also hinder small business development. Of course, the lack of human capital is not the only problem impeding entrepreneurship in low and moderate income areas. These communities often also suffer from a lack of other required inputs and inadequate social capital and finance. Having said that, it is important to note that money will not overcome gaps in education and entrepreneurial skills.

Acs and Kallas argue that "each segment of the population includes some proportion of entrepreneurs." The extent to which they will emerge depends on the support they receive. In terms of support from the public sector, he suggests that it is not so much pro-active policies that are needed, but the undoing of some destructive policies. The economic value of the inner city as a business location can be increased by, among other things, "abolishing self-inflicted regulatory costs." There is little evidence that public financial support programs to small businesses are effective in poor communities, although there is evidence that some specific programs work well in some cases. In general, public intervention should not try to imitate market functioning mechanisms. Rather, it should focus on creating an enabling environment for entrepreneurship and applying non-market solutions to market failures, such as education and physical infrastructure.

An interesting twist in the Acs and Kallas paper is the notion that the link between entrepreneurship and low and moderate income communities may be social entrepreneurship. They argue that "social entrepreneurship is when an individual who has the prerequisite skills to pursue for-profit entrepreneurship chooses to maximize his or her utility instead of profits." An "attractive" opportunity is one with sufficient potential for a positive impact to justify the investment. The development of social capital that social entrepreneurship often engenders can help to "empower disadvantaged people and encourage them to take greater responsibility for, and control over, their lives."

Much of the literature Acs and Kallas review is tepid at best in its support of public financial support programs for small businesses in poor communities. But the U.S. Small Business Association's loan guarantee programs may have something to offer low and moderate income communities, according to a paper by Will Jackson, Ben Craig, and James Thompson. Previous work by the same authors suggests that SBA guaranteed lending has a positive, albeit small effect on economic growth rates in local geographic markets, as measured by per capita income. In this paper, the authors extend the analysis to another measure of economic performance, the employment rate. Perhaps more importantly from the perspective of this volume, they investigate the possibility of a differential impact on low income communities *vis-à-vis* higher income markets.

Using a simple fixed effects model, Jackson, Craig, and Thompson find that the inflation-adjusted total dollar amount of SBA-guaranteed loans, scaled by population, has a statistically significant positive impact on employment rates in MSAs and non-MSA counties, but similar to their previous work, they find that the result is economically small. Importantly, the authors find that the effect of per capita SBA-guaranteed lending on the employment rate diminishes with greater levels of market development, as measured by per capita bank deposits. Given a positive correlation between financial market development and per capita income, the authors draw the conclusion that SBA-guaranteed lending has a larger impact in lower income areas.

Like Acs and Kallas and Bates, Barth, Yago, and Zeidman suggest that government regulations can be stumbling blocks to entrepreneurship. Results

from the Small Business Problems and Priorities survey of small business owners indicate that in a ranking of 75 barriers for small businesses, regulations such as workers' compensation and "unreasonable government regulation" were third and ninth on the list, respectively, while business taxes was fifth and property taxes ranked sixth. The authors provide some anecdotal evidence of regulatory barriers to new businesses, as well. Although the difficulty of obtaining long-term and short-term loans ranked low on the list (70th and 68th, respectively), the authors assert that some regulations intended to protect borrowers actually have the perverse effect of reducing the availability of loans to small businesses.

Barth, Yago, and Zeidman note that much of the literature on the determinants of entrepreneurship mention that liquidity constraints are a major barrier. Looking across Census tracts, the authors find that the mean share of loans made to businesses in low and moderate income communities is more than 40 percent below the mean share of low and moderate income people in the population. While they argue that this calculation is a somewhat naïve measure of "loan bias," they suggest that the number is a useful benchmark with which one can begin to understand the reasons for "the substantial variation in distributions of LMI loans and LMI populations across MSAs." Indeed, the mean tells us little about the distribution, which varies widely across MSAs. In a few cases, LMI communities receive a share of business loans greater than their share of the population, but a considerable majority of LMI communities receive a substantially smaller share of loans compared to their population share.

An arguably much better measure of such loan bias is the distribution of loans to LMI communities relative to their share of total income. In this calculation, Barth, Yago, and Zeidman find a reversal of fortunes: the share of business loans in LMI areas exceeds their share of income. But again, the distribution varies widely across MSAs, and 13 percent of LMI communities have a "positive loan bias."

In the remainder of their paper, Barth, Yago, and Zeidman review the literature on the determinants of entrepreneurship and set out to investigate the issue themselves in what they term an "indirect approach." Using regressions of number (or share) of total and small business establishments on numerous factors, they find several of their potential determinants of entrepreneurship to be statistically significant, among them many of the financial variables they included. None of the formulations of their measure of loan bias was significant in explaining total establishments, but the formulations using population in the denominator were positively correlated with establishments with zero and 1–10 employees and negatively correlated with establishments with more than 100 employees. The income-based measure of loan bias was not significant in any of the regressions.

Similar to Barth, Yago, and Zeidman and Jackson, Craig, and Thompson, Phillips and Mushinski focus to some degree on access to financing for small businesses. They evaluate the role that Morris Plan lending institutions played in expanding consumer micro-credit in the United States in the early twentieth century. This story serves as an interesting and important example of an

institutional structure "appearing organically and through the private sector to satisfy a consumer need" and thus offers vital lessons for those seeking to increase access to micro-credit today, an important effort in expanding entrepreneurship in low-and-moderate-income communities.

The Morris Plan banks were unique in viewing the lending needs of low-income people as a profit opportunity. They took advantage of the joint liability structure in their loan contracts to make relatively low cost loans–loans that were low cost to both borrower and lender.

Arthur J. Morris, for whom these thrifts were named, believed that "character, plus earning power, is the proper basis for credit." Therefore, these loans were unsecured and were targeted to individuals who were judged to have good character and who had a steady source of income, but who did not necessarily have financial resources available. Borrowers were required to find two people to serve as co-signers on the loan. This imposition of joint liability lowered monitoring costs because the co-signers had an incentive to investigate a problem loan and rectify the default. Further, adverse selection problems were mitigated to the extent that co-signers would presumably only co-sign a loan for someone they viewed as trustworthy and likely to repay the loan. Judging the character of the borrower was thus much less costly to the lender. These attributes allowed the Morris Plan banks to profitably serve a previously underserved market.

Credit unions arose in the United States at about the same time as the Morris Plan banks. Joint liability is an important component of credit union lending as well, because the members all suffer a loss when a loan is not repaid (and some loans require co-signers). In this sense, the joint liability imposed on credit union borrowers was much broader than that imposed on Morris Plan borrowers. Phillips and Mushinski assert that the relatively greater success of Morris Plan banks during this period is due in large part to the weaker joint liability of the Morris Plan loans.

Phillips and Mushinski note that a key lesson from the experience of the Morris Plan banks relative to the credit unions is that those designing micro-credit institutions should critically consider the social and cultural context into which the institution is to be introduced. The Morris Plan structure was "more attuned to the individuality of typical Americans than were credit unions."

The overall thrust of these papers seems to be that fostering entrepreneurship in low and moderate income communities is no easy task. Many of the problems that lead to unemployment and low wages in these communities are likely also hindrances to entrepreneurship. But there is hope, and the public and nonprofit sectors may be able to help.

One of the best things that the public sector can do to foster entrepreneurship is to eliminate unnecessary regulations and break down other barriers. Financial capital is critical, and existing efforts to assist entrepreneurs in acquiring financial capital seem to have been effective in some cases. Small Business Administration loan guarantees are associated with higher personal income and higher employment rates, and tend to be especially effective in low and moderate income communities. Given their share of personal income, low and moderate

income communities also largely receive a reasonable share of commercial loans, although there is wide variance in these shares relative to personal income across communities, and commercial loan activity is very low in low and moderate income communities overall relative to their share of the population. Entrepreneurship likely has a critical role in rebuilding declining communities.

While these five papers offer some important insights on the issue of entrepreneurship in low and moderate income communities, they have really only touched the surface. The hope is that this conference will spawn additional research in the area of entrepreneurship in low and moderate income communities and begin to frame an important policy debate.

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Alleviating the Lagging Performance of Economically Depressed Communities and Regions

Timothy Bates

1 Lagging Economic Base, Lagging Employment, Lagging Incomes: Roots

Joseph Schumpeter observed early in the twentieth century that there really is no equilibrium in competitive markets. Static efficiency at a single point in time conveys little advantage to the firm, the industry, or the region; the advantage, instead, belongs to the innovators introducing new marketing strategies, new products, and more efficient production techniques. The entrenched giants relying upon scale economies in production and marketing for competitive advantage are unlikely to survive in the long run, when matched against the entrepreneurs who invent new market segments, revolutionize production techniques, and reconfigure supply chains.

Many of the greatest centers of U.S. industry in twentieth century are economically depressed areas today, for example: Detroit, Michigan; Gary, Indiana; various cities in upstate New York. All suffer from a slow, long-term loss of competitive position. Leading firms in the these regions—Ford, U. S. Steel, Kodak, Xerox, and others—previously enjoyed powerful oligopolistic positions in their respective industries.

The process of decay did not follow a set formula, but Michael Porter has identified certain broad patterns, including lagging innovation, a gentlemanly pace of competition, and a tendency to blame industry problems on unfair international competition or, perhaps, labor unions (1998). Competition might be suppressed in part by private-sector monopoly power, or by protective government policies once the process of decline has set in. But at best, this merely slows the pace of decline.

Local governments in the declining regions often face fiscal crises, which they address by pursuing policies that accelerate the pace of decline. In Detroit,

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for example, weak infrastructure and poor education and training systems work to exacerbate rather than alleviate the processes of long-term decline. Bright, ambitious young adults raised in economically depressed areas often choose to depart, seeking their fortunes in other regions of the country, where opportunities are wider and risks are lower. The outcomes of these and other contributing factors are economically depressed regions characterized by weak human resources, low levels of capital investment, lagging innovation, and eroding infrastructure. Something of a downward spiral develops; a process of cumulative causation takes root, which is very hard to halt, much less reverse.

Porter offers a provocative thumbnail sketch of what is perhaps the most common cause of regional stagnation: the core cause of high underemployment rates and lagging household incomes. Firms constituting the economic base of the area—the firms that bring in dollars by selling their products to clients located outside of the region—are experiencing a loss of their competitive edge (1998). These established firms may have large-scale, highly specialized assets in the form of plants and equipment; they might have professional, technical, and managerial workers—indeed *most* of their workers—possessed of a wealth of specialized skills and hands-on work experience. That is not really the crux of the problem. The crux is the fact that these established firms, however wealthy and powerful, have been slow to adapt to changing circumstances.

This reality explains why the large and powerful corporation so often loses out when faced with competition that is truly entrepreneurial. "Successful companies seek predictability and stability," notes Porter (1998, p.52). Too often, prevailing conventional wisdom is rooted in circumstances that are losing their relevance. Faced with competitive threats within changing circumstances, decision makers are basing strategies upon outdated fundamentals, and "strategy becomes ossified" (Porter, 1998, p.52).

Entrepreneurship can manifest itself in many ways; I will focus primarily upon: small firms. What chance does the small business have against the entrenched, large-scale, status quo producers? The inflexibility of the old order is key to understanding why the newcomer often prevails. Unencumbered by the conventional wisdom, the entrepreneurial newcomer is not bound by norms and common practices. Greater flexibility, quicker execution, new strategies—these are the keys to success.

2 The Dynamics of Regional Cumulative Underdevelopment

Declining competitive advantage drags down the economic-base industries that regions rely upon for competitive advantage. If the regional economy is highly diversified, cumulative underdevelopment tendencies may never materialize. A healthy, well-diversified regional economy is most likely one that has a number of different industries experiencing varying stages of expansion and decline. As those core industries decline, they free up resources (by laying off

workers, for example); industries enjoying increasing competitiveness and expanding market share are buying/hiring more resources. This process undoubtedly is painful to individuals displaced from a declining sector and lacking the skills most actively sought in the expanding sectors. But the pain of transition is part of the normal functioning of a healthy, market-driven capitalist economy. The problem of cumulative underdevelopment is profoundly more painful, and, most often, it afflicts areas with a thinly diversified economic base.

A hypothetical depressed area is described in this section, focusing upon circumstances that perpetuate regional underdevelopment. I am not attempting to deny the diversity that characterizes actual depressed regions and districts; my intent is to simplify reality by abstracting from messy detail certain core traits that might be manipulated by persons or institutions seeking to create or expand entrepreneur-driven business activities.

A depressed area is an underdeveloped enclave within a prosperous and dynamic economy. Economic underdevelopment is preserved by a drain of resources that sustains the depression. Flows of resources interact with prevailing economic conditions in a system of circular causation that maintains underdeveloped areas as characteristic features of the U.S. economy. Characteristic resource drains include human capital, financial capital, physical capital, and purchasing power. Depressed areas, therefore, are left without many of the resources necessary for redevelopment and improvement.

Human capital is the most important single resource. This resource often diminishes over time by way of the educational system and the high-wage economy. Drawn by outside opportunities, many intelligent and capable young adults move into the progressive sectors where opportunities are wider and rewards are greater. Advanced educational credentials are common tickets out for bright young people. Attractive career opportunities are forthcoming from employers located in prosperous, growing regions of the country. Depressed-area employers are unlikely to offer comparable opportunities. This selective drain of human resources leaves underdeveloped areas bereft of their best products.

Young people may be the most mobile, but they are not the only human resources leaving depressed areas. Declining opportunities prompt local professionals to look elsewhere. The pull of attractive career options in expanding regions, combined with bleak local options, cause accountants, engineers, lawyers, doctors, and other professionals to depart. Often, they are not replaced.

The drain of physical capital is equally striking. The economic-base industries in depressed areas are typically in decline. Regions with atrophying export industries—autos in Detroit, camera film in Rochester, New York, dairy products in rural New England—compose a major share of the depressed areas currently found in the United States. Almost by definition, declining export industries are undergoing long-term disinvestment. New investment—particularly cost-cutting investment—may take place, and the economic-base

industries may be major local employers. But long-run trends are clear: employment numbers gradually are declining as old facilities close down, rarely to be replaced. Factories, farms, and other facilities often fall into a state of underutilization and ultimately are abandoned.

Non-base industries—local retailing and services—gain much of their vitality (or lack thereof) from the area's economic-base industries. When factories close and farm land is underutilized, employment in the base industries falls predictably, and the pool of local purchasing power to buy the goods and services of the non-base industries contracts. These industries then shrink in lockstep fashion as the region's economic base declines.

Faced with declining industries, job loss, shrinking purchasing power, and selective out-migration of well-educated adults, local governments operate in an environment of declining fiscal capacity. The local public infrastructure may fall into disrepair and become increasingly expensive to maintain. Lacking the resources for adequate maintenance and repair, local governments by default often permit public facilities to deteriorate. Streets, schools, parks, sanitation, police and fire stations (and their equipment) depreciate. Repairs to resolve crises replace normal maintenance; the physical capital of public infrastructure drains out of depressed areas. Ultimately, older schools, libraries, police and fire stations, hospitals, and the like are closed down.

The housing sector's vitality profoundly reflects dominant trends in the region's private sector. Low property values and a paucity of new construction predictably accompany the long-run decline of the local economic base. Weak public services provided by local governments prone to fiscal crisis do not enhance property values. Faced with a declining demand for rental housing, some landlords may choose to maintain their short-run cash flows by minimizing building maintenance. Like the public infrastructure, some rental housing stock falls into a pattern of deterioration and disinvestment. When property is worn out and future prospects do not warrant major repairs, it may be abandoned.

A substantial part of the savings generated by residents and businesses in depressed areas flows into local financial institutions whose investment policies might send funds out of the area. A modern financial sector normally stimulates growth by mobilizing savings and by facilitating allocation of funds to finance economic activity. Businesses, households, and local governments depend upon such funds to finance economic activities beyond what they can raise independently. Yet in economies where regional development is highly uneven, expansion in growing areas typically drains capital from declining regions (Bates and Bradford, 1979).

High rates of investment in expanding areas increase employment and purchasing power, and this in turn further tends to increase investment in a multiplier fashion. To support high investment, funds migrate to the growing areas from other regions, in search of attractive returns. "The banking system," observed Myrdal, "becomes an instrument for siphoning off the savings from the poorer regions to the richer and more progressive ones" (1957, p.28).

The resources that might enable a depressed area to break out of its downward trajectory are precisely the resources that are prone to drain out. Bankers seek secure returns; young adults seek attractive career opportunities; landlords redeploy their capital by disinvesting from weak housing markets. All of these processes are part of the normal functioning of the U. S. economy. That is precisely why depressed areas are normal features of a dynamic economy.

Redeploying resources from declining to expanding sectors and regions often exacerbates uneven development because processes of circular causation magnify growth in the expanding areas and decline in the depressed regions. The capital and talent needed to revitalize depressed areas tend to be drained away. As these resources gravitate toward high-growth areas, regional inequality is heightened. As the ensuring downward multiplier process becomes entrenched, it can be difficult to reverse. In summary, local governments are particularly harmed: declining resources predictably lead to public infrastructure decay and a struggle to maintain public services. Housing markets, already hurt by out-migration, suffer further from declining public-sector services and amenities. Banks, observing local government deterioration and a weak housing market, are reinforced in their belief that secure returns on loans are more attainable elsewhere. Tightening credit availability encourages landlords to disinvest from marginal properties that might otherwise have been maintained.

Pessimism reigns, further driving young adults to pursue careers in more promising environs. Non-base industries are unlikely to make long-term investments in local retail and service industries. Out-migration, public-sector deterioration, tightening credit availability, housing disinvestment, business disinvestment ... all of these factors snowball, decline feeding upon decline in a process of circular causation.

3 Traditional Attempts to Revitalize Depressed Areas

It's important to realize that systematic local government responses to economic decline are often themselves contributors to further economic deterioration. Simply stated, entrenched government policies worsen the situation in many instances, constituting an effective strategy for *undermining* possibilities for economic revitalization. This may stem from structural problems–loss of property-tax base, for example—rather than incompetence or mismanagement in local government. Incompetence, of course, merely causes a bad situation to worsen (Porter, 1997).

Lack of political power may handicap local governments as they compete for resources at higher levels of government. Infrastructure improvement, for example, may be needed badly, but the competition for public-sector infrastructure allocations may be intense. Winners are apt to be the contenders with greater political clout: affluent suburbs may take the bulk of infrastructure funding that fiscally strapped central cities are seeking (Orfield, 1998).

There exists, nonetheless, local economic development policies designed to promote business investment and job creation in regions and communities characterized by as low income, high poverty, high un- and underemployment, and the like. Such policies often evolve in a political environment in which the major development needs of depressed areas do not heavily shape the content of the revitalization program.

Enterprise zones, of course, come to mind. Tax subsidy programs designed to jump-start economically depressed areas have been a standard feature of local economic development policies for decades. Numerous studies by economists have produced little hard evidence that such tax-cut policies actually achieve their objectives in any fashion, much less in a cost-effective manner. But there is some evidence. A recent review of the scholarly literature on applicable state tax incentives, conducted by Terry Buss, does find some evidence that tax breaks can influence firm location decisions (2001).

The narrower scholarly literature on enterprise and empowerment zones has reached a similar conclusion (Peters and Fisher, 2002). Well-designed studies of impact (Dowell, 1996, for example) usually conclude that enterprise-zone incentives have no discernible impact upon the location, investment, and job-creation decisions of private businesses. But a serious optimist could find enough evidence fragments in the literature to argue that a program characterized by superior design and excellent administration may be a useful tool for revitalizing depressed areas.

Such optimism might explain why Detroit has been blanketed by a variety of state and federal enterprise- or empowerment-zone incentives and programs over the past decade. An alternative hypothesis is that adopting tax incentives is politically easier and less expensive than addressing major infrastructure needs, lack of local government fiscal capacity, and other serious structural problems that undermine the attractiveness of Detroit as a site for business creation and expansion. I label this the "tax incentive as a token gesture" hypothesis, a productive area for further scholarly research. Meanwhile, prevailing informed opinion suggests that tax-incentive programs are likely to have little impact by themselves either to revitalize depressed areas or encourage critically needed entrepreneurial business development.

The case for public-sector involvement in worker training and retraining is altogether different from the rationale for boosting local economic development through tax subsidies. Yet the worker-training strategy, properly understood, is not really about area development. Local economic development strategies often are characterized as "place-based." Worker training and education, in contrast, are "people-based" and thus, at best, are very indirect approaches to revitalizing depressed areas.

Seen in the context of a dynamic, ever-changing economy, the need to encourage, subsidize, and otherwise provide for worker training and retraining is widely recognized and not controversial. As workers predictably are expelled from industry sectors where labor demand is declining, effective retraining facilitates the transfer of workers into sectors where labor demand is increasing.

Workers must have the skills and expertise employers seek in an expanding, dynamic economy. Effective training enhances the mobility of displaced workers and lowers the personal costs of transition for workers who have lost their jobs.

The fallacy of utilizing education and training as a place-based redevelopment strategy has been demonstrated many times (Fusfeld and Bates, 1984). Like education, effective training increases one's options in the labor market. Workers can move easier from a declining industry to an expanding one, drawing people out of the stagnant and declining geographic areas where jobs are few, and into the dynamic and expanding geographic areas with more opportunities. People move toward opportunity. The depressed areas left behind by mobile members of the work force reap no automatic benefit. Having lost their more skilled workers, these areas most often are left worse off. The cumulative causation heightening regional inequality is unlikely to abate through worker training and education.

4 What does Work?

The conditions that enhance regional inequality are counterbalanced in the private sector by forces inherent in that inequality. This counterbalancing is highly imperfect and may not become manifest for many years, but it is a corrective process that attracts observant entrepreneurs. Simply stated, sustained growth in specific geographic areas tends to raise the costs of doing business. California's Silicon Valley grew rapidly for decades, and by the end of the twentieth century, the costs of doing business had soared. Housing was brutally expensive, infrastructure was congested, and skilled labor was increasingly scarce and aggressively sought. Sustained success at some point tends to turn into its opposite.

Sustained underperformance has altogether different private-sector manifestations. Property values stagnate and decline; plants and equipment are underutilized; idle land awaits development and redevelopment; underemployment is often rampant. Economic stagnation itself naturally generates a pool of resources that is ready and willing to be redeployed.

What is needed are individuals who profitably can redeploy the underutilized resources of the depressed region. These individuals are entrepreneurs. Their role is to attract the necessary resources from outside the region that, when combined with local resources, will render viable business entities.

The appropriate role of government, broadly, is *not* to give this entrepreneur a tax subsidy. More important is that depressed-area local governments are relieved of the fiscal straitjacket that too often undermines their ability to provide modern infrastructure and basic government services. A local government lacking the fiscal capacity and/or ability to provide modern infrastructure

and basic services will drive away far more entrepreneurs than an enterprise zone will attract.

Detroit in 1994 was implementing a federally funded empowerment zone to complement its existing enterprise-zone incentives to businesses. Simultaneously, the city's once impressive system of freeways literally was falling apart; local streets were in serious disrepair; large parts of the sewer and water main infrastructure were decades beyond their useful life; and snow removal from most of Detroit's streets ranged from problematic to nonexistent. This list of systemic malfunctions is representative rather than exhaustive. Contemplate building a new firm in an enterprise zone, and tapping into a section of the sewer system that was installed during the Civil War.... The enterprise-zone incentives were not attractive. Detroit, effectively, was operating a disinvestment program and driving away firms and entrepreneurial energy.

Detroit claimed that it was offering economic revitalization incentives to private businesses, but it wasn't. The net effect of the incentive, infrastructure, and government-services package in Detroit was to enhance underdevelopment. The city was operating an economic *devitalization* program. It worked: Detroit's economic base was weaker in 2005 and the number of workers employed by the private sector had fallen, relative to the level of the early 1990s. The attraction of underutilized resources effectively had been neutralized, in the eyes of private-sector firms, by the economic devitalization program offered by the public sector.

5 What is to be done?

This is a conceptual paper. Thus far, I have been discussing the positive contribution of entrepreneurship to area revitalization in a highly general, abstract manner. The balance of this paper will move from the abstract to the specific. I will narrow my focus to a single manifestation of entrepreneurship: the small business.

Economic-base industries (those selling products outside their region) commonly have been thought of as goods' producers—manufacturers of goods and bulk commodities as diverse as coal, soybeans, and apples. Aside from agricultural producers, goods production industries traditionally have been dominated by large firms.

The role of small firms in base and non-base industries can be clarified, if imperfectly, by grouping a region's firms into three broad categories. First, the base industries serving multistate, national, and international markets provide the raison d'etre for the regional economy—autos in Detroit, dairy products in rural Vermont, movies in Los Angeles. A second industry tier complements the base industries by providing them with the goods and services necessary to produce their exports. A third industry tier supplies the

local economy with food, housing, medical services, recreational services, and the like. This group is dominated by small businesses; tier two has a significant presence of larger-scale small firms, but it is populated predominantly by large businesses. Tier one is dominated by the large-scale firms that describe the Fortune 500. corporations.

Area revitalization is accomplished most directly by strengthening a region's economic base; that is, by strengthening the scope and presence of tier-one and tier-two firms. If these firms prosper, money flows into the region from the purchases of customers located elsewhere. As the economic-base employers hire more workers and buy more products from local suppliers, benefits filter down to tier-three firms. A tempting generalization is that the big firms (tiers one and two) lead and the small firms (tier three) follow. The more accurate this generalization, however, the weaker the potential contribution of small firms to revitalize the economy in depressed areas.

Tier-one firms in many regions of the nation with lagging economies suffer from rising competition rooted in the rapid globalization of goods production. Southern textile mills, for example, lose market share, and the regions where they predominate face the same problems that have set back the Detroit area—decline in the base industries ripples through the region in a multiplier fashion. In this context, the development potential of tier-three small businesses probably will be neutralized by declining local purchasing power. Entrepreneurial innovation is needed at tiers one and two.

Can an innovative small textile business revitalize the local economic base in a declining textile-dominated region? That depends. Hopelessness and despair among local economic development advocates are justified most when certain conditions prevail; the applicable six conditions broadly define industry niches where significant scale economies permit high volume, mass production of goods that are amenable to being moved cheaply via containerized shipping. If the following six questions are answered affirmatively, the odds against the success of the innovative small producer of goods are overwhelming:

1. Is the market for the product large?
2. Is the product standardized?
3. Is the demand for the product highly stable?
4. Is speed of delivery of only minor importance?
5. Is the product's weight-to-value ratio low? It's bulk-to-value ratio?
6. Do the dominant producers of the product exercise significant monopolistic power in their dealings with major suppliers?

Global supply chains have come to dominate many product areas where answers to the questions above are affirmative. Why produce bath towels in North Carolina? Produce them instead in a large, modern factory in southern China, where wage and benefit costs are a fraction of those in North Carolina.

The advice economists traditionally offer to innovative firms seeking bath-towel competitiveness strikes me as useless. For producers unable to compete on labor costs, that advice has been to:

1. invest in labor-saving equipment;
2. reorganize production and training for the purpose of making labor more productive.

Typically, the response to labor-cost disadvantages has been concerted efforts to step up capital investment and worker productivity. For more than two decades, this strategy has been undermined by a steadily growing number of export-oriented producers in low-wage countries matching "the levels of productivity attained by the most efficient domestic producers" (Waldinger, 1989, p.72).

The globe is steadily becoming a smaller place for goods production. Sophisticated telecommunications along with jumbo jets and containerized shipping effectively have shrunk international space. Productivity levels of U.S. workers are being matched or even exceeded in a growing range of producers with low-cost labor in countries such as China.

By identifying the circumstances for pessimism, I have spelled out the converse—the circumstances in which the innovative small firm can compete successfully at tier one. Inherent in every advantage of the global low-cost producer is an important disadvantage. International space has shrunk, but the producer at the terminus of a 10,000-mile-long global supply chain lacks much of the flexibility that carves viable market niches for innovative small firms.

The giant factories in Asia may enjoy significant scale economies in production, but those producers are unlikely to be competitive in market niches demanding rapid deliveries of small, unstandardized orders. The weight-to-value ratios of many products rule out economical shipping by air freight; a very long supply chain, therefore, translates into a very long time lag. Domestically as well as globally, the flexible, quick-moving small producer has an edge in serving niche markets, particularly those characterized by unstable demand and typically small orders. Is the applicable niche market subject to regularly changing consumer tastes and preferences? Is the product market seasonal in ways that are hard to predict? Does the niche market deal in perishable products, particularly those where freshness and price are directly related? Broadly speaking, an affluent clientele often prefers the niche product to the standardized, mass-produced alternative. This offers the innovative, flexible, fast-moving small firm entry into tier one. Such a small business can be a major component of the goods-producing industries that so often dominate a region's economic base.

If all or most of the following six questions are answered affirmatively, the odds favor the success of innovative small producers of goods:

1. Is the market for the product small?
2. Is the product highly differentiated (as opposed to standardized)?

3. Is the demand for the product highly variable?
4. Is speed of delivery of major importance?
5. Is the product's weight-to-value ratio high? It's bulk-to-value ratio?
6. Are the applicable supplier industries highly competitive?

If the above conditions apply, then the wisdom of Joseph Schumper is highly applicable: static efficiency at one point in time conveys little advantage. . .the advantage instead belongs to the innovators introducing new marketing strategies and products. . . .Cost advantages rooted in low wages and scale economies of production convey little advantage to the export-based manufacturer in a wide range of the markets served by innovative entrepreneurs operating nimble small businesses.

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State of Literature on Small- to Medium-Sized Enterprises and Entrepreneurship in Low-Income Communities

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1 Introduction

The topic of this paper seems rather simple at first glance; however, it is anything but simple. The issue, entrepreneurship and low-income (LI) communities, must be put into perspective, and that is not simple. So let us start with a simple question: Does entrepreneurship impact communities in general, and, if so, how? Over the years, the literature has given three answers to this question—job creation, innovation, and economic growth—each with supporters and detractors. By studying the opposing issues for three decades, we have learned that job creation takes place in firms of all sizes create jobs; in some industries, small firms have the advantage in innovation, and new-firm formation seems to lead to economic growth. While this statement can be debated, it seems to be a reasonable summary of my research and its findings over the past three decades.

What about the role of entrepreneurship in LI, or poor communities? And what do we mean by an "LI" community? Do we mean a developing country; a poor, rural community; or a pocket of poverty in a rich country? A poor country probably needs capital accumulation, education, foreign investment, and building of a supportive institutional environment for entrepreneurship (Deininger, 2003; Hallberg, 2000; Klein and Hadjimichael, 2003; Smith, 2000). All of this would mean declining rates of self-employment. If by "LI" we mean pockets of poverty in a rich country, then the immediate question is about who the entrepreneur will be—rich people in poor communities, or the poor—and how will entrepreneurship would help them? If we are interested in cities, then we have a lot of literature upon which to draw.

This paper limits the discussion of the role of entrepreneurship to LI areas in developed countries. We define entrepreneurship as new-firm formation; the classic Schumpeterian connotation of the term with innovativeness is abandoned in this paper. Hence, the formation of new small- and medium-size

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enterprises (SME) is taken to mean entrepreneurship. These definitions are adopted to embrace the complex relationships among SMEs, job creation, innovation, and economic growth. An underlying assumption of the paper is that the foremost objective of LI communities with respect to entrepreneurship is job creation. Innovation and economic growth should be regarded as secondary goals.

The literature from the past decade suggests that when poor people start businesses without the requisite skills, education, financial capital, and social contacts, they usually fail. The causes of poverty in these communities go much deeper than what entrepreneurship might fix. Of course, many programs have tried to help the poor, and we will review some of these. This paper will develop a framework to help guide our thinking and organize the literature on the subject.

The next section develops a simple two-by-two matrix to guide our thinking by focusing on a supply-and-demand model of the economy for rich and poor communities. The model helps us understand what role supply of inputs and demand for products play in a community that is above average and one that is below: if rich communities have functioning markets, perhaps poor communities do not. The third section examines what is necessary to create functioning markets where none exist. The forth section asks questions about who becomes an entrepreneur: why do some people work for wages and others try self-employment? The fifth section begins with a short case study about the regional development efforts in Appalachia and presents the results of empirical research about the role and impact of SMEs in LI communities—the evidence on entrepreneurship and poor communities turns out to be mixed. Next, social entrepreneurship and its role in community building are examined. We suggest that social entrepreneurship, with its emphasis on utility maximizing, as opposed to profit maximizing, might play an important role in building communities where government has failed. The penultimate section reviews the literature on the impact of entrepreneurship policies on poor communities. The final section is a summary.

2 Basic Regional Economic Development Theories

Classic regional development theories have approached the topic from the supply side and the demand side, both reflected in the economic-base theory of regional development (Hoover, 1975; Nelson, 1993). This theory embraces regional export activity as the primary source of regional economic development (Krikelas, 1992). A region will grow when income from its export goods contributes to the local economy; the consequent increase in local incomes gives rise to non-basic economic activities. Growth results from forward and backward linkages, described in the supply- and demand-side models, respectively.

The supply-side theory of regional development views a region with a competitive pool of inputs that attract new investment: an educated work force, financial capital, technological base, land, and natural resources. Each region's mixture of inputs determines the nature of its base-economic activities. The supply-driven model describes regional growth as an outcome of a primary supply of "labor, capital, imported inputs, and government services" (Hoover, 1975, p.231). The "supply multiplier" effect occurs as an increase in output from a successful activity stimulates increases in other, supporting economic activities through forward linkages. Measures for increasing the availability and improving the quality of inputs include educating and training the labor force, creating university-industry linkages and removing the "barriers to occupational mobility and technical change" (Hoover, 1975, p.242).

Demand theories explain regional development through a process where the external demand for a region's product gives rise to the demand for other products in the region (either inputs to the central product or nonbase products and services). The process is called "backward linkage" to denote how regional development starts with defining "where the demand comes from" and continues with tracing "its impact through the regional economic system" (Hoover, 1975, p.218). In the demand-driven model, the supply of inputs is taken as given: Perfectly elastic supply follows demand (Hoover, 1975).

Hoover (1975) emphasizes that the demand- and supply-driven models are not conflicting but complementary theories. They both build on the understanding that economic-base activities lead to and determine a region's overall development; that "nonbasic" activities are "simply consequences" of the region's economic growth. A region cannot grow from within or by "taking on in its own washing" (Hoover, 1975, p.219). What differentiates the supply- and demand-driven model is the understanding of where the impetus to growth comes from—the supply of quality production inputs in a region, or the demand for its economic base products?

A critique of this theory is that if the unit of analysis (the region) is taken to be a large, self-sufficient region that has internal trade flows, then the internal trade and demand can generate growth (Tiebout, 1956).

Both the supply-side and demand-side theories assume that regions are characterized by strong social capital (Porter, 1998; Rubin, 1994), and a regulatory system that guarantees smooth functioning of markets (Deininger, 2003; Klein and Hadjimichael, 2003). These theories do not explain how poor and uneducated regions start to develop in the first place; they assume the presence of some competitive competencies or resources, or a persistent demand for the region's economic base product.

Could entrepreneurship explain how poor communities develop (complementing the supply-side theories)? (See here Hirschman, 1958). Start with the assumption that entrepreneurship is always desirable in poor communities, even if entrepreneurs need continuing public support and , and most small- and medium-sized enterprises never grow big and pay lower wages than large plants. Table 1 represents supply- and demand-side approaches to development

Table 1 Conditions of Development by Community Affluence

Community / Theory	Affluent	Low Income
Supply	Quality human capital	Low-quality human capital
	Financial capital	Limited financial capital
	Infrastructure	Poor infrastructure
	Leadership	Limited leadership
Demand	Strong export demand	Weak export demand
	Backward linkages	Weak backward linkages
	Tradable goods	Few tradable goods

in affluent and LI communities. A growing body of literature suggests that affluent communities rely on supply-side policies to grow and develop. In other words, entrepreneurship seems to play an important role in economic growth and development. These communities have high-quality human capital, adequate financial capital, and social capital (Acs and Armington, 2006; Acs and Plummer, 2005; Bresnahan and Gambardella, 2004; Florida, 2002; Acs and Varga, 2005; Acs and Storey, 2004). More recent theories of economic development, such as endogenous growth theory (Romer, 1994, 1990, 1986), can be seen as types of supply-side theory of regional economic growth. Endogenous growth theory emphasizes the learning-by-doing process as a factor of growth, along with spillover effects (Acs et al., 2004; Acs et al., 1994, Audretsch and Feldman, 1996).

The role of entrepreneurship as a successful community development tool in LI communities plagued by low-quality inputs is unclear. Bates (1993) suggests that when LI individuals start businesses without adequate capital, education, social contacts, and networks, they will fail in most cases.

3 Macro-Level Aspects of Entrepreneurship

Academic study of entrepreneurship broadly can be divided into the macro-level research into the environment of entrepreneurship, and the micro-level, cognitive and behavioral studies of entrepreneurship. Next, this paper will review the macro-level factors of entrepreneurship and discuss its individual aspects in the context of LI communities.

Global Entrepreneurship Monitor (GEM) identifies nine critical features of a pro-entrepreneurship economic environment. These include access to financial capital, educational training, supporting government policies and programs, R&D transfer, favorable commercial and legal infrastructure, as well as cultural and social norms (Acs et al., 2005, p.14).

Addressing the topic of inner cities as entrepreneurship environments, Porter (1998) argues that with their unique local market demand, integration with

regional clusters, and human resources (there are myths about the inner-city labor force), they offer good opportunities for inner-city-based entrepreneurs. He states, however, that efforts at fostering inner-city development have "tried to defy the laws of the marketplace" (1998, p.10). The competitiveness of locations is largely a function of the local business environment, which, in turn, influences the productivity of inputs. Access to labor, capital, and natural resources no longer determine prosperity because they are more widely available.

As to the role of government subsidies and support, Porter's position is that the focus and qualifying criteria for current programs erodes their effectiveness. Businesses should be supported on the basis of economic need rather than on the basis of the race, ethnicity, or gender of their owners. The qualifying criteria should be location and number of employees. The private sector has the leading role in revitalizing inner cities. The focus should be on "creating economically viable businesses," rather than on subsidies and special-preference programs (p.396). This can be accomplished by establishing business relationships with inner-city companies, redirecting corporate philanthropy from social services to business-to-business efforts, such as training programs and management assistance, and adopting the right model for equity capital investment. Abolishing self-inflicted regulatory costs also can increase the economic value of the inner city as a business location.

Hallberg (2000) agrees that SME competitiveness and growth are functions of the overall business environment, and argues that a good business environment is necessary for the success of targeted assistance programs. The primary role of government is to "provide an enabling business environment that opens access to markets and reduces policy-induced biases against small firms" (p.8). SME development strategy is, Hallberg says, a "private-sector development strategy" (p.8). The rationale for intervention in the SME sector is to address market and institutional failures that bias the size distribution of firms, not the existence of inherent economic benefits provided by small firms. By promoting product innovation and delivery mechanisms, and by building institutional capacity, governments can hasten the development of markets that SMEs can access for services.

Even though Porter (1998) supports creating a favorable market environment first (through enabling regulation), there also shines through the importance of the "correct attitude" of the community. Porter sees the role of community-based organizations (CBOs) in working to change the work force and community attitudes, and to create work-readiness and job-referral systems. But he also states that in trying to develop a community economically, one should not rely on local human resources if these are inferior to the "incomers."

Rubin (1994) notes that CBOs are moving away from advocacy to focusing on providing physical assets, such as housing. Porter would argue that this is the right strategy—profit-oriented businesses are more efficient in using public subsidies. Some supporters of community-based development fear that this shift in philosophy will derail the whole community-based development

endeavor from its initial mission, which is community regeneration, empowerment, and participation. CBOs counter that "Enabling individuals to grow through property ownership, skill development or continued education, and encouraging them to participate in decisions to physically and socially repair the community, increases the assets of both individuals and the neighborhood," Rubin writes, and, "as communities become more economically viable, they are better places to live, and communities that are better places to live become more economically viable" (p.410). CBOs not only should make efforts to have the houses built, but also remember that the entire process flows from and benefits the community.

Cluster formation, which generally is associated with social capital, is an "essential ingredient of economic development" as well (Porter, 1998, p.8). Clusters are defined as "geographical concentrations of interconnected companies and institutions in a particular field" (Porter, 1998a, p.2). Firms within an industry prefer to locate close to their competitors and related industries in order to benefit from the presence of a pool of skilled work force, suppliers, industry information, and to expose oneself to innovative pressure. Klein and Hadjimichael (2003), referring to Audretsch (2002) and Glaeser (1998), state that: "Functioning cities . . . are the best of all incubators or clusters, as they help firms, particularly small- and medium-sized ones, establish themselves, grow, and create employment" (p.80).

4 Individual-Level Aspects of Entrepreneurship

4.1 Characteristics of an Entrepreneur

To evaluate the role entrepreneurship might play in community revitalization, it is critical to understand that, "The entrepreneurial process is a long-term, human-centered practice of innovation that transcends industrial, sectoral, race, sex, and class lines" (Friedman, 1986, p.35). According to psychologists, on an individual level, entrepreneurs exhibit the need to achieve, an internal locus of control, propensity for risk-taking, tolerance of ambiguity, and a type-A behavior (Gladwin et al., 1989, p.1,306). Each segment of the population includes some proportion of people temperamentally disposed to be entrepreneurs. But the extent to which they become entrepreneurs depends upon the environmental support—cultural, financial, and educational (Friedman, 1986).

Bates (1993) echoes Friedman's observations, noting, "The personal traits associated most strongly with entry into self-employment are wealth holdings, education, and age (a proxy for years of work experience)" (p.255). The necessary traits serve as complements, not substitutes, for one another. Startup capital cannot overcome deficiencies in entrepreneurial skills and education, and loans to less-skilled individuals often are not repaid. Business survival is determined by many of the same characteristics that influence the success of

individual entrepreneurs. New managers of businesses with uncertain abilities learn as time goes by. If they revise their abilities upward, they probably will survive; if not, they probably will not. Newer firms with lower sales volumes are more likely to fail, while efficient–and more experienced–firms grow and survive (Jovanovic, 1982). Financial capital and educational attainment are correlated most strongly with business survival–similar to the entry into self-employment.

4.2 What Motivates Startups?

While studying microenterprises in LI communities, Sherrard Sherrarden et al. (2004), contend that human capital theory variables such as skills, knowledge, education, experience, motivation, and creativity fail to explain the determinants of becoming an entrepreneur. Entrepreneurship is a function of need, opportunity, and environmental conduciveness, and, more often than not, is triggered by negative occurrences that may include the loss of a job or spouse (Friedman, 1986). Some individuals find discrimination in the labor market to be motivating. For others, the decision to start a business is the result of more positive rationale, which includes a sense of self-fulfillment and personal growth, autonomy, flexibility, and community service (Sherrarden et al., 2004). There are also people who start new firms to "appropriate the expected value of their new ideas, or potential innovations, particularly under the entrepreneurial regime" (Audretsch, 2002, p.26).

Innovative output is affected by city scale, as spillovers are assumed to occur with greater frequency in regions where the direct knowledge-generating inputs are greatest (Audretsch, 2002). Following the theory of knowledge spillovers, derived from the knowledge-production function, the greatest clustering of innovating activity will occur in industries where tacit knowledge is important. Within the literature, the consensus view is that knowledge spillovers, within a given location, fuel technological advance, but there is little consensus as to the manner in which this occurs.

4.3 Obstacles to Starting a Firm

Entrepreneurs generally are faced with myriad obstacles as they create a new business. The barriers to entry originate from a number of sources including individual characteristics, government policies, financing, and location. Potential entrepreneurs are people with the human and financial resources necessary to overcome the barriers to entry and those who are prone to respond to opportunities.

The lack of language for immigrants and the technical skills for the general population that prevent entry into white-collar employment—which may be

preferable to self-employment—are also are obstacles to starting a small business (Bates, 1993). Other encumbrances to business formation come as a result of tax policies and regulation, subsidy programs, and regulatory burdens (Klein and Hadjimichael, 2003; OECD, 1997). Entry requires adequate access to capital, financing, infrastructure, markets, technology, and skilled work force (Friedman, 1986; Klein and Hadjimichael, 2003; OECD, 1997). The success of startups also is determined by surrounding business and physical environments. The rate at which new businesses are formed is greatly influential in determining the viability of further small business development in a particular area (Bates, 1993). Venture capital, while essential for financing startups, typically is not effective if it targets LI communities undergoing industrial restructuring (Friedman, 1986). Furthermore, areas in which corruption, crime, and theft are commonplace tend to be poor climates for the successful creation of businesses (Klein and Hadjimichael, 2003).

Relative to urban areas, rural communities have a smaller customer base and may be less welcoming of outsiders (Gladwin et al., 1989). In addition to low sales potential, these rural communities also may be constrained by perceived low returns, a lack of knowledge and previous management experience, and a lack of capital and credit as well as of social acceptability and contacts.

Barriers to exit, including rigid labor market regulations, hard budget constraints, and stigma associated with business failure, may also be problematic for entrepreneurship (Klein and Hadjimichael, 2003).

5 Empirical Research on the Role of SMEs in LI Communities

5.1 Trends in Entrepreneurship and Poverty: The Case of Appalachia

Appalachia, a 200,000-square-mile region stretching from New York to Mississippi along the Appalachian mountain range, encompasses the entirety of West Virginia and parts of 12 other states (Appalachian Regional Commission, 2007). The terms “Appalachia” and “coal” used to be synonymous because the region’s substantial reliance on heavy industry and natural resource extraction. In the 1960s, many of the poorest counties in the country were located in Appalachia; incomes averaged only 73% of the rest of the nation (Widner, 1990, p.299). President Kennedy, having encountered the striking poverty of the region during his election campaign, initiated the Appalachian Regional Commission (ARC) in 1961. The Appalachian Regional Development Act was signed into law in 1965, and became the first federal government program exclusively devoted to the development of a lagging region (Higgins and Savoie, 1995, p.205).

Causes of the poor economic performance of the region included the so-called “boom-and-bust economies of coal mining,” the decline of farming employment, heavy concentration of mature industries, massive outmigration

of young and educated population, and the region's extreme isolation due to topographical characteristics. From 1965 to 1992, about two-thirds of federal appropriations for ARC went for highways to address the region's isolation. The majority of supplemental federal funds and state and local funds, however, were used for other infrastructure development, such as water supply, sewers, industrial sites, and airports (Higgins and Savoie, 1995, p.213).

Although smaller in absolute amounts, significant funds were used to improve the quality of education, health services, and housing conditions. Only after 1971, when the ARC was reauthorized, did the emphasis shift "from construction of physical infrastructure to its operation, and from vocational training to formal education at all three levels" (Higgins and Savoie, 1995, p.219). Developments in entrepreneurship in recent decades will be reviewed subsequently in this past context of regional development measures.

In general, certain portions of Appalachia have prospered, while many continue to underperform. In 1990, poverty rates were highest in central Appalachia, followed by southern and northern segments. Among counties that were more distressed in 1990, poverty rates have declined more than for those closer to the U.S. average in their level of development; the level of economic development is equalizing within the region. At the county level, particularly in distressed and mining areas, a substitution in labor force participation between men and women has been significant (Black and Sanders, 2004).

In the ten years between 1990 and 2000, the economy has grown much faster while income inequality appears to have grown more slowly in Appalachia than for the nation. But median family income and labor force participation in Appalachia remains lower than the U.S. averages, while poverty rates are higher. Between 1990 and 2000, the unemployment rate of men in Appalachia on the whole decreased more than for the United States. The decrease was particularly noticeable among white men in Appalachia relative to white men in the United States (Black and Sanders, 2004).

Despite some of the trying economic conditions in the Appalachian region, businesses are created, residents are employed, and wages are generated. While these activities typically occur on a smaller scale than at the national level, a more focused approach best illustrates the nature of business development in Appalachia. It is true that establishment birth rates are lower in Appalachia than in the United States as a whole, but at the same time, establishment death rates are lower. Between 1982 and 1997, increases in manufacturing establishments were 10% greater in Appalachia than in the Unites States overall. In a knowledge-based economy, this may not necessarily be an improvement (Foster, 2003).

It is no surprise that job creation rates are 1.2% points lower in Appalachia than the rest of the United States. More interesting is that Appalachian job destruction rates are 3.4% points lower than overall U.S. job destruction rates. While these figures may invite the belief that Appalachia is performing quite well, it is important to note that, in general, new businesses in the region are relatively less productive and offer lower wages. The average Appalachian

worker makes 10% less than his or her average American counterpart (Foster, 2003). But lower living costs of the region may not directly translate into a 10% lower standard of living.

To this point, we have scrutinized the whole of Appalachia against the entire country. By examining more targeted indicators, two things become apparent. First, the Appalachian region is heterogeneous. Given its size and varying cultural makeup, an in-depth look into variations among its three subregions—northern, central, and southern Appalachia—is necessary. Second, in certain aspects, such as southern subregion job creation, the Appalachian region is comparable to the whole United States, but it still lags behind the rest of the United States as a whole (Foster, 2003; Jensen, 1998).

In 1982, all three subregions were dominated by manufacturing, but by 1997, the central and northern subregions were dominated by the service sector. Despite the shift in industry dominance, the southern subregion continues to fare best. Establishment size is relatively consistent across areas, although it is largest in the southern subregion. The southern subregion enjoyed the highest establishment birth rate, followed by the central and northern subregions. Employee wages in the central subregion are about 20% below the rest of the United States, while the gap for those in the northern and southern areas is only about 10%. In summary, the southern subregion appears to be in the best health of all the Appalachian subregions, at least in terms of the measures discussed (Foster, 2003).

Regional technology industries lag considerably in most measures applied in Brandow Company, Inc. (2001) in terms of the vitality of retained firms. The largest firms in technology sectors are likely to be lagging in competitiveness, as suggested by their lower-than-average sales-per employee rates (Brandow Company, Inc., 2001). On a more positive note, startups in the region during a recent five-year period tended to survive at a slightly higher rate than the U.S. average and tended to add jobs at a favorable pace. A tendency among startups to grow jobs without being able to sustain them, however, is likely, given that job loss from failed startups was greater than that observed in the nation, and that the sales vitality of remaining firms was low. These insufficiencies underscore the region's poor entrepreneurial performance.

Overall, while Appalachia has done well in retaining existing firms, most of these are in non-value-added retail and service sectors. Further, the regions still suffers from low levels of entrepreneurship and low growth among firms, and also continues to be heavily reliant on branch facilities (Brandow Company, Inc., 2001). In summary, there are lessons to learn from Appalachia. Business retention does not necessarily translate into robust growth and vitality. Broad-ranging retention outreach programs detract from potentially more beneficial activities. Those include specific assessments of the needs of and service delivery to core local industry clusters, high-vitality industries, and high-growth firms that potentially improve the area where they are located (Brandow Company, Inc., 2001). The lag in entrepreneurial activity in Appalachia is clearly the weakest link (p.30). Consequently, as Jensen (1998) notes, there is a need for

"continuous public and private investment in job training, reemployment, and employment services." The study by Brandow Company, Inc. (2001) reaches similar conclusions, stating that "Appalachian technology" is not an oxymoron. Rather, targeted assistance is necessary for the region to catch up. Branch facilities create entrepreneurial opportunities that should be exploited, and potential synergies with startups should be explored.

5.2 How Effective have SMEs Been in Creating Jobs, Generating Economic Growth, and Initiating Innovation?

Entrepreneurs perform a very specific role in help enhance economic development. Their role is to recognize an opportunity and to use resources yielding a low return and shift them into a function yielding a higher return from which they personally gain (Casson, 1982; Acs and Storey, 2004). Entrepreneurs seek out these opportunities for personal gain and, in so doing, ensure that resources constantly are being reallocated in a manner that improves efficiency. In other words, productivity is enhanced by allocating the production factors of labor, capital, and knowledge more effectively throughout the economy (Acs and Storey, 2004). In the absence of entrepreneurs, resources fuel functions whose returns are low, leading to an ossified economy in which resources are underutilized. Further, as Acs and Storey state: "The clearest example of an entrepreneurial act which can lead to resource transfer is the creation of a new firm that offers a product or service that was not previously available. The new firm founder assembles resources to provide the product/service and offers this to customers. Where this is an entirely new product it may not explicitly displace an existing product or service" (p.873).

Entrepreneurs, however, do not always have perfect knowledge. They may observe what they believe to be an opportunity, but either because of unreasonable optimism and/or poor judgment, their idea proves nonviable in the short, medium, or long term. They may have displaced an existing business but then failed to satisfy its customers. In this case, the entrepreneurship is referred to as "destructive," but even it might have benefits. For example, other entrepreneurs may observe the actions of this unsuccessful entrepreneur. Some may take it as a signal to avoid such activities, providing valuable discouragement to others considering replicating the venture. Others, however, may observe aspects of the failed venture and conclude they can make changes to improve the chances of this venture where others have failed. Finally, the entrepreneur who started the business may learn from this experience in a subsequent business (Acs and Storey, 2004).

While the enhancements entrepreneurship may offer an area are potentially considerable, the fact remains that entrepreneurial activity varies greatly across and within countries; whether clustering occurs because of intrinsic advantages or historical accidents (OECD, 1997) is a subject of disagreement. In the Untied

States, two of the most well-known clusters have occurred in "Third Italy" and the Silicon Valley (OECD, 1997). In South Korea, SMEs have played a significant role in major transformations within the economy, especially with regard to exports, foreign investment, and productivity performance (Nugent and Yhee, 2002). Although particular regions in the United States and South Korea have benefited greatly from increased levels of entrepreneurship, it is important to note that others have not experienced comparable progress. What are the factors that might lead to higher entrepreneurship?

A key variable in the firm formation rate is the educational attainment of the labor force (Acs et al., 2005). Although the knowledge denoted by a college degree seldom suffices as the basis for a successful new business, the analytical methods learned in college serve individuals well to keep learning and to be open to new ideas.

Glaeser and others (1995) find that for a cross section of cities, a key economic determinant of growth is the level of schooling, as had been found for countries. This suggests that higher education influences later growth, not through increased savings, but by promoting higher rates of technological growth through spillovers. More specifically, Acs and Armington (2004a) find a positive impact of higher proportions of adults with college degrees on rates of new firm formation. But this positive effect of educational attainment was limited to the share of adults with college degrees. Although the high school graduate share is correlated strongly with formation rate, after allowing for the effect of differences in local share of college graduates, the additional impact of higher shares of high school graduates is negative. In other words, higher shares of high school dropouts were associated with higher rates of new firm formation, assuming similar shares of college graduation. This effect may be explained partly by the function of high school dropouts in supplying cheap labor to both old and new businesses. The high school dropout rate also may be interacting in a complex way with unemployment, with which it is correlated fairly strongly—regions with higher shares of high school dropouts tend to have higher unemployment rates. While the unemployment rate generally did not show a significant relationship to firm formation rates in our model, if we drop either of the educational attainment measures from the model, the local unemployment rate becomes significantly positive. This suggests that a substantial portion of new businesses is formed out of necessity, when workers are not able to find attractive alternatives in positions as employees.

Since the mid-1980s, the role of education and human capital externalities has been recognized as a key variable in theories of economic growth. Lucas (1988) emphasizes that the economies of metropolitan areas are a natural context in which to understand the mechanics of economic growth; an important factor contributing to this growth is the catalytic role of human capital externalities within the cities. While the benefits of human capital to individuals have been studied extensively, economists are realizing that individuals do not capture all of the benefits from their own human capital. Some

benefits spill over to their colleagues and observers through discussion, example, publications, and even more positive attitudes toward change, risk, and new knowledge (Acs and Armington, 2004b). Acs and Armington (2004a) empirically investigate how new firm formation rates for various subsectors of service industries are influenced by human capital differences in 394 labor market areas, while controlling for other regional characteristics that also are likely to affect firm formation rates. They conclude that the extent of human capital in a region has a significant effect on the new service firm formation rate.

The service firm formation rate is even more sensitive to the concentration of similar businesses (establishments-per-thousand people) within a local area. The greater the concentration, the more probable are relevant knowledge spillovers, and the more likely the resulting new ideas will lead to new firm formations (Acs and Armington, 2004a). New knowledge in the form of products, processes, and organizations leads to opportunities that can be exploited commercially. Converting new ideas into economic growth, however, requires turning new knowledge into economic knowledge that constitutes a commercial opportunity. Acs and Plummer (2005) develop a model that introduces a "knowledge filter" between new knowledge and economic knowledge. It identifies both new ventures and incumbent firms as mechanisms that reduce the knowledge filter and increase regional growth. They test the hypothesis that new venture creation is a better mechanism than the absorptive capacity of incumbent firms for converting new knowledge into economic knowledge. The results support the contention that new venture creation is a superior method of penetrating the regional knowledge filter than incumbent firms. Simon and Nardinelli (2002) come to similar a conclusion based on historical evidence that cities in the United States and the United Kingdom with more knowledgeable people grow faster in the long run because knowledge spillovers are limited geographically to the city, and knowledge is more productive in the city within which it is acquired.

A growing body of literature suggests that variations across countries in entrepreneurial activity and the spatial structure of economies could be the source of different efficiencies in knowledge spillovers and, ultimately, in economic growth. The empirical model used by Acs and Varga (2005) attempts to examine this by endogenizing both entrepreneurial activity and agglomeration effects on knowledge spillover within a Romerian framework. The model is tested using the Global Entrepreneurship Monitoring cross-national data to measure the level of entrepreneurship in each particular economy. After controlling for the stock of knowledge and research and development (R&D) expenditures, the authors find that both entrepreneurial activity and agglomeration have a positive and statistically significant effect on technological change in the European Union.

To explain how growth occurs, the transmission mechanism from human capital to growth must be examined. Acs and Armington (2004b) find that if the new firm formation rate increases by one standard deviation, from 3.5 per

thousand (labor force) to 4.5 per thousand, the employment growth will increase by one-half standard deviation, from 2.1% to 2.85%. This holds for all years examined and for all sectors of economy except manufacturing, where new plants are more important than new firms.

Additionally, Acs and Armington find that if the high school graduation rate increased by one standard deviation, from 72% to 80%, economic growth would increase from 2.1% to 2.85%. The evidence also suggests that raising the overall level of education (high school graduation) has a greater impact on economic growth than raising the level of the best educated. The results indicate that if the business specialization rate increased by one standard deviation, from 2.2 establishments per thousand in the population to 2.6 establishments per thousand in the population, the employment growth rate would decline by 0.75%. Finally, Acs and Armington note that more crowding and density also is associated with less, not more, growth.

Public officials have some power to influence business location and relocation decisions. Infrastructure, education, tax, and expenditure policies can play a role, albeit to varying degrees (Fox and Murray, 1990). The empirical study by Fox and Murray shows that large firms tend to be less sensitive to certain policy factors than smaller firms. Corporations looking to establish or relocate branch facilities place greater value on profitability, while local startups, which are typically smaller, emphasize amenities. Overall, the most influential policy-amenable factors appear to be the presence of an interstate highway, railroad infrastructure, and the educational attainment level of an area's work force.

The importance of distinguishing between types of entrepreneurship becomes apparent in studying the shift in the industrial makeup of cities. The service sector now dominates where manufacturing once did. While all cities have a core service industry, the largest cities have a disproportionate concentration of financial and advanced corporate services, whereas smaller cities have a greater concentration of manufacturing (Sassen, 1990). Sassen finds a clear association between the size of the region and its functional specialization. Twelve of sixteen large metropolitan statistical areas (more than 2 million people), or MSAs, had a high concentration of both production and exported producer and distribution services related to banking, insurance, real estate, business, and the law. The concentration of manufacturing industries was highest among smaller MSAs (fewer than 1 million people). In short, advanced services have concentrated massively into large cities, and the emergence of the producer service sector does not necessarily "lift the boat" of the poor in these cities (Sassen, 1990). Rural retail and service businesses have been found to contribute only modestly to local employment, income, and the tax base (Gladwin et al., 1989). Gladwin et al. suggest that to achieve economic growth in rural areas, efforts should be targeted to industries and manufacturers that produce goods and services for export.

Microenterprise has not proved itself to be a particularly successful weapon against poverty, either. In a detailed study of microentrepreneurs by Sherrard and Sherrarden, the majority who were LI before startup remained LI (Sherrard Sherrarden et al., 2004). While microenterprise has not been shown to increase incomes, it does provide other enrichment. In the manufacturing sector, no association between the increase of incomes in the lowest income quintile and SMEs was observed, nor was a link made between the importance of SMEs and the "depth and breath of poverty" (Beck and Demirgüç-Kunt, 2004). In studying the role of small businesses in job creation in the United States, Haltiwanger and Krizan (1999) conclude that even though young firms have higher average net employment growth rates, the growth is much more volatile relative to mature establishments. Hence, the age rather than size of a firm appears to be critical for employment growth.

Hallberg (2000) finds the empirical evidence for a causal link between SMEs and poverty alleviation to be very mixed. SMEs offer less job security, lower wages, fewer fringe benefits, worse working conditions, and less skill-enhancement opportunities than large firms. Research focused on examining private enterprise training patterns and effects in Colombia, Indonesia, Malaysia, Taiwan, and Mexico found that manufacturing and small and microfirms tended not to offer formal, structured training or informal on-the-job training (Batra and Tan, 1995). This is of great concern, as firm-level productivity was found to be affected positively by the formal training of skilled workers. The training of unskilled workers, however, appeared to have no effect on productivity. Nevertheless, Hallberg (2000) ends with an encouraging note saying that, "Encouraging their [SMEs'] emergence in LI countries is warranted because of their share of employment–'being there' is a sufficient justification" (p.2).

6 Social Entrepreneurship

One conclusion of this survey is that entrepreneurship may not be a cure for poverty in poor communities. The reason is that the community does not have the requisite human capital, networks, social capital, finance, or other required supply inputs necessary for successful entrepreneurship. A conclusion articulated as early as the 1950s must be repeated: human capital building must precede entrepreneurship because, "The ultimate repositories of technological knowledge in any society are the men comprising it" (V. Graf, 1957). Poor communities generally do not have the government funding for the inputs of entrepreneurship and, therefore, it would seem as though entrepreneurship does not and will not play an important role. When government fails to provide the requisite educational, community, and social inputs necessary for successful entrepreneurship, we find that social entrepreneurship may play an important role in these communities.

6.1 Defining Social Entrepreneurship

"Social entrepreneurship" has several definitions. According to Johnson (2000), what they have in common is a "problem-solving nature," along with the "corresponding emphasis on developing and implementing initiatives that produce measurable results in the form of changed social outcomes and/or impacts" (p.5). Referring to Thompson et al. (2000), Johnson says that the skills of social entrepreneurs are "fairly replicable" if "social entrepreneurship is defined as 'principally bringing businesses and management skills to the nonprofit sector' " (p.11). But "If a social entrepreneur is defined as an 'exceptionally creative and innovative individual,' replication will be much more difficult to achieve, and the focus, then, should be on creating conditions in which latent entrepreneurial talent can be harnessed for social purposes."(p.11).

Cannon (2000) identifies social entrepreneurship as: (1) individuals who have a lot of money elsewhere and now want to "give back" to further social goals; (2) "recovering social workers" looking for more effective approaches than offered by the system from which they came; and (3) a new breed of business school graduate with a social enterprise in mind. Combining attributes that various authors (Say, Schumpeter, Drucker, Stevenson) have associated with entrepreneurship, Dees (2001) gives a clearly idealistic definition of a social entrepreneur. He states that social entrepreneurs are the agents of change while: "(1) adopting a mission to create and sustain social value (not just private value); (2) recognizing and relentlessly pursuing new opportunities to serve that mission; (3) engaging in a process of continuous innovation, adaptation, and learning; and (4) acting boldly without being limited by resources currently in hand; and (5) exhibiting heightened accountability to the constituencies served and for the outcomes created" (p.4).

Put simply, social entrepreneurship is when an individual who has the requisite skills to pursue for-profit entrepreneurship chooses to maximize his or her utility instead of profits.

Whatever the definition of "social entrepreneurship," the impacts of activities that fit within its range are becoming more noticeable. In a time when the gap between the affluent and the poor is widening, social entrepreneurship is emerging as an innovative approach for dealing with complex social needs. It has surfaced in the background of the move away from the "social welfare state approach" toward the market-based distribution of wealth (Johnson, 2000, p.2). Traditionally, the nonprofit sector has been the provider of publicly or charity-funded social services. The number of nonprofit organizations has increased, but the flow of finances to them has decreased (Johnson, 2000, p.3). Nonprofit organizations increasingly have had to align themselves toward market-like principles of action. New donors from diverse backgrounds are rethinking the principles of giving, and stress real outcomes in place of donor satisfaction (Johnson, 2000).

6.2 How do Social Entrepreneurs Operate?

Entrepreneurs are drawn in by attractive opportunities. Gucly et al. (2002) state, "For social entrepreneurs, an 'attractive' opportunity is one that has sufficient potential for positive social impact to justify the investment of time, energy, and money required to pursue it seriously."

In determining whether a promising idea is worthy of their investment, social entrepreneurs must be able to articulate a compelling social impact theory and a plausible business model (Gucly et al., 2002). Designing an effective operating model and crafting a viable resources strategy are central to framing a plausible business model. They hinge upon credible assumptions about the intended operating environment. "Finally, the requirements of the venture must fit the commitment, qualifications, and life stage of the entrepreneur considering it," say Gucly et al. (p.14). "When all these elements are feasible and aligned, the chances for success are relatively high, and those involved can make a more informed estimate of the potential for social impact" (p.14).

Traditional sector boundaries are breaking down as societies search for more innovative, cost-effective, and sustainable ways to solve social problems and provide socially important goods, such as education and health care (Dees and Anderson, 2002). Communities adversely affected by economic decline likely need both economic and social regeneration (Thompson et al., 2000). "Social entrepreneurship needs champions who understand which initiatives are most appropriate, feasible, and desirable, and who can bring out the latent enterprise in others," say Thompson et al. (p.328). These individuals must recognize that there is an opportunity to satisfy an unmet need that the state welfare system will not or cannot meet, and those who are able to gather the necessary resources must use them effectively toward the goal of "making a difference" (p.328). Development of new social capital (community-based tangible and intangible assets that otherwise would not exist) will help empower disadvantaged people and encourage them to take greater responsibility for and control over their lives.

"If we assume that promoting an entrepreneurial culture is a desirable means of achieving our end (social and economic development), then we must clearly define what elements, behaviors, traits, and characteristics we want to encourage and value," states Davis (2002, p.6). Davis proposes five steps to foster entrepreneurial culture. These include rethinking the architecture of work (with emphasis on fair competition, equal access, and fair play); changing the direction of macroecnomic policies from fighting inflation and protecting the investors to promoting decent work and employment-intensive growth; removing government-created barriers to entrepreneurship; and ensuring access to credit without race-, gender-, or firm-size-based discrimination. Last, social entrepreneurship must be "promoted, cultivated, and valued as a profession" (p.15). These steps do not seem to be very helpful for practical purposes, nor are they realistic. Davis goes on to stress the believed importance of youth development,

particularly as it relates to promoting young entrepreneurs: "Education and employment policies should be developed in an integrated manner, as they have direct implications and impact each other. Youth employment and entrepreneurship policies are likely to be more effective if they are closely linked and integrated with educational policies, including the structure and content of school curricula, extracurricular activities, and after-school programs. Vocational needs of young people should be central" (p.19).

6.3 A Picture of Social Entrepreneurship

In 1998, the Open Society Institute (OSI), a privately operating and grant-making foundation, launched the Baltimore initiative to address "critical national urban issues as they are experienced locally" (OSI, 2006). The initiative functions within "the limitations and opportunities created by local social, economic, and political conditions," and "builds on the commitment of Baltimore's government and nonprofit community to employ innovative strategies and develop public-private partnerships to address the city's problems." Continuing interaction between the staff of the initiative and the community leaders is considered of ultimate importance.

The initiative targets problems in five interrelated areas: drug addiction treatment, criminal justice, work force and economic development, education and youth development, and access to justice. The initiative awards grants and convenes educational forums to learn about these five problem areas. The goal of the initiative is to bring together "a representative cross section of the region" while addressing the problem areas, and "to help identify policies and practices that will enable all residents to participate fully in Baltimore's economic, social, and political life."

OSI goes on to say: "Confronting high levels of drug addiction, crime, and unemployment, Baltimore city government acknowledges its responsibility to combat poverty and discrimination, and has welcomed joint public-private efforts, including contributions from OSI, to change harmful or ineffective policies and implement promising initiatives. In a city of 620,000, where half of the students in neighborhood schools drop out before graduation, 60,000 residents are said to be drug dependent, and 56% of the African-American men are involved in the criminal justice system, OSI–Baltimore recognized that small initiatives or model programs would have limited impact. Instead, it concentrated on building partnerships and engaging large bureaucratic systems in a deliberate process of change" (2004, p.163).

Local hospitals were engaged to start a collaborative program to "recruit, train, and advance low-income city residents as skilled health-care workers" (p.163). Local hospitals also were engaged in supporting the expansion of the public drug addiction treatment system. The "Campaign for Treatment Not Incarceration" was undertaken to promote solutions to drug addiction. Grants

were awarded to encourage "public and private agencies to offer employment training services to people who were previously incarcerated to help them reenter the community successfully" (p.164).

In the education system, some large, ineffective public high schools have been replaced with small learning communities that have increased attendance rates. After-school partnerships have been initiated.

With the Soros Foundations Network's initial $50million investment, OSI has been able to leverage more than $225 million to address Baltimore's most persistent challenges, including poverty, drug addiction, criminal and juvenile justice, and education (OSI, 2004). OSI claims that it not only has received a good return on its investment but also has alleviated some of Baltimore's most challenging problems. Among OSI's stated accomplishments are raising Baltimore students' test scores; doubling the number of drug-dependent residents receiving treatment; dramatically reducing individuals' illegal income after they have been in drug treatment; publicizing abuses at juvenile justice centers, including abuses at a notorious center that subsequently was closed; expanding high-quality summer learning programs for LI students; securing $25 million for after-school programs for 14,000 students; helping to establish six new, innovative high schools; breaking up large neighborhood high schools into smaller learning centers; and creating an urban debate league now operating in 26 high schools.

7 Policy Suggestions and Practices

Thus far, a plethora of measures have been applied by government entities to encourage business formation, despite the relatively limited theoretical guidance. Governments have tried supplying certain types of financing (for example, long-term credit); providing management and marketing advice to small businesses; assisting with the establishment of interfirm linkages and matchmaking programs between foreign and domestic traders and investors; supporting technology development through risk-sharing programs and cluster or incubator promotion; and supporting enterprise-level training (Klein and Hadjimichael, 2003). As argued above, entrepreneurship may not present a solution for LI communities. Hence, the entrepreneurship policies applied by regions, nations, and international organizations are more often than not carried by ideologies and beliefs of policy makers or also academic scholars. As Hallberg (2000, p.5) concludes, "In reality, the desire of governments to promote SMEs is often based on social and political considerations rather than on economic grounds." Although it includes a bias toward market solution, a similar statement by Klein and Hadjimichael asks if government-supported entrepreneurship policies are "being pursued because they systematically improve on market outcomes or because they are potentially attractive programs that sometimes may even replace more meaningful reform?" (p.73).

The rest of this subsection continues the discussion of entrepreneurship policy solutions for LI communities.

Acs and Armington (2006) propose an American solution to the social feedback mechanism, one that is consistent with the early work of Schumpeter. American capitalism differs from all other forms of industrial capitalism in its historical focus on both the creation of wealth (entrepreneurship) and the reconstitution of wealth (philanthropy). Philanthropy is part of the implicit social contract that continuously nurtures and revitalizes economic prosperity. Much of the new wealth has been given back to the community to build up the great social institutions that have a *positive* feedback on future economic growth. This entrepreneurship-philanthropy nexus has not been explored fully by either economists or sociologist. The authors suggest that American philanthropists—especially those who have made their own fortunes–created foundations that, in turn, contributed to greater and more widespread economic prosperity through knowledge creation.

Lundström and Stevenson (2005) suggest focusing primarily on the occupational choice issue and the shift in emphasis from firms to people. Hart (2003) focuses on the regional level, with a particular view toward regional growth and the role of universities. Audretsch (2002) and Glaeser (1998) suggest that public policies ensure that firms are provided with necessary infrastructure (telecommunications, transport, energy, water) and social services (health, education), in addition to establishing a sound business environment and adequate market infrastructure. Functioning cities, for example, are the best of all incubators or clusters, as they help firms, particularly small- and medium-sized ones, establish themselves, grow, and create employment (Audretsch, 2002; Glaeser, 1998). Holtz-Eakin and Rosen (2004) choose to examine three issues germane to an entrepreneurial society: the design of effective public venture capital programs; new firm formation and the deregulation of the banking industry; and the relationship among entrepreneurial activity, social mobility, and wealth inequality.

Bates (1993) warns the policy makers that money will not overcome gaps in education and entrepreneurial skill. It is important to recognize that, "Debt capital and human capital endowments are complements in the small business world, not substitutes" (p.258). He argues that successful public loan programs target higher-income, better-educated owners that possess appropriate skills and experience, and who contribute their profits to investments that promote expansion and growth (Bates, 1993). Bates recommends such policy measures as preferential public procurement, tax incentives on capital gains, and higher rates of immigration of educated people who also have financial capital.

Similarly to Bates, Deininger (2003), Hallberg (2000), and Klein and Hadjimichael (2003) all conclude that public financial support programs to SMEs generally are not effective. Public institutions should not try to imitate market-functioning mechanisms. Their strengths lie in application of nonmarket solutions to the problems resulting from market failure, and the possession of resources that the private sector cannot make available or may not be willing

to provide. Public institutions should do only what they can do better than the private market. Klein and Hadjimichael (2003) state: "The emerging consensus is that lasting subsidies are undesirable and that business development services should be market oriented and privately provided. Private firms have powerful incentives to seek out advice and to search for better partners. When the market selection mechanism works well, firms that find ways to obtain such services grow, and those that do not fail" (p.82).

One might contend, however, that the situation of SMEs and entrepreneurship in LI communities reflects exactly what will happen when the solution is left to the market. Klein and Hadjimichael (2003) suggest that providing non-dependent, one-time services and basic education, and marrying intervention with community development efforts is a better method for aiding SME success. They assert that subsidies should be a one-time support (such as for development of credit-assessment skills, or for a management toolkit). After this initial input, "following-up activity and discipline" should be left to market forces (p.82). They are of the opinion that "Public intervention should focus on the enabling environment for firms, including basic market infrastructure such as credit bureaus, but should abstain from direct support to individual firms or intermediaries" (p.82).

Counter arguments can be raised that public assistance is sometimes necessary in helping SMEs to grow, especially if they are high-potential, new technology-based firms. Audretsch (2002) concludes that the Small Business Investment Company program has been an effective tool for "growing" SMEs, particularly with respect to commercializing inventions. Klein and Hadjimichael do not oppose supporting the creation of industry clusters that are relevant to or develop high technologies, as they can be powerful drivers of growth. Experience shows, however, that rarely are high-potential technology startups created in LI communities. As for private-sector development and pro-poor policy design, Klein and Hadjimichael (2003) state that the poor must be able to realize opportunity through provisions of basic education and a minimum of social cohesion. "The design of pro-poor policies is a case-by-case effort" (p.128).

For member countries of the Organization for Economic Cooperation and Development, the primary regional development policies for attracting firms to disadvantaged regions are investment in infrastructure, social assistance, training, and other forms of public assistance (OECD, 1997). Programs to assist the creation and development of microenterprises in inner cities and remote rural areas also have become widespread policy tools (OECD, 1997). More specifically, programs instituted in OECD countries with the goal of encouraging microenterprise in inner cities and rural areas are based on the premise that these new ventures become the catalysts of further and future growth. In line with arguments by Hart (2003), the OECD advises, "Governments wishing to adopt policies used successfully in other regions or countries should take the regional context into account" (1997, pp.4–5).

Recommendations from the OECD mirror those of the majority of the studies on the issue of public intervention. The role of government should be oriented toward ensuring a supporting business environment for SME growth, and policies should be carried out by local authorities who are more intimately aware of local conditions and needs (OECD, 1997). Additionally, the availability of financing, the business environment, the presence of technology, management capabilities, and access to markets (foreign markets, public procurement are the five conditions under which the best policy practices thrive. Policies targeted toward an increase in entrepreneurial activity are influenced by certain regional characteristics, so, while labor-force skill improvement programs may be effective in urban and intermediate-sized regions, they typically are ineffective in rural areas, where take-up rates are low. Conversely, firm creation policies are likely to be more effective in rural areas than urban or intermediate regions, as a result of low dead weight and displacement effects (OECD, 1997).

8 Summary

It is worth reposing our earlier question: Are we interested in LI communities or LI individuals? We know that when LI individuals try self-employment, they often fail. The evidence supports this. If we look at LI communities, the issue is a little more complicated. We saw that the issue in LI communities revolves around the lack of both demand- and supply-side issues. On the supply side, we saw that LI communities lack the inputs for successful economic development. On the demand side, they lack the demand for goods and services produced by the region. Therefore, in a region lacking an economic base, the role of entrepreneurship may be limited as an economic development tool. It is useful to think of a poor community in a rich country as an example of government failure. By this we mean that the basic supply-side institutions—education, infrastructure, leadership, finance—are missing. Many of these are public goods. We also suggest that when the supply side of the model is "broken," it might be beyond both the ability of the state and the market to solve the problem. Here, philanthropy free from both political and market forces might be the appropriate institution to tackle the problem of economic development by rebuilding. Baltimore provides an interesting example of this type of social entrepreneurship.

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On Government Intervention in the Small-Firm Credit Market and Economic Performance

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Abstract In this paper we empirically test whether the Small Business Administration's main guaranteed-lending program—the 7(a) program—has a greater impact on economic performance in low-income markets. This hypothesis is predicated on our previous research (Craig, Jackson, and Thomson, 2007b), where we investigate aggregate SBA guaranteed lending. In that research, we found that the overall impact of SBA-guaranteed lending on economic performance is significant and positive in low-income markets.

Using local labor market employment rates as our measure of economic performance, we find a quantitatively similar positive impact of SBA 7(a)-guaranteed lending. This impact on economic performance is also significantly larger in low-income areas. This result suggests that the 7(a) program, which is the largest SBA guaranteed lending program, is also the main contributor to the positive impact of SBA-guaranteed lending on local market economic performance.

1 Introduction

It is well documented in the economics literature that economic growth and financial market development tend to be positively correlated. Whether relatively higher levels of financial development actually cause higher levels of economic performance, however, or higher levels of economic performance cause higher levels of financial development, is an issue of debate that dates at least to the studies of Schumpeter (1911) and Robinson (1952).

Three important recent studies provide evidence that relatively higher levels of financial market development do, indeed, tend to lead to higher levels of one

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measure of economic performance—higher rates of economic growth. Jayartne and Strahan (1996), Rajan and Zingales (1998), and Guiso, Sapienza, and Zingales (2004), all report significant evidence supporting the proposition that the causal relationship runs from more financial market development to more economic growth.

In this paper, we investigate whether local financial market development helps to promote economic performance by focusing on a particular rationale for such a relationship—financial market development increases the amount of external finance available to small firms. Specifically, we examine whether a government intervention aimed at increasing small firms' access to bank credit has a relatively greater impact in low-income areas. We exploit the fact that there is a strong positive correlation between low-income markets and markets with relatively low levels of financial development. And we use SBA-guaranteed lending as our government invention method. We choose the small-firm credit market because of the high degree of information asymmetry that may be associated with it, and because this information asymmetry may lead to a credit rationing problem, as explained in Stiglitz and Weiss (1981).

We choose the SBA guaranteed lending program because our previous research (Craig, Jackson, and Thomson, 2007b) suggests that SBA guaranteed lending in the aggregate has a larger positive influence on low-income markets. Our previous research used metropolitan statistical areas (MSAs) and non-MSA counties to represent local geographic financial markets. However, Craig, Jackson, and Thomson (2007b) did not investigate whether this positive relationship between SBA-guaranteed lending and economic performance in low-income markets was primarily the result of SBA's main guaranteed-lending program, the 7(a) program. As in Craig, Jackson, and Thomson (2007b), we use the level of labor market employment, or the employment rate, as our measure of economic performance. And we test whether 7(a) program guaranteed lending alone has a differential impact for low-income markets.

Our null hypothesis is that 7(a) program guaranteed lending does not have an impact on low-income markets different from higher-income markets. Our primary alternative hypothesis is that 7(a) program guaranteed lending has a greater impact on the employment rate in low-income markets than in higher-income markets. As in Craig, Jackson, and Thomson (2007b), this alternative hypothesis is predicated on four overlapping assumptions. They are:

1. Income levels are a proxy for relative development of the local financial market.
2. Less developed financial markets are more likely to experience severe information asymmetry problems that could lead to credit rationing.
3. SBA-guaranteed lending is likely to reduce these credit-rationing problems and improve the development of that local financial market.
4. Increased financial development helps to lubricate the wheels of economic performance and increase the effective level of labor utilization, or the employment rate.

Our results suggest that low-income markets are affected positively by 7(a) program guaranteed lending to a similar extent as aggregate SBA-guaranteed lending. Moreover, as in Craig, Jackson, and Thomson (2007b), the impact for low-income markets is significantly larger than it is for higher-income markets. These results suggests that the 7(a) program, which is the largest SBA-guaranteed lending program, is also the main contributor to the positive impact of SBA-guaranteed lending on local market economic performance. These results also have important implications for public policy in general, and the composition of the SBA guaranteed lending programs in particular.

The remainder of this article is organized as follows. Section 2 provides a discussion of the economics of small-business credit markets. A rationale for SBA loan guarantees is presented in Section 3, where we also consider the underlying economic mechanisms that might enable a directed subsidy, such as SBA-guaranteed lending, to result in better "observed" economic performance. In Section 4, we focus on the net welfare effect of SBA-administered subsidies and review the empirical literature examining the link between SBA loan guarantees and economic performance. We also include in this section a descriptive overview of the SBA 7(a) guaranteed lending program. In Section 5, we provide the data, model, and results for testing the empirical links between SBA 7(a) loan guarantees and economic performance in low-income markets. Section 6 offers our conclusion with a public policy discussion.

2 Small-Business Credit Markets

Lenders may fail to allocate loans efficiently because of fundamental information problems in the market for small-business loans. These information problems may be so severe that they lead to credit rationing and constitute the failure of the credit market. Stiglitz and Weiss (1981) argue that banks consider the interest rate they receive on the loan and its riskiness when deciding to lend. Information frictions in loan markets may cause two effects that allow the interest rate itself to affect the riskiness of the bank's loan portfolio. When the interest rate affects the nature of the transaction, it is unlikely that a rate to suit both buyers and sellers will be found—that is, no interest rate will "clear the market." The first effect, adverse selection, impedes the ability of markets to allocate credit using only the lending rate, because it increases the proportion of high-risk borrowers to within the pool of prospective borrowers. The second effect, moral hazard, reduces the ability of rates alone to clear lending markets, because it influences the ex post actions of borrowers.

The adverse selection effect is a consequence of different borrowers having different likelihoods of repaying their loans, a probability known to the borrowers but not the lenders. The expected return to the bank on a loan obviously depends on the probability of repayment, so the bank would like to be able to identify borrowers who are more likely to repay. It is difficult to identify such

borrowers partly because the borrowers have more information than the lender (Myers and Majluf, 1984). Typically, the bank will use a variety of screening devices. The interest rate a borrower is willing to pay may act as one such screening device. For example, people who are willing to pay a higher interest rate are likely to be, on average, worse risks, because they know their probability of repaying the loan is low. So as the interest rate rises, the average "riskiness" of people willing to borrow increases. This may result in lowering the bank's profits from lending.

Similarly, as the interest rate and other terms of the contract change, the behavior of the borrower is also likely to change. For instance, raising the interest rate decreases the payoffs of successful projects. Higher interest rates thus may induce firms to undertake riskier projects—projects with lower probabilities of success, but higher payoffs when successful. In other words, the price a firm pays for credit may affect the riskiness of its investment decisions, which is the moral hazard problem.

As a result of these two effects, a bank's expected return may increase less than proportionately for an additional increase in the interest rate; beyond a certain point, it may decrease as the interest rate is increased. It is conceivable that the demand for credit may exceed its supply. Although traditional analysis would argue that in the presence of an excess demand for credit, unsatisfied borrowers would offer to pay a higher interest rate to the bank?bidding up the interest rate until demand equals supply—that does not happen in this case. This is because the bank will not lend to someone who offers to pay the higher interest rate, as this borrower is likely to be a worse risk than the average borrower. The expected return on a loan to a borrower at the higher interest rate may be actually lower than the expected return on loans the bank is currently making. Hence, there are no pecuniary forces leading supply to equal demand, and credit is rationed.

2.1 Importance of Lending Relationships

Lending relationships have been recognized by economists as an important market mechanism for reducing credit rationing.[1] Lending is based on limited information about the quality of borrowers in the market, but a close and continued interaction between a firm and a bank may provide a lender with sufficient information about, and a voice in, the firm's affairs so as to lower the cost and increase the availability of credit. Conditional on a positive previous experience with the borrower, the bank may expect future loans to be less risky,

[1] See Kane and Malkiel (1965), Petersen and Rajan (1994), Berger and Udell (1995), and Stein (2002).

which should reduce its average cost of lending and increase its willingness to provide funds.

The relationship-lending literature suggests that in addition to being formed over time, relationships can be built through interaction over multiple products. That is, borrowers may obtain more than just loans from a bank. Borrowers may purchase a variety of financial services, such as checking and savings accounts. These added dimensions of a relationship can affect the firm's borrowing cost in two ways. First, they render the lender's information about the borrower more precise. For example, the lender can learn about the firm's sales by monitoring the cash flow in its checking account or by factoring the firm's accounts receivables. Second, the lender can spread any fixed costs of monitoring the firm over multiple products.

Overall, the available evidence points to a significantly positive relationship between factors connected to the strength and duration of the lending relationships among banks and small-business customers, and both the terms (lower loan rates and fewer loan covenants) and availability of credit. From the perspective of the banks, the stronger the relationship, the more likely the borrower is to select the bank for future credit needs and other banking services.

3 Potential Role for SBA Loan Guarantees

The promotion of small businesses is a cornerstone of economic policy for a large number of industrialized countries. Public support for small enterprise appears to be based on the widely held perception that the small-business sector is an incubator of economic growth—a place where innovation occurs and new ideas become economically viable business enterprises. In addition, policy makers routinely point to small businesses as important sources of employment growth. Possibly as a result, there is widespread political support for government programs, tax breaks, and other subsidies aimed at encouraging the growth and development of small business in the United States, and increasingly, around the world (Bergström, 2000).

A particular area of concern for policymakers is whether small businesses have access to adequate credit. After all, a lot of small firms are relatively young and have little or no credit history. Lenders also may be reluctant to fund small firms with new and innovative products because of the difficulty of evaluating their risk. These difficulties are classic *information* problems—difficulty obtaining sufficient information about the parties involved in a transaction—and they may prevent otherwise creditworthy firms from obtaining credit. If information problems are substantial, they can lead to credit rationing; that is, loans are allocated by a mechanism other than price. If small businesses face severe credit rationing, then they also may become credit-constrained; they may miss out on positive net present value projects because they cannot raise the external capital necessary to fund the project. This suggests that to the extent economically

significant credit rationing persists in small-business credit markets, a rationale exists for supporting small enterprises through government programs to improve their access to credit.

Because relationships may be more costly for small businesses to establish than large businesses, and because lack of relationships may lead to severe credit rationing in the small-business credit market, some form of government intervention to assist small businesses in establishing relationships with lenders may be appropriate. But the nature of intervention must be evaluated carefully, as it represents a subsidy to small businesses (or lenders, or both) at the expense of other groups.

One government intervention to improve the private market's allocation of credit to small enterprises is the SBA-guaranteed lending program. SBA loan guarantees are well established, and their volume has grown significantly over the past decade. Nearly 20 million small businesses have received direct or indirect help from some SBA program since 1953. The SBA's business loan portfolio of roughly 240,000 guaranteed loans was worth about $60 billion in 2004, making it the single largest financial backer of small businesses in the United States. To place this amount in perspective, consider that in June 2004, commercial banks reported a total of about $522 billion of small-business loans outstanding (small-business loans are defined as any commercial and industrial loan with an initial amount of less than $1 million [SBA, 2005]). Although these two sets of loan numbers are not exactly comparable, the relative magnitude of SBA activity to that of the commercial banking industry suggests that the SBA is a major player in the small-business loan market.[2]

The economic justification for any government-sponsored, small-business lending program or loan guarantee program must rest on a generally acknowledged failure of the private sector to allocate loans efficiently. Without a clearly identified problem with private-sector lending to small businesses, the SBA's activities would seem to be a wasteful, politically motivated subsidy to this sector of the economy.

SBA loan guarantees may improve credit allocation by providing a mechanism for pricing loans that is independent of borrower behavior. By reducing the expected loss associated with a loan default, the guarantee increases the expected return to the lender—without increasing the lending rate. In the absence of adverse selection, lenders could offer loan rates to borrowers that reflected the average risk within the pool of borrowers; each loan would reflect a

[2] There are several reasons why comparisons of SBA loan totals and small-business loans reported for commercial banks on the call reports can be misleading. First, SBA-guaranteed loan totals include a non-trivial amount of loans by non-bank lenders. Second, banks report business loans only in amounts of $1 million and less, while the SBA will guarantee loans for as much as $2 million. Finally, the call reports reflecting small loans to businesses include loans to small businesses and loans under the $1million threshold to large and medium-sized firms.

random draw from the pool. If the bank made a large number of small loans to a pool of borrowers, the bank's loan portfolio would have the same risk and return characteristics of the pool.

With the guarantee in place, the lender could profitably extend credit at loan rates below what would be dictated by the risk of the average borrower. The guarantee increases the profitability of the loan by reducing the losses to the bank in instances when the borrower defaults.

To the extent that the loan guarantees reduce the interest rate at which banks are willing to lend, external loan guarantees will help mitigate the moral hazard problem. The lower lending rates afforded by external guarantees reduce the bankruptcy threshold, thereby increasing the expected return of safe projects vis-à-vis riskier ones.

Additionally, lowering the lending rate increases the number of low-risk borrowers applying for credit; that in turn increases the likelihood that the average risk of firms applying for loans is representative of the pool of borrowers. Hence, external loan guarantees also help mitigate adverse selection. In theory, SBA loan guarantees should reduce the probability that a viable small business is credit-rationed.

The program reduces the risk to the lender of establishing a relationship with informationally opaque small-business borrowers. Finally, the SBA loan guarantee programs may improve the intermediation process by lowering the risk to the lender of extending longer-term loans, which more closely meet the needs of small businesses for capital investment. It is interesting to note that small-firm credit markets are becoming better at addressing some of the problems SBA guarantees are said to address. For example, credit-scoring technology may help alleviate some of the credit-rationing problems in small-firm credit markets.

As discussed in Berger and Frame (2006), small-business credit scoring (SBCS) is a lending technology used by many financial institutions to evaluate applicants for so-called "microcredits"—those less than $250,000 ($250K). SBCS analyzes consumer data about the owner of the firm, and, using statistical methods to predict future credit performance, combines it with relatively limited data about the firm itself. As these markets develop, and more financial institutions engage in SBCS-based lending technologies, the degree to which small businesses face credit rationing may decline. That suggests that the value of SBA guaranteed lending may decline, at least to the extent that SBCS reduces frictions in the small-firm credit market. [3]

One should not jump to the conclusion that the presence of a market imperfection, in this case credit-market friction, makes government intervention desirable. By guaranteeing the loans of a certain class of small enterprise,

[3] For more on credit scoring as a lending technology see: Berger and Frame (2006); Berger, Frame, and Miller (2005); Frame, Srinivasan, and Woolsey (2001); Frame, Padhi, and Woolsey (2004).

the SBA selectively influences credit allocation. From Kane (1977), and Craig and Thomson (2003), we know that selective credit allocation is likely to be an inefficient and possibly counterproductive policy tool. In the case of financial institutions, the provision of subsidies tied to small-enterprise lending is likely to have costly, unintended effects. The welfare costs of these unintended consequences may include: deadweight losses associated with resource misallocation, wealth redistribution, and less stability in the banking system. In the case of small businesses, the provision of subsidies tied to borrowing is likely to increase the amount of debt capital held by small firms, and generate welfare costs associated with this differing capital structure. The subsidy associated with SBA guaranteed lending may have redistributional effects inconsistent with conventional notions of social welfare. For example, it is likely that most of the wealth transfer will be to established small-business owners or to the shareholders of the lending institutions, neither of which represents the poorest or most disadvantaged in our society.[4]

Nonetheless, the net value of subsidizing small businesses will be positive if the benefits are greater than the costs. One benefit may be an increase in local market employment rates. Such an increase may have significant social benefits, especially in areas with chronic levels of low employment.

4 SBA Loan Guarantee Programs and Local Economic Performance

The Small Business Administration was born on July 30, 1953. The SBA received most of its powers from two agencies that were dissolved at its birth, the Reconstruction Finance Corporation (RFC) and the Small Defense Plants Agency (SDPA). The SBA was granted authority to make direct loans and guarantee bank loans to small businesses by the RFC. It also assumed the RFC's role of making loans to victims of natural disasters. Formerly the functions of the SDPA, helping small businesses procure government contracts, and helping small-business owners with managerial, technical, and business training assistance also were assumed by the SBA.

Recognizing that private financial institutions are typically better than government agencies at deciding which small business loans to underwrite, in the mid-1980s the SBA began moving away from making direct loans and toward guaranteeing private loans. Currently, the SBA makes direct loans only under special circumstances. Guaranteed lending, through the SBA's 7(a) guaranteed loan and 504 loan programs, is the main form of SBA activity in lending markets.

[4] See Craig and Thomson (2003) for more on this point.

The more basic and more significant of these two is the 7(a) loan program. Its name refers to Section 7(a) of the Small Business Act, which authorizes the agency to provide business loans to small businesses. All 7(a) loans are provided by commercial lenders. A large percentage of American commercial banks participate in the 7(a) program, as do a number of finance companies, credit card banks, and other non-bank lenders.

It is important to note that 7(a) loans are made available only on a guaranty basis. They are provided by lenders who structure their own loans in accordance with SBA's underwriting requirements, and then apply for and receive a guaranty from the SBA on a portion of the loan. The SBA does not fully guaranty 7(a) loans; usually, it's 50 percent to 85 percent of the loan amount. The maximum 7(a) loan is $2 million, and the maximum guaranty on such a loan is $1.5 million (SBA 2006a). For the maximum loan, the SBA will guarantee no more than 75 percent of the loan amount. The lender and the SBA share the risk that a borrower will not repay the loan in full.

The public policy rationale for SBA guarantees appears to be that credit-market imperfections may result in small enterprises being credit-rationed—particularly for longer-term loans for purposes such as capital expansion. If SBA loan guarantees indeed reduce credit rationing in the markets for small-business loans, then there should be a relationship between measures of SBA guaranteed lending activities and economic performance. Our main point is that credit-market frictions—primarily in the form of costly information and verification of a small firm's projects—can lead to lower levels of credit allocation that negatively impact economic performance in the local market.[5] To the extent that SBA's guaranteed lending program mitigates credit-market frictions, there should be a positive relationship between the SBA guaranteed lending and economic performance, especially across local markets where credit-market frictions are likely to be a significant problem.[6]

Does more SBA-guaranteed lending lead to higher levels of local market economic performance? The results from Craig, Jackson, and Thomson (2007b) suggest that the answer is yes. In that paper we empirically test whether aggregate SBA guaranteed lending has a greater impact on economic performance in low-income markets

Using local labor market employment rates as our measure of economic performance, we find evidence consistent with this proposition. In particular,

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[5] Implicit here is that labor and capital are complements, at least for small firms.

[6] This empirical relationship is supported also by the economics literature that documents a significant positive correlation between economic growth and financial market development. This literature dates at least to the controversial studies of Schumpeter (1911) and Robinson (1952). More recent important studies provide evidence that relatively higher levels of financial market development tend to lead to higher levels of economic performance—King and Levine (1993a,b), Jayartne and Strahan (1996), Rajan and Zingales (1998), and Guiso, Sapienza, and Zingales (2004).

we find a positive and significant correlation between the average annual level of employment in a local market, and the level of aggregate SBA guaranteed lending in that local market. The intensity of this correlation is relatively larger in low-income markets. Indeed, one interpretation of our results is that this correlation is positive and significant *only in low-income markets*.

In Craig, Jackson, and Thomson (2007a) we report regression results consistent with the hypothesis that aggregate SBA guaranteed lending produces positive, albeit small, net social benefits. Specifically, we report consistent evidence that the level of SBA-guaranteed lending activity (per $1,000 of deposits) is positively related to the growth of per capita income at the local market level–for both urban and rural markets. This impact of SBA-guaranteed lending on growth appears to be small. This small, measurable economic impact of SBA loan guarantees on local economic growth would be expected, however, given the limited role they play in the overall (small- and large-firm) credit intermediation process.

In Craig, Jackson, and Thomson (2007a), our sample consists of local economic markets for which we have complete SBA-guaranteed lending data over the sample estimation period (1992–2001). Our sample contained more than 360,000 SBA loans aggregated to the local market level for each year in our sample. We estimated our models separately for urban (MSAs) and rural (non-MSA counties) markets. We used the instrumental variables (with the instruments from prior periods) and mean transformed data in our estimation procedures.

The results from both Craig, Jackson, and Thomson (2007a) and Craig, Jackson, and Thomson (2007b) should be interpreted with caution, however, for at least two reasons. First, we are unable to control for small-business lending at the local market level and hence, we do not know whether aggregate SBA loan guarantees are contributing to economic performance by helping to complete the market for small firm credit or are simply proxies for small-business lending in the market. Second, we are not able to test whether SBA loan guarantees materially increase the volume of small-business lending in a market, a question related to who captures the subsidy associated with SBA loan guarantees.

5 7(a) Loan Guarantees and Low-Income Markets

Previous research has examined the impact of SBA loan guarantees on economic growth for both urban and rural markets. While this research has found a link between the level of SBA loan guarantees, scaled by deposits, in a market, and personal income growth, it provides only indirect evidence consistent with the hypothesis that SBA guarantees improve credit allocation in the small-business market. Direct tests of this hypothesis are elusive, however, as they would seem to require the type of information on potential small-business

borrowers that is not readily observable—the lack of which is the likely cause a viable business might face credit rationing.

The SBA 7(a) guaranteed lending program is one of many government-sponsored market interventions aimed at promoting small business. The rationale for these guarantees often is based on the argument that credit-market imperfections can result in small enterprises being credit-rationed—particularly those in financially less developed areas. If SBA loan guarantees do reduce credit rationing in these markets for small-business loans, then there should be a relationship between measures of SBA guaranteed lending activities and economic performance, and this relationship should be more evident in financially less developed markets.

We take as our maintained hypothesis that credit-market frictions—primarily in the form of costly information and verification of a small-firm's projects—can lead to a socially suboptimal credit allocation that negatively impacts the labor employment rate in the local market. (Implicit here is that labor and capital are complements ... at least for small firms.) To the extent that SBA guaranteed lending programs mitigate credit-market frictions, there should be a positive relationship between SBA guaranteed lending and the level of employment, especially across less developed (low-income) financial markets. Therefore, we test for whether SBA loan guarantees ease credit-market frictions by measuring whether the normalized amount of SBA guaranteed lending in a local market is correlated with relatively higher levels of employment in low-income areas. Our null hypothesis is that there are no discernible differences in the impact of SBA guaranteed lending on employment rates in low-income markets relative to higher-income markets.

5.1 Data

To examine our hypothesis about the differential impact of SBA 7(a) guaranteed lending on employment rates in less financially developed areas, we utilize data from three sources. One is loan-specific data—including borrower and lender information—on all SBA-guaranteed 7(a) from January 1991through December 2001. We have more than 320,000 loans, with an average size of $203,000, in our sample.

Our second source of data is from the National Bureau of Economic Research (NBER), the Bureau of Labor Statistics (BLS), and the Bureau of Economic Analysis (BEA) from 1991 through 2001. The third source is data from the Federal Deposit Insurance Corporation's annual summary of deposit data (SUMD) files.

All of our individual loan data are aggregated to the local market level. For this study, we also aggregate over time to produce cross-sectional observations for our local markets. We use Metropolitan Statistical Areas to define the relevant local market for urban areas and non-MSA counties as the local market for rural areas.

5.2 Empirical Strategy

Recall that our null hypothesis is that the impact of SBA 7(a) guaranteed lending on employment rates is not different in local markets that are relatively less financially developed. To test this hypothesis, we simplify the analysis of Craig, Jackson, and Thomson (2007a). These authors estimate their models using classic Arellano and Bond panel regression estimation techniques. In this study, we estimate a simple cross-sectional OLS fixed-effects regression model designed to explain differences in employment levels across markets over our sample period. Our basic model is:

$$EMPR_i = \alpha_0 + \alpha_1 PICAP_i + \alpha_2 HERF_i + \alpha_3 MSADUM_i + \alpha_4 DEPPOP_i + \alpha_5 SBAPOP_i + \varepsilon_i \quad (1)$$

Equation (1) uses the average annual employment rate over our sample period (*EMPR*) at the local market level to proxy for economic performance. We are interested in how SBA 7(a) guaranteed lending affects cross-sectional changes in *EMPR*. For this study *EMPR* is defined as 100 minus the unemployment percentage rate in the local market. The primary variable of interest on the right-hand side of equation (1) is *SBAPOP,* which is the inflation-adjusted average annual dollar amount of SBA 7(a) guaranteed loans scaled by average population in the local market over our sample period.

Other right-hand side variables in our model are included as controls. For example, *DEPPOP* is a measure of market liquidity similar to the one used by King and Levine (1993a). *DEPPOP* is defined as the inflation-adjusted average annual dollar amount of commercial bank deposits scaled by average population in the local market over our sample period. *PICAP* is defined as the inflation-adjusted average annual per capita income in the local market over our sample period. It is probably reasonable to assume that markets with higher *PICAP* and higher *DEPPOP* also have higher levels of employment, *EMPR*.

The deposit market Herfindahl index (*HERF*) is also included in (1) to control for the structure of the local market. Constructed at the market level using branch-level deposit data from the SUMD database, *HERF* provides a measure of concentration, and presumably the competitiveness, of the local banking market. Equation (1) also includes a dummy variable *MSADUM* which is equal to one, zero otherwise, if the local market is an MSA as opposed to a non-MSA county.

We test our null hypothesis using a research design based on dividing our sample into a high financially developed local market subsample and a low financially developed local market subsample. We do not have a direct measure of local financial market development. Thus, we use an instrument variable for financial development of the local market. Following Jackson, Craig, and Thomson (2007a), we use PICAP as a proxy for financial market development. This reasonably assumes that financial services tend to gravitate to high-income

communities more than low-income communities. Our high financially developed local market subsample consists of local markets with a PICAP above the sample median. Our low financially developed local market subsample includes local markets with less than or equal to the overall sample median PICAP.

We estimate (1) for the high and low subsamples, as well as the entire sample. Next we test whether the coefficients on the SBAPOP variable for the high and low subsample are equal. If the coefficients are not equal, we reject our null hypothesis. And, if the coefficient on the low subsample SBAPOP variable is significantly larger than the coefficient on SBAPOP for the high subsample, we accept our main alternative hypothesis. That is, we conclude that SBA 7(a) guaranteed lending has a larger positive impact on levels of employment across local markets that are less financially developed.

5.3 The Empirical Results

Equation (1) is estimated using a simple OLS fixed-effects method. Descriptive statistics for the variables used in the regression can be found in Table 1, and a correlation coefficients matrix in Table 2. Our regression estimation results are presented in Table 3. Observe in Table 1 that our primary variables of interest display large dispersions. For example, in panel A of Table 1, our employment rate percentage variable (*EMPR*) ranges from 98.67 percent to 68.06 percent, with a mean of 93.67 percent.

Exhibit 1 Variable definition

Variable	Definition	Source
EMPR	Average employment percentage rate in the local market over the sample period	BLS
SBAPOP	Average per capita amount of new SBA 7(a) lending in the local market over the sample period	SBA, BLS
HERF	Average deposit market Herfindahl over the sample period	FDIC SUMD
PICAP	Average per capita income in the local market over our sample period	BEA
MSADUM	Dummy variable equal to 1 if local market is an MSA, 0 otherwise	BEA
DEPPOP	Average annual per capita bank deposits in the local market over the sample period	FDIC SUMD

Notes: SBA is the Small Business Administration; FDIC SUMD is the Federal Deposit Insurance Corporation, Summary of Deposit Data; BEA–Bureau of Economic Analysis; BLS is the Bureau of Labor Statistics; SBAPOP, PICAP, and DEPPOP are inflation-adjusted. EMPR is calculated by subtracting the local market unemployment percentage rate from 100.

Our per capita income variable (PICAP) has a mean of $15,562 with a high of $36,772 and a low of $6,637, and a standard deviation of $3,080. Our local market deposits per capita variable (*DEPPOP*) also displays a wide range in

panel A of Table 1. The high for *DEPPOP* is $106,313 deposits per capita, the low is only $147 deposits per capita, and the mean is $8,314 per capita. A similar story can be told for our measure of SBA 7(a) guaranteed lending activity in panel A. Per capita SBA 7(a) guaranteed lending (*SBAPOP*) ranges from a high of $404.63 per capita to a low of $0.00 per capita, with a mean of $21.99 per capita over our sample period. Similar trends in dispersion are displayed in panels B and C for the high and low subsamples in Table 1.

In Table 2 we present a correlation matrix for our main variables. Several correlation coefficients in Table 2 are worth mentioning. The local market employment rate (*EMPR*) is correlated significantly and positively with local market per capital income (*PICAP*), per capita deposits (*DEPPOP*), and SBA guaranteed lending per capita (*SBAPOP*). The correlation coefficients for the first two of these relationships are rather large.

Table 1 Descriptive statistics

Variable	Mean	Min.	Max.	Std. Dev.
Panel A. Full Sample (N = 2358)				
EMPR	93.67	68.06	98.67	3.00
HERF	0.53	0.03	1.00	0.28
PICAP ($000)	15.562	6.637	36.772	3.080
MSADUM	0.13	0.00	1.00	0.34
DEPPOP($000)	8.314	0.147	106.313	6.114
SBAPOP($)	21.99	0.00	404.63	27.34
Panel B. High Subsample (N = 1178)				
EMPR	94.86	84.26	98.42	2.10
HERF	0.46	0.03	1.00	0.26
PICAP ($000)	17.790	15.241	36.772	2.654
MSADUM	0.25	0.00	1.00	0.25
DEPPOP($000)	9.534	0.149	106.313	7.139
SBAPOP($)	27.04	0.00	404.63	29.04
Panel C. High Subsample (N = 1178)				
EMPR	92.48	68.06	98.67	3.29
HERF	0.61	0.11	1.00	0.27
PICAP ($000)	13.332	6.637	15.239	1.410
MSADUM	0.02	0.00	1.00	0.12
DEPPOP($000)	7.092	0.147	49.966	4.565
SBAPOP($)	16.94	0.00	287.26	24.16

Notes: EMPR is the average annual employment rate in percentage points over the sample period. HERF is the average Herfindahl ratio, calibrated to be between 0 and 1, in market *i* over the sample period. PICAP is average per capita income in local market *i* over our sample period. MSADUM is an indicator variable equal to 1 (0 otherwise) if market *i* is an MSA. DEPPOP is the average annual per capita bank deposits in market *i*. SBAPOP is the average annual amount of (new) SBA 7(a) guaranteed lending in market *i* over our sample period. SBAPOP is calibrated in dollars in per capita, and DEPPOP is calibrated in thousands of dollars per capita. All dollar amounts are in 1990 dollars.

Table 2 Pearson correlation coefficients matrix. Full Sample (N = 2358)

	EMPR	PICAP	HERF	MSADUM	DEPPOP	SBAPOP
EMPR	—					
PICAP	0.44	—				
	(0.00)					
HERF	–0.18	–0.29	—			
	(0.00)	(0.00)				
MSADUM	0.08	0.43	–0.31	—		
	(0.00)	(0.00)	(0.00)			
DEPPOP	0.27	0.28	–0.23	0.04	—	
	(0.00)	(0.00)	(0.00)	(0.08)		
SBAPOP	0.15	0.21	–0.05	0.04	0.06	—
	(0.00)	(0.00)	(0.01)	(0.03)	(0.00)	

Notes: P-values are in parentheses. EMPR is the average annual employment rate in percentage points over the sample period. HERF is the average Herfindahl ratio, calibrated to be between 0 and 1, in market *i* over the sample period. PICAP is average per capita income in local market *i* over our sample period. MSADUM is an indicator variable equal to 1 (0 otherwise) if market *i* is an MSA. DEPPOP is the average annual per capita bank deposits in market *i*. SBAPOP is the average annual amount of (new) SBA 7(a) guaranteed lending in market *i* over our sample period. SBAPOP is calibrated in dollars per capita, and PICAP and DEPPOP are calibrated in thousands of dollars per capita.

The correlation coefficients for our independent variables suggest that multicollinearity may be a concern for the relationships between local market per capita income (*PICAP*) and *MSADUM*, *HERF*, and *DEPPOP*. Variance-inflation-factor (VIF) tests provided strong evidence that multicollinearity was not a problem in this case.

Table 3 presents the main results for our study. They are estimated using an OLS fixed-effects method. The fixed-effects class variable is the state in which the local market is located. Focusing on individual states as our fixed effect allows us to control for variations in state-specific factors associated with systematic influences on employment levels within the same state. Examples of these state-specific factors are levels of educational attainment and other human capital measures, technological endowment and advancement, and state-level public policies designed to influence employment rates.

From Table 3, our measure of per capita income in the local market (*PICAP*) has a positive and significant coefficient for the full sample, and for both the high and low subsamples. This suggests a positive and significant impact on *EMPR* of greater per capita income in the local market. This is consistent with the correlations from Table 2.

The results in Table 3 suggest that local market deposit concentration (*HERF*) has a negative and significant impact on local market employment (*EMPR*) in the full sample and high subsample, but a positive and significant impact on local market employment in the low subsample. This inconsistency across subsamples may be the result of the low subsample containing some

Table 3 OLS Fixed-effects regression estimation of (1)

Parameter Estimates and T-statistics			
Variable	Full Sample	High Subsample	Low Subsample
Intercept	86.99	92.48	79.22
	(250.62)*	(221.41)*	(86.45)*
PICAP	0.41	0.13	0.90
	(19.76)*	(5.36)*	(14.05)*
HERF	–0.65	–0.81	0.69
	(–3.04)*	(–3.41)*	(2.05)**
MSADUM	–1.17	–0.83	–2.43
	(–6.43)*	(–5.51)*	(–3.46)*
DEPPOP	0.07	0.06	0.11
	(7.53)*	(7.37)*	(5.39)*
SBAPOP	0.006	0.003	0.008
	(3.13)*	(1.66)	(2.36)**
Adj – R^2	0.236	0.107	0.196
F- Statistic	144.29*	29.22*	58.39*
N =	2358	1178	1178

Notes: This table provides parameter estimates for (1): $\boldsymbol{EMPR_i = \alpha_0 + \alpha_1 PICAP_i + \alpha_2 HERF_i + \alpha_3 MSADUM_i + \alpha_4 DEPPOP_i + \alpha_5 SBAPOP_i + \varepsilon_i}$. EMPR is the average annual employment rate in percentage points over the sample period. PICAP is average per capita income in local market *i* over our sample period. HERF is the average Herfindahl ratio, calibrated to be between 0 and 1, in market *i* over the sample period. MSADUM is an indicator variable equal to 1 (0 otherwise) if market *i* is an MSA. DEPPOP is the average annual per capita bank deposits in market *i*. SBAPOP is the average annual amount of (new) SBA 7(a) guaranteed lending in market *i* over our sample period. SBAPOP is calibrated in dollars in per capita, and DEPPOP is calibrated in thousands of dollars per capita. This table provides estimates of (1) for the Full sample, the High subsample, and the Low subsample. The Low (High) subsample contacts those observations where PICAP is less (greater) than the median PICAP for the Full sample. T-statistics are in parentheses.
* indicates significant at the 1% level.
**indicates significant at the 5% level.
***indicates significant at the 10% level.

markets without banks, and thus a zero HERF. Such markets are likely to be low employment rate markets.

Observe in Table 3 that our measure of per capita bank deposits in the local market (*DEPPOP*) has a positive and significant coefficient for the full sample, and high and low subsamples. This suggests a positive and significant impact on *EMPR* of more per capita deposits in the local financial market.

To some extent, *DEPPOP* is a measure of cross-sectional local market liquidity levels. A similar measure of liquidity was used by King and Levine (1993a, 1993b) to proxy for the level of financial development across countries. However, the issue of endogeneity is a concern for this variable. For it could be argued that higher levels of employment cause higher levels of per capita bank deposits as forcefully as it can be argued that higher levels of per capita bank deposits cause higher levels of employment. As mentioned in the introduction, however, recent studies including Jayartne and Strahan (1996), Rajan and

Zingales (1998), and Guiso, Sapienza, and Zingales (2004), all report significant evidence supporting the proposition that the causal relationship runs from more financial market development to better economic performance.

Our main variable of interest in Table 3 is *SBAPOP*. It has a positive and significant coefficient in the full sample and the low subsample, but not in the high subsample. This suggests that the positive and significant impact of *SBAPOP* on *EMPR* in the full sample is driven by the positive and significant impact of *SBAPOP* on *EMPR* in the low subsample. It also suggests that there is a differential impact of *SBAPOP* on *EMPR* in the low subsample relative to the high subsample. A t-test confirms that the coefficient on *SBAPOP* in the low subsample is significantly larger (at the 1 percent level) than the coefficient on *SBAPOP* in the high subsample.

But even for the low subsample, the impact of *SBAPOP* on *EMPR* appears to be economically small. For example, if you increased per capita SBA guaranteed lending in a low subsample local market by two standard deviations (approximately $50), the predicted result is an increase in the level of employment by 0.4 percentage points. Of course, this still may be a cost-effective method of increasing employment relative to other policy tools.

Overall, the results from Table 3 suggest that per capita SBA 7(a) guaranteed lending is significantly and positively correlated with local market employment rates. And, the impact of SBA guaranteed lending on the level of employment is greater in financially less developed markets. These results lead to the rejection of our null hypothesis. Recall that our null hypothesis, that the impact of SBA 7(a) guaranteed lending on employment rates is not different in local markets that are relatively less financially developed.

Our results are also consistent with the notion that less developed financial markets benefit relatively more from governmental interventions in small-firm credit markets. This relatively higher benefit is consistent with a credit-rationing argument such as that offered by Stiglitz and Weiss (1981), in which the intervention serves to ameliorate a market failure in the small-firm credit market. As in Jackson, Craig, and Thomson (2007a), these results also suggest that SBA 7(a) guaranteed lending will have a larger positive impact on social welfare if it is targeted to certain financially less developed (or lower-income) areas.

6 Conclusion

In our previous research (Craig, Jackson, and Thomson, 2007b), we found that SBA guaranteed lending in the aggregate had a larger positive influence on low-income markets. However, Craig, Jackson, and Thomson (2007b) did not investigate whether this positive relationship between SBA guaranteed lending and economic performance in low-income markets was primarily the result of SBA's main guaranteed lending program—the 7(a) program. As in Craig, Jackson, and Thomson (2007b), we use the level of labor market employment, or the employment rate, as our measure of economic performance. And we test

whether 7(a) program guaranteed lending alone has a differential impact for low-income markets.

Therefore, in this paper, our null hypothesis is that 7(a) program guaranteed lending does not impact low-income markets differently from higher-income markets. And, our primary alternative hypothesis is that 7(a) program guaranteed lending has a greater impact on the employment rate in low-income markets. Overall, our results strongly suggest that per capita SBA 7(a) guaranteed lending is significantly and positively correlated with local market employment rates. And the impact of SBA 7(a) guaranteed lending on the level of employment is greater in financially less developed markets than other markets. These results lead to the rejection of our null hypothesis.

It should be noted that these results are tentative, and that much more research is necessary to take a more definitive position. All of our results should be interpreted with caution for at least two reasons. First, we are unable to control for small-business lending at the local market level, and hence, we do not know whether SBA 7(a) loan guarantees are contributing to economic performance by helping to complete the market or are simply proxying for small-business lending in the market. Second, we are not able to test whether SBA loan guarantees materially increase the volume of small-business lending in a market—a question related to who captures the subsidy associated with SBA loan guarantees. Both of these questions relate to a larger question: what is the optimal level of SBA-guaranteed lending for different local credit markets in the U.S.? Future research will seek to shed light on this larger question.

Appendix 1. Characteristics of Loans Issued under the SBA 7(a) and 504 Loan Guarantee Programs

Table 4 Average SBA loan $

	Urban			Rural			Total
Year	504	7A	Total	504	7A	Total	Sample
1991	262,159	207,984	213,260	300,958	205,233	213,592	213,345
1992	302,788	244,221	249,582	316,912	232,181	238,305	246,923
1993	325,592	250,624	258,006	346,530	244,144	252,845	256,859
1994	341,261	205,738	218,756	334,919	184,367	195,604	213,855
1995	350,786	150,363	169,179	364,684	125,882	145,227	164,796
1996	376,730	190,938	213,915	341,966	145,963	168,762	206,933
1997	369,753	224,912	238,320	310,629	174,399	188,908	231,171
1998	385,883	236,159	253,764	308,272	199,479	212,395	247,994
1999	412,650	253,674	270,483	335,416	195,475	211,379	263,591
2000	427,095	260,575	277,788	343,140	197,743	213,899	269,633
2001	440,611	241,833	264,551	361,987	195,511	216,531	257,741
Sample	377,773	221,391	237,727	335,527	184,414	199,225	231,391

Source: United States Small Business Administration and authors' calculations

Table 5 Total SBA loans ($000)

	Urban			Rural			Total
Year	504	7A	Total	504	7A	Total	Sample
1991	168,044	1,235,636	1,403,680	58,687	418,265	476,952	1,880,632
1992	380,301	3,043,969	3,424,270	96,975	912,007	1,008,982	4,433,252
1993	564,577	3,978,656	4,543,233	148,315	1,125,014	1,273,329	5,816,562
1994	1,015,593	5,761,698	6,777,291	207,985	1,419,439	1,627,423	8,404,715
1995	1,165,310	4,821,247	5,986,557	234,127	916,799	1,150,926	7,137,483
1996	1,727,682	6,204,515	7,932,197	269,811	874,902	1,144,713	9,076,910
1997	1,219,816	7,273,196	8,493,012	199,424	939,313	1,138,736	9,631,748
1998	1,464,425	6,725,796	8,190,221	191,437	919,600	1,111,037	9,301,258
1999	1,521,028	7,908,288	9,429,316	175,423	797,344	972,767	10,402,083
2000	1,319,722	6,984,461	8,304,183	166,766	768,827	935,593	9,239,776
2001	1,238,118	5,266,396	6,504,514	185,699	694,065	879,765	7,384,279
Sample	11,784,617	59,203,858	70,988,475	1,934,647	9,785,575	11,720,223	82,708,698

Source: United States Small Business Administration and authors' calculations

Table 6 Total number of SBA loans

	Urban			Rural			Total
Year	504	7A	Total	504	7A	Total	Sample
1991	641	5,941	6,582	195	2,038	2,233	8,815
1992	1,256	12,464	13,720	306	3,928	4,234	17,954
1993	1,734	15,875	17,609	428	4,608	5,036	22,645
1994	2,976	28,005	30,981	621	7,699	8,320	39,301
1995	3,322	32,064	35,386	642	7,283	7,925	43,311
1996	4,586	32,495	37,081	789	5,994	6,783	43,864
1997	3,299	32,338	35,637	642	5,386	6,028	41,665
1998	3,795	28,480	32,275	621	4,610	5,231	37,506
1999	3,686	31,175	34,861	523	4,079	4,602	39,463
2000	3,090	26,804	29,894	486	3,888	4,374	34,268
2001	2,810	21,777	24,587	513	3,550	4,063	28,650
Sample	31,195	267,418	298,613	5,766	53,063	58,829	357,442

Source: United States Small Business Administration and authors' calculations

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Stumbling Blocks to Entrepreneurship in Low- and Moderate-Income Communities

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1 Introduction

There is growing and widespread interest among policy makers at all levels of government to promote entrepreneurial-friendly environments and entrepreneurship in terms of both self-employment and business ownership. The interest is motivated by a substantial body of research indicating that entrepreneurs spur the diffusion and implementation of innovative ideas, thereby creating new products, services, and markets. In addition, and perhaps more importantly, entrepreneurs contribute, whether through self-employment or the establishment of small businesses, to job formation and economic growth and development. Moreover, some consider self-employment a route out of poverty or off the unemployment rolls, especially for people encountering discrimination in the labor market. Self-employment can also be a way to increase one's earnings. All these factors play a role in governmental efforts to foster entrepreneurship, in terms of both self-employment and business ownership, particularly in low- and moderate-income communities.

Although evidence demonstrating the importance of entrepreneurship for increasing social welfare might be strong, the most important determinants of entrepreneurship are uncertain, and, therefore, so are policies that best support entrepreneurial activity. This uncertainty is twofold: it is not known fully why some individuals become entrepreneurs, while others become wage or salary workers; and factors most responsible for enabling or preventing a would-be entrepreneur from becoming self-employed or establishing a business are unclear. Researchers have studied both of these issues have been studied, but, so far, have failed to reach a consensus that provides a true roadmap to meaningful policy actions.

The purpose of this paper is to explore several aspects of the various recent efforts made to understand better what works best at promoting entrepreneurship

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throughout the United States, especially in the low- and moderate-income communities. Our approach is to rely mainly on the work of other researchers, but also to make a modest attempt to contribute to the knowledge in the field.

In the next section, we briefly discuss the importance of entrepreneurial activity's contribution to economic growth and development, and, more broadly, social welfare. The third section focuses on the commitment of financial institutions to channel loans to businesses in low- and moderate-income communities. The fourth section focuses on a newly constructed measure of "loan bias" in these communities. The fifth section focuses on databases available to study entrepreneurship, empirical studies that have examined several ways to determine entrepreneurial activity, and potential barriers to entrepreneurship. The section also identifies inconsistencies in findings, and the lack of common data sources that undermine the confidence one can have in any proposed policy actions to foster greater entrepreneurship. The sixth section discusses regulatory measures that might impede the development of greater entrepreneurial activity.

The 7th section changes pace, and discusses an alternative approach to identifying factors that help explain the differences in entrepreneurial activity across geographical regions. The approach is to focus on how business size differs in different regions of the country, based upon the notion that relatively smaller firms are breeding grounds for the expression of the entrepreneurial spirit, no matter where they are located. The 8th and last section provides a summary and conclusions.

2 Overview of the Importance of Entrepreneurship

Economic theory is not clear about how to classify entrepreneurs from other workers. For example, Kihlstrom and Laffont (1979, p.720) develops a theoretical model and find that "...less risk-averse individuals become entrepreneurs, while the more risk-averse work as laborers." Lucas (1978, p.510) constructs a model in which "each member of the work force is endowed with a "talent for managing" [that] varies across workers." Thus, either innate differences in attitudes toward risk or talents for managing are key to why some individuals are entrepreneurs and others paid workers. More generally, as Holtz-Eakin and Rosen (1994a, p.338) state, "In the nonstatistical literature ... entrepreneurs are characterized in terms of their daring, risk-taking, animal spirits, and so on. ..." People who study entrepreneurship empirically, however, require a more concrete way in which to identify entrepreneurs, a way that quantifies various factors that might help explain differences in the degree of entrepreneurship over time and across geographical regions.

In this regard, Thomas Hoening (2005, p.2), president of the Federal Reserve Bank of Kansas City, suggests that the entrepreneur is someone who recognizes "... the potential of new ideas, designs applications, develops new products,

and successfully brings these products to markets." Based on this definition, individuals who are self-employed or own relatively small businesses could be considered entrepreneurs. At the very least, they are entrepreneurial enough to bring products and services to the marketplace. Indeed, among the empirical studies of entrepreneurship, Evans and Leighton (1989), Blanchflower and Oswald (1998), and Fairlie (1999) use self-employment to define entrepreneurs; Gentry and Hubbard (2004) uses business ownership; Meyer (1990) uses both self-employment and business ownership status; and Holtz-Eakin, Joulfaian, and Rosen (1994a,b) uses filers of IRS form 1040 schedule C to define entrepreneurs.

Tables 1 and 2 offer data on the economic impact of entrepreneurship. Table 1 shows that small businesses are extremely important for employment and economic growth. Specifically, it reveals that small businesses (those with fewer than 500 employees) account for 99 percent of all firms in the United States, 86 percent of all establishments, 50 percent of total employment, 45 percent of annual payroll, and 39 percent of total receipts. Enterprises with zero to five employees account for 47 percent of all firms and 37 percent of all establishments.[1] These firms, not surprisingly, account for only 5 percent of employment and 4 percent of annual payroll and receipts. But from these small firms, through the process of "creative destruction," come the far bigger organizations that help sustain the dynamic process of job creation and economic development. Indeed, "... over the past decade, small firms have provided 60–80 percent of the net new jobs in the economy, and ... almost all of these net new jobs stem from startups in the first two years of operation" (U.S. Small Business Administration Office of Advocacy and The Ewing Marion Kauffman Foundation, 2004). Furthermore, Acs and Armington (2004) empirically finds that a higher ratio of entrepreneurial activity is associated strongly with faster growth of local economies. It is, therefore, incumbent upon policymakers concerned with growth and employment not to erect barriers to the establishment and operation of small businesses.

Table 2 provides a somewhat broader view of the role of small business in the economy because it includes the self-employed. But it also sounds a note of caution regarding the race, ethnicity, and gender of owners of firms. It is important for social welfare that all races, ethnicities, and genders are provided the opportunity to become self-employed or small business owners. Recent demographic data showing the growing importance of different social and ethnic groups in the total population underscore this fact. Table 2 raises the issue of whether this opportunity is available to individuals in all these groups. It shows the ownership distribution of firms based upon/different demographic

[1] Firms can contain multiple establishments, defined by the U.S. Census Bureau as a "single physical location at which business is conducted." See Appendix 2 for definitions of these and other terms frequently used in studies of entrepreneurship.

Table 1 Number of firms, number of establishments, employment, and annual payroll by employment size of the enterprise

		Employment Size of the Enterprise													
Data Type	Total	0	%	1–4	%	5–9	%	10–19	%	20–99	%	100–499	%	500 +	%
Firms (thousands)	5,698	770	14%	2,696	47%	1,011	18%	614	11%	508	9%	82	1%	17	0%
Establishments (thousands)	7,201	771	11%	2,699	37%	1,024	14%	653	9%	693	10%	333	5%	1,028	14%
Employment (thousands)	112,401	0	0%	5,698	5%	6,640	6%	8,246	7%	19,874	18%	15,909	14%	56,034	50%
Annual Payroll (US$ billions)	3,943	38	1%	156	4%	182	5%	241	6%	624	16%	536	14%	2,166	55%
Receipts (US$ billions)	22,063	215	1%	938	4%	888	4%	1,086	5%	2,885	13%	2,547	12%	13,504	61%

Source: 2002 County Business Patterns.

Table 2 Number of firms, receipts, employment, and annual payroll by race, ethnicity, and gender

	Population (millions)	Number of Firms (thousands)	Receipts (billions)	Number of Employees (thousands)	Annual Payroll (billions)
All U.S.	287	22,977	22,635	110,833	3,815
Male	49%	57%	31%	39%	35%
Female	51%	28%	4%	7%	5%
Black	35	1,198	93	771	18
Male	48%	48%	70%	65%	70%
Female	52%	46%	23%	23%	22%
White	197	19,895	8,304	52,209	1,549
Male	49%	60%	81%	78%	82%
Female	51%	28%	10%	13%	10%
Asian	11	1,105	343	2,294	59
Male	48%	58%	73%	68%	73%
Female	52%	31%	16%	19%	17%
Hispanic	38	1,574	226	1,546	37
Male	51%	59%	76%	72%	76%
Female	49%	34%	16%	18%	17%

Source: 2002 Survey of Business Owners.
* Minimum 50% ownership required for gender designation. Percentages might not add to 100 due to firms with equal male-female ownership.

characteristics.[2] However, the more important finding arises from the comparison of the distribution of business ownership among the different races, ethnicities, and genders to the distribution of firms, receipts, employees, and payroll among these groups. One finds a striking imbalance in distribution.

By percentage of population, for instance, females are significantly underrepresented as majority owners of firms, especially so with respect to receipts and employment of firms. Females represent 51 percent of the population but just 12 percent of receipts and 14 percent of employment of firms that are majority-controlled by a single gender. African Americans and Hispanics also are underrepresented in terms of self-employment or ownership, in comparison to their respective percentages of the total population. African Americans constitute some 12 percent of the population, but a mere 5 percent of the firms that are majority-controlled by a single race. This disparity is even more striking if one considers receipts and employment, where African-American-owned firms account for just 1 percent of receipts and employment. Hispanics account for

[2] Unlike Table 1, this table goes beyond simply the number of firms with paid employees. As Davis, Haltiwanger, Jarmin, Krizan, Miranda, and Nucci (2005) explain, the data sources for the two tables are quite different. Table 2 includes the firms in Table 1, but also adds all sole proprietorships without employees, and other corporations, partnerships, and other nonemployer business entities, of which there were more than 17,000 in 2002.

13 percent of the population but just 7 percent of firms, and 3 percent of receipts and employment. In contrast, Asian Americans represent shares of firm employment and receipts in approximate parity to their share of the population, and a share of firm numbers higher than their share of population.

This information raises important questions about potential impediments, if not downright barriers, to self-employment and business ownership for individuals in several demographic groups. It also suggests, however, that these potential obstacles might be less important, if not unimportant, for at least one minority group. The fact that many individuals from these demographic groups live in low- and moderate-income communities heightens the importance of such concerns. The reason, of course, is that to limit the opportunities of these individuals to become self-employed or establish small businesses is to limit the opportunities of a large and increasing portion of the U.S. population to grow and prosper through entrepreneurship. One of the limiting factors most frequently mentioned is lack of access to capital. We explore this issue further in the next section.

3 Potential Stumbling Blocks to Entrepreneurial Activity in Low- and Moderate-Income Communities

Many studies of the determinants of entrepreneurship conclude that a major barrier to entrepreneurship (i.e., self-employment or establishing a small business) is lack of access to funds, commonly called "liquidity constraints." The enactment of the Community Reinvestment Act (CRA) of 1977, however, requires that banks channel a portion of their funds to the communities in which they are located. Appendix 1 shows the percentage of the population in each of the 280 Metropolitan Statistical Areas (MSAs) represented by low- and moderate-income[3] (LMI) individuals, and the percentage of the total dollar amount of loans made to businesses in these communities by banks under CRA[4] in 2000. It is important to note, however, that only banks with assets of greater than $250 million were required to report under CRA in 2000 (this minimum was increased to $1 billion in 2005). Reporting banks, moreover, are required to report data only on loans of $1 million or less. For these reasons, CRA data can be viewed as information on the small-business lending of banks that

[3] According to the U.S. Census Bureau, low-income individuals in a given MSA are people with annual income of 50 percent or less of that MSA's median income, and low- and moderate-income individuals are people with incomes 80 percent or less of the median income in that MSA.

[4] Low-income communities are census tracts in which the median family income is less than 50 percent of the MSA median family income. The low- and moderate-incomes category comprises census tracts in which the median family income of the census tract is less than 80 percent of the MSA median family income.

accounted for more than 90 percent of total bank assets and business loans in 2000.[5]

In addition, for our analysis in this section, we assume that LMI individuals live mainly in LMI census tracts, rather than being randomly located throughout the census tracts in MSAs. This is plausible given that the U.S. Census Bureau notes that census tracts are "designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions."

It is quite clear that the distribution of the LMI population as a percentage of an MSA's total population varies substantially across the MSAs–the mean is 40 percent and the standard deviation is 0.03 percent. The shares range from a high of 49 percent in Yolo, California, to a low of 34 percent in Jacksonville, North Carolina. Bank loans made by reporting banks to businesses in the LMI communities as a percentage of the total dollar amount of bank loans made in these MSAs varies even more—the mean is 23 percent and the standard deviation is 0.10 percent. These figures range from a high of 54 percent in Des Moines, Iowa, to a low of 0.2 percent in Dover, Delaware. It is interesting that the mean share of loans made to businesses in LMI communities is substantially lower than the mean of the LMI population as a share of the total population. Indeed, it is more than 40 percent lower.

When one focuses on just low-income (LI) communities, one finds that the share of the total population in MSAs accounted for by the LI segment ranges from a high of 32 percent in Yolo, California, to a low of 16 percent in Jacksonville, North Carolina. The mean is 23 percent and the standard deviation is 0.03 percent. At the same time, the share of the total dollar amount of loans made by reporting banks to businesses in LI communities ranges from a high of 28 percent in Sioux City, Iowa-Nebraska, to a low of 0 percent in each of forty-five MSAs. The mean share of loans made to businesses in LI communities is a mere 6 percent (75 percent lower than the mean of the LI population as a share of the total population), and the standard deviation is 0.05 percent–the latter figure quite lower than the variation of the share of loans made to businesses in LMI communities.

The idea of parity between share of population and share of business activity seems to appeal to some commentators on entrepreneurship, particularly with respect to entrepreneurship in minority populations. This is apparent in *The State of Minority Business Enterprises*(MBDA, 2006), which notes that "Minority-owned business activity ... continues to be significantly smaller than minority representation of the nation's population." It describes this deviation from parity, moreover, as an "opportunity gap." In the next section we construct a measure that reflects this view of the relationship (to an economist,

[5] The CRA data, however, are not without limitations: loans may be made to a firm with an address in an LMI community, but the proceeds are used to fund operations, in the case of a firm with multiple establishments, outside LMI communities.

perhaps naïve) between share of population and share of business activity; the latter is represented here by business loans from banks reporting under CRA.

In this view, the ideal world is one in which the shares of the total dollar amount of loans made to businesses in the LMI communities in every MSA would match one-for-one the shares of the total population in the MSAs accounted for by low- and moderate-income individuals. The world is far from perfect based upon such a view. The difference between the LMI share of population and share of loans made to businesses in LMI communities varies from a high of 42 percentage points for Dover, Delaware (an MSA with 42 percent LMI individuals and 0 percent of total loans going to businesses in LMI communities), to a low of a negative 18 percentage points for Des Moines, Iowa (an MSA with 36 percent LMI individuals and 54 percent of total loans going to businesses in LMI communities). Moreover, there are just nineteen MSAs out of a total of 280 for which we have data (just 7 percent) where the difference is 0 or less. The difference between the LI share of population and share of loans to businesses in LI communities varies from a high of 31 percent for Yolo, California (an MSA with 31 percent LI individuals and 0 percent of total loans going to businesses in LI communities), to a low of a negative 5 percentage points for Sioux City, Iowa-Nebraska (an MSA with 22 percent LI individuals and 27 percent of total loans going to businesses in LMI communities).

Table 3 shows the pairwise correlations between the LI and LMI shares of population, and the LI and LMI shares of loans, both in terms of numbers and amounts. The LI share of the population is correlated significantly and positively with the LI shares of numbers and amounts of loans. The correlations, however, are quite low. With regard to the LMI share of population and the LMI share of loans either in terms of numbers or amounts, the correlation is also positive and significant, although quite low. According to the naïve view described above, all the correlations would have been positive and one.

4 A Measure of Low- and Moderate-Income "Loan Bias"

Another way to view the data in the previous section is in terms of an LI and LMI community "loan bias" based on the naïve view of an ideal world described noted above, where the share of total loans to businesses in LI (LMI) communities would be equal to the share of the total population represented by LI (LMI) individuals for every MSA. We choose to use the term "loan bias" not in a pejorative sense, but to demonstrate that what might appear initially to be bias to some people might require closer examination and interpretation. Appendix 1 presents a measure of the LI and LMI loan bias for each of the MSAs. It is calculated as 1 minus the ratio of the LI (LMI) share of the total amount of loans in an MSA to the LI (LMI) share of the total population in that MSA. A value of 0 would indicate no loan bias, while a value of 1 would indicate maximum loan bias. The LI loan bias ranges from 1 to –0.26. Forty-three MSAs

Table 3 Pairwise correlation

	LI Share of Population	LI Share of Loan Number	LI Share of Loan Amount	LMI Share of Population	LMI Share of Loan Number	LMI Share of Loan Amount	LMI Loan Bias(Number ofLoans/ Population)	LMI Loan Bias(Amount ofLoans/ Population)	LI Loan Bias(Number ofLoans/ Population)	LI Loan Bias(Amount ofLoans/ Population)	LMI Loan Bias (Number ofLoans/ Income)	LMI Loan Bias (Amount of Loans/Income)	LI Loan Bias (Amount of Loans/ Income)	LI Loan Bias (Number of Loans/ Income)	Branches
LI Share of Population	1														
LI Share of Loan Number	0.17***	1													
LI Share of Loan Amount	0.15**	0.92***	1												
LMI Share of Population	0.45***	0.1	0.1	1											
LMI Share of Loan Number	0.17***	0.37***	0.35***	0.11*	1										
LMI Share of Loan Amount	0.15**	0.35***	0.39***	0.11*	0.93***	1									
LMI Loan Bias (Number of Loans/ Population)	−0.1*	−0.35***	−0.34***	0.05	−0.98***	−0.91***	1								
LMI Loan Bias (Amountof Loans/ Population)	−0.08	−0.33***	−0.37***	0.05	−0.91***	−0.99***	0.93***	1							
LI Loan Bias (Numberof Loans/ Population)	−0.04	−0.98***	-0.92***	−0.05	−0.36***	−0.34***	0.35***	0.33***	1						
LI Loan Bias (Amountof Loans/ Population)	−0.02	−0.9***	−0.98***	−0.05	−0.34***	−0.38***	0.33***	0.37***	0.92***	1					
LMI Loan Bias (Numberof Loans/ Income)	−0.13**	−0.27***	−0.26***	0.03	−0.81***	−0.75***	0.82***	0.76***	0.26***	0.24***	1				
LMI Loan Bias (Amountof Loans/ Income)	−0.11*	−0.25***	−0.29***	0.03	−0.76***	−0.82***	0.77***	0.84***	0.24***	0.28***	0.95***	1			
LI Loan Bias (Amountof Loans/ Income)	−0.01	−0.87***	−0.96***	−0.08	−0.33***	−0.37***	0.32***	0.36***	0.9***	0.98***	0.25***	0.29***	1		
LI Loan Bias (Numberof Loans/ Income)	−0.02	−0.96***	−0.9***	−0.09	−0.36***	-0.34***	0.35***	0.33***	0.98***	0.91***	0.27***	0.26***	0.92***	1	
Branches	0.01	0.01	0.01	0.07	0.07	0.06	−0.06	−0.05	−0.01	−0.01	−0.02	−0.01	0	0	1

Note: *, **, and *** denote significance at 10, 5, and 1% level, respcctively.

have a LI score of 1, meaning businesses in the low-income communities received none of the loans banks made under CRA in these MSAs. Four MSAs have scores less than 0, meaning businesses in the low-income communities received a larger percentage of the total amount of loans made in these MSAs than the low-income share of total population. The degree of LMI loan bias is only marginally better. While no MSA has a score of 1, many have relatively high scores. Twenty MSAs have LMI loan bias scores of 0.75 or more. This means that for businesses in the LMI communities, their share of the total loans to all businesses in these MSAs is less than one-quarter of the LMI communities' share of the total population.

Table 3 indicates that the LI share of the population of an MSA is not correlated with LI loan bias, whereas LI share of the amount of loans is correlated significantly and negatively with LI loan bias. The same results hold for the correlations involving LMI shares. This means that loan bias is less with a greater share of loans to businesses in LI (LMI) communities, but is not related to the share of the population composed of LI (LMI) individuals. It's interesting to note that the table also shows that the number of branches per financial institution is correlated significantly and negatively with LMI loan bias, but not correlated with LI loan bias. Thus, for LMI loan bias, the degree of financial development in the MSA, as measured by branches per institution, matters.

The measure of LMI loan bias obviously is based upon a naïve view of the world, and is simply a statistical construct. Yet, as seen above, such a naïve view might be influential, and our construct might be useful in understanding the reasons for the substantial variation in the distributions of LMI loans and LMI populations across MSAs. Because the measure reflects smaller loans to businesses by reporting banks, it is clear that businesses in LMI communities in some MSAs receive a substantial portion of the total smaller loans to all businesses in these MSAs, compared with the LMI communities' share of the total population. Businesses located in other LMI communities, however, fare far worse in this respect. Whether these differences in loan bias across the various MSAs can be explained fully by focusing on the world of economics is our next topic. In free and competitive markets, one would expect differences in loan bias across regions, but differences that reflect *economic* factors, such as the creditworthiness of businesses.

Now we consider a slightly less naïve view of world in which disproportionately fewer funds might flow to businesses in LMI communities in part because the incomes in those areas are disproportionately lower than in other areas of MSAs. So we recalculated our measure of loan bias, but this time we based it on income rather than population. Specifically, this measure of loan bias is calculated as 1 minus the ratio of the LI (LMI) share of the total amount of loans to businesses in an MSA to the LI (LMI) community share of the total income of that MSA. It is interesting that the LI and LMI loan bias measures based upon population correlate positively and significantly with the same two respective loan bias measures when based upon income, with correlations of 0.98 and 0.84,

respectively. But the average LI (LMI) loan bias figure based upon population is 0.75 (0.41), whereas the average LI (LMI) loan bias figure based upon income is 0.22 (–0.85). This means that when one calculates the loan bias based upon population, the share of total loans made to businesses in LI (LMI) communities is, on average, less than the LI (LMI) community share of total population in the 275 MSAs. But when one calculates loan bias based upon income, the share of the total amount of loans made to businesses is, on average, greater than the LI (LMI) community share of total income in the MSAs. Yet, beyond the averages, one finds that 51 percent of the low-income communities and 13 percent of the low- and moderate-income communities have positive loan bias figures based upon income. This exercise suggests that to the extent that income of an area correlates with the amount of loans to businesses one might expect to be made, economic factors do help to explain why more funds flow to some areas as opposed to others within MSAs.

Clearly, the naïve view of the world reflected in the ideal of parity and of "opportunity gaps" is not compelling; when one considers only income (ignoring other factors, such as the presence of collateral that might affect lending decisions), much of the loan bias we noted above disappears. Yet, there remains substantial variation in the income-based measure of loan bias, and an assessment of the reasons for this variation might be a fruitful subject for future work. In any event, whether these measures of loan bias have any power in explaining the number and size of establishments in LMI communities within MSAs is assessed below.

5 Selected Databases and Studies of Entrepreneurship

Literature pertaining to entrepreneurship is growing rapidly. The focus here is on selected empirical studies into why some individuals become entrepreneurs and others do not. The focus is also on studies that examine the entrepreneurial process of starting or owning a small business, or becoming self-employed. Given our interest in empirical studies rather than theoretical studies, it is useful to begin with a brief overview of the different data sets typically used by researchers when studying entrepreneurship.

Table 4 provides information on widely used databases from U.S. studies. The table shows substantial differences in the data sets in terms of the issues that can be examined. Some are longitudinal data sets that enable researchers to study the same individuals or cohorts of the same individuals over time to determine factors that might explain why some individuals choose self-employment over paid employment. Others enable researchers to focus on business startups or small businesses over time or across geographical regions, rather than individual choices between self-employment and wage and salary work. All of these studies usually try to include as much information as available on the characteristics of the self-employed, the characteristics of business owners, the characteristics of

Table 4 Selected Information on databases used in studies of entrepreneurship

Data Source	Database Overview				Characteristics of Business Owners							Characteristics of Businesses				Sources of Funding		
	Sponsor	Availability	Earliest Year and Frequency	Survey Unit	Race/ Ethnicity	Gender	Marital Status	Age	Education	Work Experience	Self-Employed	Geographic Location	Age of Business	Employ-ment Size	Financial Information	Startup Capital	Loans (public, private)	Venture Capital
Characteristics of Business Owners (CBO) www.census.gov/csd/cbo	U.S. Census Bureau	Available online for download, or ordered online by CD	1982, every 5 years, last survey for 1992 (now discontinued)	Establishments	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y, Receipts and profits	Y	Y	Y
National Longitudinal Surveys (NLS) stats.bls.gov/nls	U.S. Department of Labor	Data available online for free, or ordered by CD for small fee	1969, 1979, 1997	Age and gender cohorts	Y	Y	Y	Y	Y	Y	Y	Y, Regions only	Y	N	N	N	N	N
VentureOne www.ventureone.com	VentureOne	By subscription only	1982, quarterly	Venture-Backed firms	N	Y	N	N	N	Y	N	Y, City level	Y		Y	Y	N	Y
Survey of Income and Program Participation (SIPP) www.sipp.census.gov/sipp	U.S. Census Bureau	Data available for download free on Web site	1984, frequency varies	All household members 15+ years	Y	Y	Y	Y	Y	Y	Y	Y, Metro and state levels	N	Y	N	N	N	N
Nonemployer Statistics www.census.gov/epcd/nonemployer	U.S. Census Bureau	Data available for download free on Web site	1997, annual	Firms with no employees, $1,000+ sales, file schedule C, 1065, 1120 series	N	N	N	N	N	N	Y	Y, MSA, county, state levels	N	Y	Y, Receipts and payroll	N	N	N
National Federation of Independent Business (NFIB) www.nfib.com	NFIB	Not available to public	1973, quarterly and monthly	members of NFIB organization only (600,000 members)	N	N	N	N	N	N	Y	Y	Y	Y	Y	N	Y	N
Survey of Minority-Owned Business Enterprises (SMOBE) www.census.gov/csd/mwb	U.S. Census Bureau	Free online	1992, every 5 years; became SBO after 1997	Firms and establishments	Y	Y	N	N	N	N	Y	Y, State, county, MSA, or city	N	Y	Y, Sales and payroll	N	N	N
Survey of Small Business Finances (SSBF) federalreserve.gov/pubs/oss	Federal Reserve and Small Business Administration	Free online - 2003 not yet available	1987, about every 5 years (1987, 1993, 1998, 2003)	Firms with fewer than 500 full-time employees	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dun and Bradstreet (D&B) www.dnb.com	Dun and Bradstreet	Available for purchase. Price based on the number of records requested.	1841; 1969 electronic records, monthly	Company	Y, If offered by owner	Y, If offered by owner	N	Y, If offered by owner	Y, If offered by owner	Y, If offered by owner	Y	Y	Y	Y	Y	N	N	N
Community Reinvestment Act (CRA) www.ffiec.gov	Federal Financial Institutions Examination Council	Free online - Data aggregated by census tract level	1996, annual	State banks, national banks, and large saving associations ($250M +)	N	N	N	N	N	N	N	Y, State, county, and MSA	N	N	Y, Census tract	N	Y	N
Survey of Business Owners and Self-Employed Persons (SBO) www.census.gov/csd/sbo	U.S. Census Bureau	Partial report available online, complete release in 2006	2002; superceded SMOBE, every 5 years	Proprietorships, partnerships, corporations with receipts of $1,000+	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y, Sales	Y	Y	Y
Panel Study of Income Dynamics (PSID) psidonline.isr.umich.edu/	Department of Commerce and University of Michigan	Available for download free online	1968	8,000 U.S. households	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N
Survey of Consumer Finances (CSF) www.federalreserve.gov/pubs/oss	Federal Reserve Board	Available for download free online	1983, every 3 years	4,500 U.S. families	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y, Net income and sales	Y	Y	Y
Business Information Tracking Series (BITS)	U.S. Census Bureau	Available for download free online	1988, annual	Establishments (longitudinal)	N	N	N	N	N	N	Y	Y	N	Y	Y	N	N	N
Panel Study of Entrepreneurial Dynamics (PSED) www.psed.isr.umich.edu	University of Michigan and Kauffman Center	Available for download free online	1998 only	U.S. adults	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

the business, and the sources of funding for becoming self-employed, establishing, or owning a business.

Table 4 shows that it is difficult to compare the results of studies using these different data sets. Apart from trying to explain different measures of entrepreneurship, the various factors for which one can control in any single study are constrained by the chosen data set. Thus, different studies using different data sets necessarily cannot control for a common and broad set of factors that might enable one to explain a given measure of entrepreneurship. Yet, the omission of any important factors might bias whatever results one obtains from a single dataset. This is not to disparage the considerable and costly efforts to compile all these data sets; rather, more effort should be made to reach a consensus on what information contained in the different data sets can be combined, and on what additional information is necessary to enable policymakers to determine the best actions to promote entrepreneurship.

To illustrate the importance of the use of different data sets to determine what works best to promote entrepreneurship, Table 5 provides information about several studies that have employed some of the data sets in Table 4. Several comments are based upon these studies. First, Blanchflower and Oswald (1998) and Holtz-Eakin, Joulfarian, and Rosan (1994a,b) find that liquidity constraints are a barrier to entrepreneurship, whereas Vos, Yeh, Carter, and Tagg (2005), Hurst and Lusardi (2004), and Moore (2004) do not. Second, Mitchell and Pearce (2004) finds there is prejudicial loan discrimination against African-American and Hispanic owners of small businesses, whereas Bostic and Lampani (1999) find loan racial disparity for African-American-owned but not Hispanic-owned businesses, and Meyer (1990) finds that liquidity constraints do not seem to explain the low African-American self-employment rate. Third, Puri and Robinson (2005) finds that entrepreneurs differ from nonentrepreneurs in being innately more optimistic and risk-loving, whereas Guiso and Schivardi (2004) concludes that entrepreneurship can be acquired through learning, irrespective of differences in temperament. Fourth, Black and Strahan (2002) finds that more bank branches and greater consolidation in the banking industry foster entrepreneurship, whereas Mitchell and Pearce (2004) argues that the move by larger banks to transactional lending through credit scores and "harder" information might lead to greater loan discrimination against small businesses. Fifth, Petersen and Rajan (2002) finds that small businesses located farther away from lenders no longer must be the highest-quality credits, indicating greater access to credit, whereas Brevoort and Hannan (2004) finds no evidence that distance is becoming less important, and instead find that distance diminishes the likelihood of a local commercial loan being made. Sixth, and last, DeYoung, Glennon, and Nigro (2005) finds that lenders making loans made to small businesses under the SBA 7(a) loan guarantee program experience higher default rates with greater borrower-lender distance and higher loan guarantees.

Based upon these findings, can one confidently suggest ways to improve entrepreneurship, especially in LMI communities? In Table 6, different potential stumbling blocks to entrepreneurship define one axis, while different measures

Table 5 Studies examining different levels of entrepreneurial activity over time and geographical areas

Author(s)	Purpose	Entrepreneurial Focus	Data	Results	Policy Implications
Barth, Cordes, and Yezer (1986)	Estimate the benefits and costs of restricting creditor remedies on personal loan transactions.	Individual borrowers, including both self-employed and non-self-employed.	Individual personal loan transactions from national consumer finance companies operating in 45 states.	Restricting the use of creditor remedies does not confer net benefits on the typical borrower, but imposes net costs.	Creditor remedies affect access to credit to loans.
Barth, Gotur, Manage, and Yezer (1983)	Examine the effect of selected government regulations on a high-risk personal loan market.	Individual borrowers, including both self-employed and non-self-employed.	Individual personal loan transactions from national consumer finance companies operating in 45 states.	Borrower characteristics, collateral and creditor remedies all matter in the price and loan amount granted.	Legal and regulatory variables can affect access to credit.
Berger and Udell (1994)	Examine the role of relationship lending, especially price and nonprice terms of commercial bank lines of credit extended to small firms.	Small, untraded firms.	National Survey of Small Business Finances (1988–89).	Borrowers with longer banking relationships tend to pay lower interest rates and are less likely to pledge collateral.	Bank-borrower relationship is likely to be an important mechanism for solving asymmetric information problems associated with small businesses.
Black and Strahan (2002)	Test whether more competition and consolidation in the banking sector helps or hinders entrepreneurship by limiting the availability of credit to small and young firms.	Entrepreneurial activity is measured as the log of new business incorporations per capita during a year.	1976–1994, Dun and Bradstreet.	Rate of new incorporations increases following deregulation of branching and increases as the deposit share of small banks declines.	More competition through branching and greater consolidation help entrepreneurship.
Blanchflower and Oswald (1998)	Explore the factors that might be important in determining who becomes and remains an entrepreneur.	Self-employed.	British longitudinal data on children born in 1958 and followed through 1991, among other data.	The receipt of an inheritance or gift seems to increase a typical individual's probability of being self-employed. Also, information indicates individuals prefer to be self-employed but lack capital.	Potential entrepreneurs face borrowing constraints.
Bostic and Lampani (1999)	Examines whether small-businesses location has been omitted inappropriately from analyses of differences in the credit market experiences of white-owned and minority-owned firms.	Businesses with fewer than 500 employees.	1993 National Survey of Small Business Finance.	No statistically significant differences exist in the approval rates between white-owned firms and firms owned by Asians, Hispanics and women, but differences exist between white-owned and African-American-owned firms.	Economics and demographic characteristics of a firm's geography should be considered to understand racial disparities of small business finance.
Brevoort and Hannan (2004)	Examine the relationship between distance and commercial lending, and how it has evolved.	Small businesses.	CRA annual data from 1997–2001.	Distance is associated negatively with the likelihood of a local commercial loan being made, and the deterrent effect of distance is consistently more important, the smaller the bank.	Distance might be of increasing importance in local market lending.

Table 5 (continued)

Author(s)	Purpose	Entrepreneurial Focus	Data	Results	Policy Implications
Cavalluzzo and Wolken (2002)	Examine the impact of personal wealth on small business loan rejections across demographic groups.	Businesses with fewer than 500 employees.	1998 Survey of Small Business Finances, Dun and Bradstreet, and Federal Reserve System data.	Substantial unexplained differences in denial rates between African-American-, Hispanic-, Asian- and White-owned firms. Greater personal wealth is associated with lower probability of loan denial.	Racial disparities exist even after controlling for various constraints.
DeYoung, Glennon, and Nigro (2005)	Examine how increased borrower-lender distance worsens the performance of small business loans, and how new lending technologies and existing government subsidies might mitigate or exacerbate these effects.	Small business loans made to firms under SBA 7(a) loans program.	Random sample of 35,999 SBA 7(a) guaranteed loans originated by 5,552 qualified SBA program lenders between 1983 and 2001.	On average, lenders that use credit scoring models experience higher default rates than those that do not. Loan defaults increase with borrower-lender distance, and higher loan guarantees are associated with higher default rates.	More generous government loan guarantees might not generate desired results.
Dunn and Holtz-Eakin (2000)	Examine the impacts of individuals' own wealth and human capital, and parental wealth and self-employment experience on the probability that an individual transits from wage-and-salary to self-employment.	Self-employed.	National Longitudinal Surveys. Specifically, samples of young men who were ages 14–24 in 1966, mature women who were ages 30–44 in 1967 and older men who were ages 45–59 in 1966.	The financial assets of young men exert a statistically significant but quantitatively modest effect on the transition into self-employment. Using this as our metric, they find a relatively small impact of capital market constraints in the NLS.	These data suggest strong roles for family-specific capital and transmission of skills within families in enhancing the probability of making a transition to entrepreneurship.
Evans and Leighton (1989)	Examine the process of selection into self-employment and the determinants of self-employment earnings.	Self-employed.	National Longitudinal Survey, sample of men followed from 1966–1981.	Probability is higher of being self-employed for unemployed and more highly educated, but not related to age or experience for first 20 years of experience. Also, return to wage experience in self-employment is lower than the return to wage experience in wage work.	Unemployed workers with the poorest opportunities in the wage sector switch to and remain in self-employment.
Fairlie (1999)	Examine racial patterns in transitions between self-employment and wage/salary work among prime-age men.	Self-employed.	22 years of data from the Panel Study of Income Dynamics (PSID).	Racial differences in asset levels and probabilities of having self-employed fathers explain a large part of the gap in African-American/white entry rate, but none of the gap in the exit rate.	Existing policies that promote minority business ownership need to be modified or redesigned to reflect the racial differences in transition rates into and out of self-employment.
Fairlie and Robb (2004)	Examine the causes of intergenerational links in business ownership, and the related issue of how having a family business background affects small-business outcomes.	Small businesses based on filing IRS form 1040 Schedule C.	1992 Characteristics of Business Owners.	Prior work experience in a family member's business has a positive effect on business outcomes. Also, inherited businesses are more successful than noninherited businesses.	Most disadvantaged business development policies, such as set-asides and loan assistance programs, are targeted toward alleviating financial constraints not toward providing opportunities for work experience in small business.

(continued)

Table 5 (continued)

Author(s)	Purpose	Entrepreneurial Focus	Data	Results	Policy Implications
Gentry and Hubbard (2004)	Examine the importance of saving by entrepreneurial households, and the possible interdependence between entrepreneurs' investment and saving decisions.	Households reporting owning one or more businesses with a total market value of >=$5,000.	1983 and 1989 Surveys of Consumer Finances.	Entrepreneurial households own a substantial share of household wealth and income, and this share increases throughout the wealth/income distribution; their portfolios are very undiversified; their income ratios and saving rates are higher.	Studies of the saving decisions of wealthy households should pay more attention to the role of entrepreneurial decisions and their role in wealth accumulation.
Gompers, Lerner, Scharfstein (2003)	Examine factors that lead to creation of venture capital-backed startup firms, a process called "entrepreneurial spawning" (i.e., the propensity of publicly traded companies to spawn new venture capital-backed firms).	Entrepreneurs are employees who leave public companies to start new venture capital-backed firms.	1986–1999, using VentureOne database.	Breeding grounds for entrepreneurial firms are other entrepreneurial firms.	Policies that seek to foster entrepreneurial and venture capital activity by providing capital or investment incentives might not be enough. Instead, regions might need to attract firms with existing pools of workers who have the "training and conditioning" to become entrepreneurs. Stimulating entrepreneurship in a region with few existing entrepreneurs is difficult.
Guiso and Schivardi (2004)	Test whether the talent to become an entrepreneur is learnable.	Entrepreneurs are assumed to get more output from any combination of inputs so that entrepreneurial ability is equivalent to a firm's total factor productivity.	Italian firm data from 1982–1990. Number of firms in a given industry in a given area is a proxy for learning externalities and knowledge spillovers.	Geographical agglomeration of firms is due to differences in learning opportunities, not differences in startup costs.	Policy actions should promote the learning process to increase entrepreneurial ability.
Guiso, Sapienza, and Zingales (2004)	Test whether local financial development matters for various outcomes.	Probability a person becomes self-employed. Also uses the average age of the self-employed.	1992–1998, Italian data on households, firms and financial institutions. Create a measure of financial underdevelopment that is the probability a household is shut off from the credit market.	Financial development increases the probability a person becomes self-employed and decreases the average age of entrepreneurs. It also increases the ratio of new firms to the population.	Local financial development is important for self-employed and small firms.
Hamilton (2000)	Examine the earnings differentials in self-employment and paid employment.	Self-employed.	1984 Survey of Income and Program Participation. Sample of 8,771 male school leavers ages 18–65 working in the nonfarm sector.	Entrepreneurs have not only lower initial earnings than employees with the same characteristics, but lower earnings growth.	Little evidence is found that the earnings differential reflects the selection of low-ability paid employees into self-employment.
Holtz-Eakin, Joulfaian, and Rosen (1994 a)	Examine to what extent liquidity constraints increase the likelihood of entrepreneurial failure.	Individuals who file IRS form 1040 Schedule C in 1981 and 1985, and have a cash flow greater than $5,000.	Federal tax data for 1981 and 1985.	Liquidity constraints exert a noticeable influence on the viability of entrepreneurial enterprises.	Sole proprietorships are undercapitalized.
Holtz-Eakin, Joulfaian, and Rosen (1994 b)	Examine how the receipt of an inheritance affects entrepreneurship.	Transition to filing IRS form 1040 Schedule C (from 1981 to 1985).	Federal tax data for 1981 and 1985.	The size of the inheritance has a substantial effect on both the probability of becoming an entrepreneur and the amount of capital invested in the new enterprise.	Liquidity constraints can have a substantial influence on entrepreneurship decision.

Table 5 (continued)

Author(s)	Purpose	Entrepreneurial Focus	Data	Results	Policy Implications
Hurst and Lusardi (2004)	Examine whether the inability of would-be entrepreneurs to acquire the capital necessary to start a business is an obstacle to new business formation.	Business owners (with results the same for self-employed).	Panel Study of Income Dynamics and National Survey of Small Business Finances.	Throughout most of the wealth distribution (as much as $200,000 in household wealth), there is no discernible relationship between household wealth and the probability of starting a business. Only for households at the top of the wealth distribution is a positive relationship found.	Liquidity constraints do not prevent entrepreneurs from starting a business.
Meyer (1990)	Examine explanations for differences in self-employment, net income, number of employees and form of organization between African-Americans and whites, with special focus on liquidity constraints and consumer discrimination.	Self-employed.	1984 Survey of Income and Program Participation; 1982 Characteristics of Business Owners.	The evidence does not support liquidity constraint/low assets explanation for the low African-American self-employment rate; cultural differences might explain African-American/white differences in self-employment.	Cultural differences might explain African-American/white differences in self-employment.
Mitchell and Pearce (2004)	Test of discrimination in lending to small businesses.	Businesses with fewer than 500 employees.	1998 Survey of Small Business Finances, uses models of the probability that small-business owners have outstanding loans, and have applications for new relationship and transactional loans denied by banks and nonbanks.	The preponderance of evidence is consistent with prejudicial discrimination against African-American and Hispanic firm owners. Also, preferential practices characterize the granting of transaction loans to a significantly greater degree than the granting of relationship loans.	Discrimination is a problem in access to credit for some minority-owned firms, and the move by larger banks to transactional lending through credit scores and other "harder" information might lead to greater discrimination than with relationship lending.
Moore (2004)	Test whether wealth affects the decision to be an entrepreneur.	"New" entrepreneurs are households that started a business in the previous 3 years and have no prior businesses.	1995, 1998, and 2001 Survey of Consumer Finances. Home equity value is used as a proxy for wealth.	A positive relationship between wealth and only starting a business is significant for households only in the top quartile of the home-equity distribution.	For the majority of potential entrepreneurs, liquidity constraints are not binding.
Petersen and Rajan (2002)	Examine whether the distance of firms from their lender is a good predictor of credit quality, and whether distance has become a less useful predictor of credit quality.	Businesses with fewer than 500 employees.	1993 National Survey of Small Business Finance. Information on distance of firm from lender and method of communication (person, phone or mail) used.	Informationally opaque firms have closer lenders, and that banks are closer than other lenders. Also, bank transactions are more likely to be conducted in person than transactions with other lenders.	Greater information availability and reduced costs of processing it mean access of small firms to credit can be provided by financial institutions at greater distance.
Puri and Robinson (2005)	Examine whether entrepreneurs differ from nonentrepreneurs in terms of fundamental attitudes, such as optimism and risk-taking.	An entrepreneur is a respondent who must own some or all of at least one privately-owned business, and the respondent must be self-employed full-time.	Survey of Consumer Finances, mainly 1995, 1998 and 2001, but some data going back to 1992.	Entrepreneurs are significantly more likely to think they will live longer, suggesting they are more optimistic about life prospects. Also, they are more risk-loving than the nonentrepreneur population.	Entrepreneurs are optimistic and risk-lovers, but the willingness to take risk is tempered by strong family ties, good health practices and long planning horizons.
Vos, Yeh, Carter, and Tagg (2005)	Test whether small businesses are constrained in their access to financing.	Businesses with fewer than 500 employees.	U.K. and U.S., 1998 Survey of Small Business Finances for U.S. and 2004 Federation of Small Businesses for U.K.	Small businesses that seek external funding usually get what they want.	Small businesses are not subject to financial constraints.

Table 6 Stumbling blocks to entrepreneurship

Measure of Entrepreneurship	Not Amenable to Policy			Amenable to Policy				
	Exogenous Characteristics of Entrepreneurs			Talent or Ability Is Learnable	Agglomeration of Entrepreneurs	Financing or Liquidity Constraints	Discrimination	Regulation
	Optimistic	Low Risk Aversion	Talent or Ability					
Individual Self-Employment	Yes: Puri and Robinson (2005)	Yes: Knight (1921); Yes: Puri and Robinson (2005); Yes: Kihlstrom and Laffont (1979)	Yes: Lucas (1978); Yes: Schumpeter (1911)	Yes: Dunn and Holtz-Eakin (2000); Yes: Guiso and Schivardi (2004)	Yes: Gompers, Lerner, Scharfstein (2003); Yes: Guiso and Schivardi (2004)	No: Hurst and Lusardi (2004); No: Moore (2004); Yes: Gentry and Hubbard (2004); Yes: Guiso, Sapienza, and Zingales (2004); Yes: Blanchflower and Oswald (1998); Yes: Fairlie (1999); Yes: Black and Strahan (2002); Yes: Immergluck and Smith (2001)	Yes: Bates (1991); Yes: Blanchflower, Levine, and Zimmerman (2003); Yes: Mitchell and Pearce (2004)	Yes: Barth, Cordes, and Yezer (1986); Yes: Berkowitz and White (2002); Yes: Persad (2004)
Individual Business Ownership	Yes: Puri and Robinson (2005)	Yes: Knight (1921); Yes: Puri and Robinson (2005); Yes: Kihlstrom and Laffont (1979)	Yes: Lucas (1978); Yes: Schumpeter (1911)	Yes: Dunn and Holtz-Eakin (2000); Yes: Guiso and Schivardi (2004)	Yes: Gompers, Lerner, and Scharfstein (2003); Yes: Guiso and Schivardi (2004)	No: Hurst and Lusardi (2004); No: Moore (2004); Yes: Gentry and Hubbard (2004); Yes: Guiso, Sapienza, and Zingales (2004); Yes: Blanchflower and Oswald (1998); Yes: Fairlie (1999); Yes: Black and Strahan (2002); Yes: Immergluck and Smith (2001)	Yes: Bates (1991); Yes: Blanchflower, Levine, and Zimmerman (2003); Yes: Mitchell and Pearce (2004)	Yes: Barth, Cordes, and Yezer (1986); Yes: Berkowitz and White (2002); Yes: Persad (2004)
New Firm Startups	Yes: Puri and Robinson (2005)	Yes: Knight (1921); Yes: Puri and Robinson (2005); Yes: Kihlstrom and Laffont (1979)	Yes: Lucas (1978); Yes: Schumpeter (1911)	Yes: Dunn and Holtz-Eakin (2000); Yes: Guiso and Schivardi (2004)	Yes: Gompers, Lerner, and Scharfstein (2003); Yes: Guiso and Schivardi (2004)	No: Hurst and Lusardi (2004); No: Moore (2004); Yes: Gentry and Hubbard (2004); Yes: Guiso, Sapienza, and Zingales (2004); Yes: Blanchflower and Oswald (1998); Yes: Fairlie (1999); Yes: Black, and Strahan (2002); Yes: Immergluck and Smith (2001)	Yes: Bates (1991); Yes: Blanchflower, Levine, and Zimmerman (2003); Yes: Mitchell and Pearce (2004)	Yes: Barth, Cordes, and Yezer (1986); Yes: Berkowitz and White (2002); Yes: Persad (2004)
Firms by Number of Employees	Yes: Puri and Robinson (2005)	Yes: Knight (1921); Yes: Puri and Robinson (2005); Yes: Kihlstrom and Laffont (1979)	Yes: Lucas (1978); Yes: Schumpeter (1911)	Yes: Dunn and Holtz-Eakin (2000); Yes: Guiso and Schivardi (2004)	No Studies	No: Vos, Yeh, Carter, and Tagg (2005); No: Petersen and Rajan (2002); Yes: Immergluck and Smith (2001)	Yes: Bates (1991); Yes: Blanchflower, Levine, and Zimmerman (2003); Yes: Mitchell and Pearce (2004); Only between white and African-American business owners: Bostic and Lampani (1999)	Yes: Barth, Cordes, and Yezer (1986); Yes: Berkowitz and White (2002); Yes: Persad (2004)

of entrepreneurship define the other. In the middle of the table are various studies of entrepreneurship linked to both the different impediments and the different entrepreneurship measures. For each of the studies, we indicate whether stumbling blocks to entrepreneurial activity do exist.

The studies differ as to whether impediments to entrepreneurship actually exist, and if they do, whether they are significant. Unfortunately, differences in entrepreneurship measures and differences in data sets make it difficult to choose which results should guide policy. This is certainly the case with respect to the existence of liquidity constraints. But there appears to be agreement among the studies reviewed that discrimination, particularly involving African Americans, is a barrier to entrepreneurship. Also, there seems to be agreement that the existence of entrepreneurial firms in a region helps spur the establishment of still more such firms. Furthermore, as the next section shows, there appears to be consensus that governmental regulations impede entrepreneurship. Finally, there appears to be agreement that individuals can learn or be taught to become entrepreneurs. At the very least, agreement that are indeed stumbling blocks to entrepreneurship should provide better guidance as to how to allocate available resources for the benefit of all communities, but especially LMI communities.

6 Regulatory Stumbling Blocks to Entrepreneurship

An additional way to identify impediments to entrepreneurship is to ask entrepreneurs what they perceive to be barriers to starting and operating a business. Every four years, the National Federation of Independent Business conducts a nationwide survey of small-business owners known as *Small Business Problems & Priorities*. Table 7 includes selected problems identified as critical by respondents to the 2004 survey. It is notable that few of the barriers studied in the empirical literature are identified as critical by survey respondents. For instance, as noted earlier, liquidity constraints are the topic of numerous studies –many of which find them to be binding–yet the difficulty of obtaining long-term loans is ranked 68th and the difficulty of obtaining short-term loans is ranked 70th of seventy-five problems. Additionally, just 7 percent of respondents rated these two problems as being of "critical" importance. Instead, business owners tended to stress three broad groups of problems: those not amenable to policy actions (such as earnings); those typically beyond the scope of small-business policy (such as health-care costs); and those associated with governmental tax or regulatory policies. As Table 7 shows, the cost of workers' compensation insurance is ranked the third-most important problem; business taxes are ranked fifth (see Table 8 for differences in state sales taxes); property taxes are ranked sixth; and "unreasonable" government regulation is ranked the ninth-most important impediment.

Table 7 Selected problems identified by small business owners

Problem	Rank	Percent of Respondents Identifying as Critical
Employees		
Cost of Health Insurance	1	65.6
Workers' Compensation Costs	3	32.8
Locating Qualified Employees	11	14.0
FICA (Social Security) Taxes	13	14.3
Unemployment Compensation (UC)	19	14.4
Keeping Skilled Employees	28	12.4
Health/Safety Regulations	30	10.4
Finance		
Cash Flow	7	21.6
Poor Earnings (Profits)	12	18.6
Highly Variable Earnings (Profits)	23	10.6
Obtaining Long-Term (5 Years or More) Business Loans	68	6.7
Obtaining Short-Term (12 Months or Revolving) Business Loans	70	6.7
Regulation		
Unreasonable Government Regulation	9	19.5
Frequent Changes in Federal Tax Laws and Rules	15	12.7
State/Local Paperwork	17	11.6
Federal Paperwork	18	12.2
Health/Safety Regulations	30	10.4
Taxes		
Federal Taxes on Business Income	5	23.2
Property Taxes (Real, Personal, or Inventory)	6	22.7
State Taxes on Business Income	8	20.2
FICA (Social Security) Taxes	13	14.3
Estate (Death) Taxes	36	17.3

Source: Small Business Problems & Priorities, National Federation of Independent Business.

Table 8 State sales tax, initial fees to establish domestic corporations, and fees to establish limited liability companies

State	State Sales Tax (Percent)	Fees to Incorporate	Fees to Establish Limited Liability Companies
Alabama	4	$40	$40
Alaska	none	$250	$250
Arizona	5.6	$60	$50
Arkansas	6	$40	$40
California	7.25	$100	$70
Colorado	2.9	$50	$50
Connecticut	6	$50	$60
Delaware	none	$15 minimum	$90

Table 8 (continued)

State	State Sales Tax (Percent)	Fees to Incorporate	Fees to Establish Limited Liability Companies
Florida	6	$35	$100
Georgia	4	$100	$100
Hawaii	4	$100	$100
Idaho	6	$100	$100
Illinois	6.25	$150	$500
Indiana	6	$90	$90
Iowa	5	$50	$50
Kansas	5.3	$90	$165
Kentucky	6	$40	$40
Louisiana	4	$60	$60
Maine	5	$125	$125
Maryland	5	$100	$100
Massachusetts	5	$275	$500
Michigan	6	$10	$50
Minnesota	6.5	$135	$135
Mississippi	7	$50	$50
Missouri	4.225	$25	$105
Montana	none	$70	$70
Nebraska	5.5	$25	$135
Nevada	6.5	$175	$75
New Hampshire	none	$35	$35
New Jersey	6	$125	$125
New Mexico	5	$100	$50
New York	4.25	$125	$200
North Carolina	4.5	$125	$125
North Dakota	5	$30	$125
Ohio	6	$125	$125
Oklahoma	4.5	$50	$100
Oregon	none	$50	$50
Pennsylvania	6	$125	$125
Rhode Island	7	$230	$150
South Carolina	5	$135	$110
South Dakota	4	$125	$125
Tennessee	7	$100	$300
Texas	6.25	$300	$200
Utah	4.75	$52	$52
Vermont	6	$75	$75
Virginia	5	$25	$100
Washington	6.5	$175	$175
Washington, D.C.	5.75	$150	$150
West Virginia	6	$50	$100
Wisconsin	5	$100	$170
Wyoming	4	$100	$100

Source: AT&T Small Business Resources.

Anecdotal evidence for the impact of governmental regulations as a barrier to entrepreneurship is substantial. For instance, Cleveland, Ohio, requires any new taxicab company to have a fleet of at least 25 cars–all of which must be three years old or younger. The Ohio cities of Akron, Canton, and Dayton require potential taxicab operators to demonstrate to government officials that their firms will meet so-called "public convenience and necessity" requirements before they can begin operation. Licensing is another potential stumbling block. The State of California requires professions such as landscape architects and interior decorators to be licensed. Nationally there are some five hundred occupations (including fence installers and courtroom shorthand reporters) with licensing requirements. Table 8 shows other impediments, such as fees to incorporate and fees to establish limited liability companies. These vary widely across states, and undoubtedly contribute to variable entrepreneurial activity across geographical regions.

Other regulations that might be problematic for entrepreneurs apply to lending. Although intended to benefit borrowers, these regulations can have the perverse effect of decreasing the availability of loans to businesses. Bankruptcy exemption regulations, for example, might be a barrier to entrepreneurship. Unincorporated business owners are personally liable for their commercial endeavors, so an increase in personal bankruptcy exemptions lowers the recovery value of defaulted loans. This could increase the cost of loans, and decrease their availability. Berkowitz and White (2002) studies the impact of personal bankruptcy exemption levels on the probability of small firms being denied credit using data from the 1993 Survey of Small Business Finances (SSBF) and finds that high exemption levels "are associated with an increase in the probability of noncorporate firms being denied credit" (Berkowitz and White, 2002, p.446). Persad (2004), using SBA 7(a) data, finds that personal bankruptcy exemption levels are associated positively with default rates and loan interest rates. In addition, Barth, Cordes, and Yezer (1983 and 1986) finds that restrictions on creditor remedies (such as wage garnishment, wage assignment, and deficiency judgments) have net costs to borrowers in the personal loan market. This impact also relates to small business finance; as the SSBF suggests, many small-business owners fund their operations with personal liabilities.

7 An Indirect Approach to Assessing Determinants of Entrepreneurship

Our initial approach to examining factors that may explain cross-sectional variation in entrepreneurship across geographic regions is based on the size of businesses as measured by number of employees. The analysis considers total number and size composition of establishments in 204 MSAs. We examine establishments grouped into four size categories (0, 1–10, 11–100, and more than 100 employees), as well as all establishments combined. To the extent that the intensity of entrepreneurial activity is greater in smaller than bigger

businesses, examining the determinants of the relative importance of smaller versus bigger businesses represents an indirect study of the differences in entrepreneurship across geographical regions.[6] The basic model is as follows:

$$EST_{ij} = \alpha + \beta_1' D_{ij} + \beta_2' P + \beta_3' F_{ij} + \beta_4' B_{ij} + \varepsilon_{ij}, \quad (1)$$

where EST is either all establishments or the share of establishments as represented by one of the four size categories; D includes the race, ethnic, gender, age, and educational level (four-year college degree or higher, and high school diploma or lower), composition of the population, average household income, homeownership rate, poverty level, unemployment rate, and number of establishments per square mile (except in the total number of establishment regressions, in which only the land area is used); P is the state sales tax rate; F are measures of available financial resources, about which more will be said momentarily; B are the measures of loan bias discussed earlier (i.e., BLMIPB–loan bias for LMI communities based on income; BLIPB–loan bias for LI communities based on population; BLMIIB–loan bias for LMI communities based on income; BLIIB–loan bias for LI communities based on income; is a random error term; i is a subscript for MSA, and j is a subscript for state.

The variables included in F are the total number of financial institutions; the number of branches per institution; the total deposits per institution; the total number and average size of loans to businesses made by banks under CRA; the proportion of the number and amount of loans to businesses in low-income (LI) and moderate-income (MI) communities to the total number and amount of loans to all businesses in an MSA; the proportion of the number and amount of loans made to businesses in low- and moderate-income communities (LMI) to all businesses in an MSA; and the proportion of the number and amount of loans made to businesses with receipts less than $1 million to the total number and amount of loans to all businesses. A list of all the variables, their definitions, data sources, and summary of statistics is provided in Table 9a, and Table 9b contains the pairwise correlations for the variables. There are five basic models: one for total establishments and four representing each of the establishment size categories. Each model has six specifications reflecting mainly the inclusion or exclusion of different combinations of the LI and MI loan variables, discussed below.

Tables 10–14 present the empirical results of our exercise. We summarize them as follows:

Population

- Total population is not a significant factor in explaining the total level or the shares of establishments with either 0 or 11–100 employees in MSAs. But

[6] Lucas (1978) contends that smaller businesses have less managerial talent and, therefore, one would expect to find that smaller businesses are likely located in regions with lower levels of income per capita.

Table 9a Variables, Definitions, Sources, and Summary Statistics

Variable	Definition	Source	Summary Statistics				
			Mean	Median	Maximum	Minimum	Std. Dev.
DALLEST	All establishments (thousands)	U.S. Census, 2000	16.83	7.14	245.79	1.60	29.67
L0ESH	Establishments with 0 employees, as a share of all establishments (%)	U.S. Census, 2000	9.4	9.3	18.1	5.9	1.8
L10ESH	Establishments with 1-10 employees, as a share of all establishments (%)	U.S. Census, 2000	51.1	50.8	59.9	44.0	3.0
L100ESH	Establishments with 11-20 employees, as a share of all establishments (%)	U.S. Census, 2000	19.7	19.8	24.9	13.7	1.9
L100PESH	Establishments with 100+ employees, as a share of all establishments (%)	U.S. Census, 2000	19.8	20.3	28.1	11.5	3.0
DPOP	Total population (millions)	U.S. Census, 2000	0.67	0.28	9.52	0.05	1.18
DAGE2544	Population, ages 25-44, as a share of total population	U.S. Census, 2000	29.3%	29.2%	36.1%	18.8%	2.2%
DHINC	Median household income (thousands of dollars)	U.S. Census, 2000	40.83	39.30	76.55	24.86	7.69
DHOMEO	Homeowners, as a share of total population	U.S. Census, 2000	69.7%	70.8%	82.9%	37.5%	6.1%
DCGRAD	Population above age 25, with high school degree or below, as a share of > age 25 population	U.S. Census, 2000	23.5%	22.5%	52.4%	11.0%	7.5%
DHGRAD	Population above age 25, with college education or higher, as a share of > age 25 population	U.S. Census, 2000	48.1%	48.6%	70.1%	22.2%	8.8%
DWHITE	Non-Hispanic whites, as a share of total population	U.S. Census, 2000	77.7%	82.1%	97.7%	6.0%	16.3%
DBLACK	African-American, as a share of total population	U.S. Census, 2000	9.3%	5.8%	45.2%	0.1%	9.6%
DASIAN	Asian, as a share of total population	U.S. Census, 2000	3.0%	1.8%	64.5%	0.3%	4.9%
DHISP	Hispanic, as a share of total population	U.S. Census, 2000	8.8%	3.7%	93.1%	0.3%	13.9%
DPOV	Poverty population, as a share of total population	U.S. Census, 2000	12.1%	11.4%	35.4%	4.6%	4.3%
DUNMP	Unemployment rate	U.S. Census, 2000	5.8%	5.5%	13.1%	2.6%	1.8%
DAREA	Land area, square miles	U.S. Census, 2000	2,228	1,530	39,369	47	3,308
PTAX	State personal tax rate	CRA, 2001	5.34	6.00	7.25	0.00	1.45
FINSTI	No. of financial institutions (thousands)	FDIC, 2001	0.20	0.08	4.72	0.02	0.39
FBRANCH/FINSTI	No. of bank branches per financial institution	FDIC, 2001	0.24	0.21	0.56	0.06	0.11
FDEPO/FINSTI	Total deposit per institution (thousands of dollars)	FDIC, 2001	38.79	34.81	169.00	17.26	16.64
FALN	All loans, number (thousands)	CRA, 2001	12.17	5.48	198.65	0.77	21.64
FALAVE	All loans, average amount (FALA/FALN) (millions of dollars)	CRA, 2001	0.04	0.04	0.09	0.02	0.01
FALMIA/FALA	Loans to businesses in low- and moderate-income communities, amount, as a share of all loans	CRA, 2001	0.26	0.22	4.99	0.00	0.32
FALMIN/FALN	Loans to businesses in low- and moderate-income communities, number, as a share of all loans	CRA, 2001	0.23	0.19	5.39	0.01	0.33
FALIA/FALA	Loans to businesses in low-income communities, amount, as a share of all loans	CRA, 2001	0.06	0.05	0.28	0.00	0.05
FALIN/FALN	Loans to businesses in low-income communities, number, as a share of all loans	CRA, 2001	0.04	0.04	0.19	0.00	0.04
FAMIA/FALA	Loans to businesses in moderate-income communities, amount, as a share of all loans	CRA, 2001	0.20	0.16	4.85	0.00	0.31
FAMIN/FALN	Loans to businesses in moderate-income communities, number, as a share of all loans	CRA, 2001	0.18	0.14	5.31	0.01	0.33
FLSMA/FALA	Loans to businesses with less than $1 million in receipts, amount, as a share of all loans	CRA, 2001	0.50	0.48	0.77	0.23	0.09
FLSMN/FALN	Loans to businesses with less than $1 million in receipts, number, as a share of all loans	CRA, 2001	0.43	0.41	0.69	0.28	0.07
BLMIPB	Loan bias for LMI communities based on population	Milken Institute	0.41	0.43	0.99	-0.51	0.25
BLMIIB	Loan bias for LMI communities based on income	Milken Institute	0.75	0.80	1.00	-0.26	0.24
BLIPB	Loan bias for LI communities based on population	Milken Institute	-0.85	-0.73	0.99	-7.40	0.88
BLIIB	Loan bias for LI communities based on income	Milken Institute	-0.22	0.02	1.00	-5.84	1.18

Notes: Number of Observations: 304. The original number of MSAs was 331 but some were deleted for lack of data. All data are from Year 2000.

Table 9b Correlations

	l10esh	l20esh	l100esh	l100pesh	dpop	dage2544	dhinc	dhomeo	degrad	dhgrad	dwhite	dblack	dasian	dhisp	dpov	dunmp	dallest/darea	ptax	finsti	fbranch/finsti	fdepo/finsti	faln	falave	falmia/faln	falmin/faln	falia/faln	faliw/faln	famia/fala	famin/faln	fhsma/fala	fhsmn/faln	blmipb	blmiib	blipb	bliib
l10esh	0.36***	1																																	
l20esh	-0.42***	-0.38***	1																																
l100esh	-0.57***	-0.66***	0.68***	1																															
l100pesh	-0.59***	-0.84***	0.08	0.4***	1																														
dpop	0.22***	-0.03	-0.21***	-0.11*	0	1																													
dage2544	0.15***	-0.18***	-0.11**	0.03	0.11*	0.36***	1																												
dhinc	0.34***	0.11**	-0.11**	-0.11*	-0.23***	0.33***	0.53***	1																											
dhomeo	-0.11**	-0.01	-0.02	0.06	0.05	-0.24***	-0.24***	0.03	1																										
degrad	0.39***	0.04	-0.05	-0.1*	-0.21***	0.2***	0.42***	0.47***	-0.24***	1																									
dhgrad	-0.49***	0.01	0.03	0.12**	0.22***	-0.15***	-0.38***	-0.41***	0.26***	-0.87***	1																								
dwhite	-0.13**	-0.07	0.17***	0.21***	0.02	-0.27***	-0.23***	-0.02	0.4***	0.04	-0.07	1																							
dblack	-0.22***	-0.17***	-0.18***	-0.09	0.38***	0.13**	0.17***	-0.08	-0.06	-0.08	0.13**	-0.39***	1																						
dasian	0.19***	0.12**	-0.04	-0.08	-0.19***	0.27***	0.34***	0.41***	-0.4***	0.31***	-0.29***	-0.4***	-0.07	1																					
dhisp	0.23***	0.15***	-0.07	-0.14***	-0.2***	0.15***	0.04	-0.05	-0.28***	-0.1*	0.1*	-0.78***	-0.19***	0.17***	1																				
dpov	-0.15***	-0.01	0.1*	0	0.07	-0.06	-0.3***	-0.68***	-0.39***	-0.25***	0.28***	-0.5***	0.16***	-0.08	0.51***	1																			
dunmp	-0.08	0.09*	0.08	-0.02	-0.06	0	-0.26***	-0.46***	-0.37***	-0.34***	0.33***	-0.47***	0.05	0.03	0.51***	0.77***	1																		
dallest/darea	0.19***	0.3***	-0.28***	-0.2***	-0.26***	0.28***	0.34***	0.43***	-0.02	0.24***	-0.08	-0.24***	0.06	0.37***	0.14**	-0.21***	-0.11*	1																	
ptax	-0.08	-0.03	0.03	0.05	0.05	0.1*	-0.07	0.02	-0.08	-0.12**	0.11**	-0.19***	-0.05	0.14***	0.24***	0.09	0.2***	0.05	1																
finsti	0.21***	0.11*	-0.25***	-0.14**	-0.1*	0.59***	0.36***	0.39***	-0.04	0.23***	-0.11**	-0.24***	0.16***	0.27***	0.1*	-0.15***	-0.09	0.56***	0.08	1															
fbranch/finsti	-0.12**	0	0.32***	0.21***	-0.1*	-0.32***	-0.31***	-0.21***	0.04	-0.09	-0.03	0.15**	-0.21***	-0.17***	0.02	0.07	0.03	-0.21***	-0.11*	-0.39***	1														
fdepo/finsti	0.17***	0.07	-0.1*	-0.06	-0.12**	0.36***	0.29***	0.31***	-0.13**	0.17***	-0.15***	-0.32***	-0.04	0.39***	0.29***	-0.02	0	0.3***	0.12**	0.47***	-0.22***	1													
faln	0.31***	0.09	-0.31***	-0.19***	-0.11**	0.76***	0.42***	0.36***	-0.14**	0.25***	-0.18***	-0.32***	0.16***	0.34***	0.17***	-0.11**	-0.06	0.47***	0.13**	0.89***	-0.39***	0.48***	1												
falave	-0.34***	-0.55***	0.46***	0.61***	0.37***	-0.11*	0.03	-0.02	0.23***	0.01	0.04	0.36***	-0.03	-0.21***	-0.32***	-0.19***	-0.22***	-0.12**	-0.07	-0.1*	0.15***	-0.09	-0.17***	1											
falmia/fala	-0.05	-0.07	0	0.01	0.09*	-0.04	0.02	-0.05	-0.07	-0.01	0	-0.08	0.11*	0.01	0.01	0.09	0.05	-0.04	-0.02	-0.04	0.03	0.01	-0.03	-0.01	1									
falmin/faln	-0.06	-0.08	0	0.01	0.11**	-0.04	0.02	-0.05	-0.06	-0.02	0.01	-0.07	0.12**	-0.01	0	0.08	0.05	-0.04	-0.03	-0.03	0.02	0	-0.03	0.01	0.99***	1								
falia/fala	-0.2***	-0.18***	0.04	0.19***	0.21***	-0.01	0	-0.04	0	-0.02	0.04	0.03	0.12**	-0.03	-0.1*	0	0	-0.01	0.01	0.01	0.03	0.09	-0.01	0.12**	0.25***	0.2***	1							
falin/faln	-0.24***	-0.24***	0.11**	0.23***	0.25***	-0.01	-0.01	-0.05	0.02	-0.01	0.03	0.04	0.15***	-0.05	-0.13**	0	0	-0.02	-0.03	0.01	0.02	0.1*	-0.03	0.17***	0.19***	0.17***	0.92***	1						
famia/fala	-0.02	-0.04	-0.01	-0.02	0.06	-0.04	0.02	-0.05	-0.08	-0.01	-0.01	-0.09	0.09	0.02	0.03	0.09	0.06	-0.04	-0.03	-0.04	0.03	-0.01	-0.03	-0.03	0.98***	0.98***	0.08	0.03	1					
famin/faln	-0.03	-0.06	-0.01	-0.01	0.08	-0.04	0.02	-0.05	-0.06	-0.01	0	-0.08	0.11*	0	0.02	0.09	0.05	-0.03	-0.03	-0.03	0.02	-0.02	-0.03	-0.01	0.98***	0.99***	0.1*	0.05	0.99***	1				
fhsma/fala	-0.19***	-0.05	0.11**	-0.01	0.13**	-0.36***	-0.2***	-0.37***	0.06	-0.13**	0.11*	0.05	0.24***	-0.23***	-0.15***	0.23***	0.04	-0.24***	-0.12**	-0.32***	0.24***	-0.22***	-0.36***	0.07	0.06	0.07	-0.04	0.01	0.07	0.07	1			
fhsmn/faln	-0.21***	-0.17***	0.31***	0.27***	0.1*	-0.26***	-0.1*	-0.23***	0.04	-0.03	0	0.16***	0.05	-0.11**	-0.18***	0.11**	-0.02	-0.15***	-0.13**	-0.2***	0.32***	-0.16***	-0.26***	0.5***	0.01	0.02	0.04	0.08	0	0.01	0.61***	1		
blmipb	0.03	0.1	-0.09	-0.07	-0.06	0.02	-0.13**	-0.04	0.21***	-0.16***	0.23***	0.18***	0.04	-0.14**	-0.18***	-0.08	-0.06	-0.05	0.01	0	-0.15**	-0.14**	-0.02	0.02	-0.41***	-0.33***	-0.37***	-0.33***	-0.35***	-0.29***	0.08	-0.01	1		
blmiib	0.18***	0.22***	-0.04	-0.2***	-0.22***	-0.02	-0.04	-0.02	0	-0.02	0	-0.04	-0.11*	0.03	0.1	0.07	0.05	-0.09	0	-0.03	-0.04	-0.08	-0.01	-0.17***	-0.21***	-0.17***	-0.98***	-0.9***	-0.04	-0.08	0.1	-0.03	0.37***	1	
blipb	0.02	-0.02	-0.15**	-0.03	0.06	0.01	-0.07	-0.01	0.27***	-0.17***	0.24***	0.23***	0.01	-0.15**	-0.21***	-0.16***	-0.1*	-0.06	-0.06	-0.01	-0.11*	-0.14**	-0.03	0.11*	-0.35***	-0.29***	-0.29***	-0.25***	-0.31***	-0.26***	0.03	-0.01	0.84***	0.28***	1
bliib	0.18***	0.19***	-0.02	-0.18***	-0.21***	-0.07	-0.06	-0.01	0.06	-0.03	0	0.03	-0.16***	-0.02	0.06	0.01	0.01	-0.13**	-0.02	-0.08	-0.02	-0.1*	-0.07	-0.12*	-0.2***	-0.17***	-0.96***	-0.87***	-0.04	-0.07	0.08	-0.02	0.36***	0.98***	0.29***

Note: *, **, and *** denote significance at 10, 5, and 1% level, respectively.

Table 10 Determinants of the total number of establishments in MSAs

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
C	-52.35	-17.4971	-18.169	-19.3771	-17.8355	-15.104	-58.0395*	-57.4187*	-58.2001*	-57.5618*
	(0.13)	(0.35)	(0.33)	(0.32)	(0.34)	(0.42)	(0.07)	(0.07)	(0.07)	(0.07)
DPOP	6.9919***	0.7933	0.8025	0.8182	0.7941	0.7341	4.7605*	4.7646*	4.7656*	4.7647*
	(0.00)	(0.21)	(0.2)	(0.2)	(0.21)	(0.25)	(0.05)	(0.05)	(0.05)	(0.05)
DAGE2544	89.4948***	36.5161**	36.887**	36.2153**	36.6461**	37.2844***	56.6351**	56.194**	56.3769**	56.2983**
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)	(0.03)	(0.03)	(0.03)
DHINC	-0.2693	0.0307	0.0354	0.0292	0.0318	0.0238	0.0678	0.0713	0.0687	0.0721
	(0.2)	(0.72)	(0.68)	(0.74)	(0.71)	(0.78)	(0.64)	(0.62)	(0.63)	(0.62)
DHOMEO	25.1614	15.0137*	15.4675*	15.716*	15.1018*	14.9274*	32.5734**	32.7334**	32.641**	32.884**
	(0.2)	(0.07)	(0.06)	(0.06)	(0.07)	(0.07)	(0.02)	(0.02)	(0.02)	(0.02)
DCGRAD	-17.8901	-1.6203	-0.9965	-2.2475	-1.3086	-1.9156	-19.1231	-19.3292	-18.9967	-19.5014
	(0.35)	(0.86)	(0.92)	(0.8)	(0.89)	(0.83)	(0.13)	(0.13)	(0.13)	(0.13)
DHGRAD	-30.979***	-8.2244	-7.5181	-9.3567	-7.8851	-8.6132	-27.6072***	-27.6173***	-27.3728***	-27.7399***
	(0.01)	(0.2)	(0.25)	(0.14)	(0.22)	(0.17)	(0.00)	(0.00)	(0.00)	(0.00)
DWHITE	37.3751	-1.8691	-2.709	0.4799	-2.0379	-2.0295	26.8032	26.6357	26.8973	26.3373
	(0.18)	(0.89)	(0.84)	(0.97)	(0.88)	(0.88)	(0.21)	(0.21)	(0.21)	(0.22)
DBLACK	35.5407	-7.6439	-8.2912	-4.6843	-7.7413	-7.1919	25.1725	24.8345	25.2457	24.3809
	(0.19)	(0.56)	(0.51)	(0.73)	(0.55)	(0.59)	(0.21)	(0.22)	(0.21)	(0.22)
DASIAN	57.9889*	-2.1364	-3.6306	0.2821	-2.5474	-1.6941	44.9694	44.9436	45.0031	44.6178
	(0.09)	(0.88)	(0.8)	(0.98)	(0.86)	(0.91)	(0.1)	(0.11)	(0.1)	(0.11)
DHISP	40.2164	-5.3202	-6.307	-2.9899	-5.5578	-5.8122	26.7493	26.5794	26.7759	26.3059
	(0.15)	(0.7)	(0.63)	(0.83)	(0.68)	(0.67)	(0.18)	(0.18)	(0.18)	(0.19)
DPOV	-2.2796	11.2356	11.723	10.5979	11.3069	13.996	35.5476	36.418	35.5795	36.4716
	(0.94)	(0.44)	(0.43)	(0.47)	(0.44)	(0.33)	(0.23)	(0.23)	(0.23)	(0.23)
DUNMP	-38.6361	-0.0459	0.8192	4.1101	0.2486	-3.487	-21.7382	-22.6779	-21.7235	-22.7742
	(0.26)	(1)	(0.97)	(0.83)	(0.99)	(0.86)	(0.46)	(0.44)	(0.46)	(0.44)
DAREA	0.0005*	0.0001	0.0001	0.0001	0.0001	0.0001	0.0004**	0.0004**	0.0004**	0.0004**
	(0.05)	(0.22)	(0.23)	(0.21)	(0.22)	(0.24)	(0.03)	(0.03)	(0.03)	(0.03)
PTAX	0.4053	0.064	0.0598	0.0125	0.0659	0.0509	0.1419	0.1398	0.1416	0.138
	(0.24)	(0.76)	(0.77)	(0.94)	(0.75)	(0.81)	(0.64)	(0.64)	(0.65)	(0.65)
FINSTI	54.2215***	19.7425***	19.706***	19.8558***	19.7332***	19.7511***	71.0229***	71.0204***	71.0165***	70.9787***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
FBRANCH/FINSTI	-1.5591	-0.0292	-0.154	-0.3516	-0.0387	0.6351	7.1136	6.9617	7.0515	6.8936
	(0.77)	(1)	(0.98)	(0.95)	(0.99)	(0.91)	(0.24)	(0.24)	(0.24)	(0.25)
FDEPO/FINSTI	-1.5591						0.0177	6.9617	7.0515	6.8936
	(0.77)						(0.58)	(0.24)	(0.24)	(0.25)
FALN		0.9722***	0.9726***	0.9679***	0.9725***	0.9717***				
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)				
FALAVE		17.5219	19.1437	22.6161	18.2856	25.3088				
		(0.4)	(0.38)	(0.34)	(0.39)	(0.37)				
FALMIA/FALA			7.0293							
			(0.27)							
FALMIN/FALN			-6.6582							
			(0.27)							
FALIA/FALA				28.6861						
				(0.26)						
FALIN/FALN				-41.2395						
				(0.25)						
FAMIA/FALA					2.4595					
					(0.49)					
FAMIN/FALN					-2.3066					
					(0.48)					
FLSMA/FALA						-2.197				
						(0.51)				
FLSMN/FALN						-2.9871				
						(0.56)				
BLMIPB							0.1719			
							(0.87)			
BLMIIB								0.0162		
								(0.6)		
BLIPB									0.0175	
									(0.58)	
BLIIB										0.0157
										(0.61)
Adjusted R2	0.91	0.96	0.96	0.96	0.96	0.96	0.88	0.88	0.88	0.88
F-statistic	187.24	448.94	402.63	406.22	401.34	402.44	108.85	108.89	108.85	108.93
Prob (F-statistic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Observations	304	304	304	304	304	304	263	263	263	263

Note: White heteroskedasticity-consistent standard errors and covariance, and p-values in parentheses. *, ** and *** denote significance at 10, 5, and 1% level, respectively.

population is related positively to a larger share of establishments with more than 100 employees, and negatively associated with the share of establishments with 1–10 employees.

- MSAs with larger shares of the population in the 25–44 age group tend to have more establishments. This segment of the population correlates negatively with a larger share of small establishments (those with 0 and 1–10 employees), and positively with the share of establishments with more than 10 employees.

Table 11 Determinants of the proportion of all establishments with 0 employees in MSAs

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
C	30.8829***	29.2656***	29.43***	27.8883***	29.4023***	28.6697***	33.1876***	31.6319***	34.5476***	32.3549***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DPOP	0.1408*	-0.136	-0.1407	-0.1378	-0.1364	-0.1109	0.0407	0.0732	0.0229	0.0744
	(0.09)	(0.12)	(0.11)	(0.11)	(0.12)	(0.2)	(0.74)	(0.56)	(0.85)	(0.56)
DAGE2544	-19.7088***	-17.9906***	-18.0376***	-18.0403***	-18.0329***	-18.2297***	-18.8713***	-20.3811***	-20.8687***	-20.6081***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DHINC	0.0591**	0.0638**	0.0624**	0.0603**	0.0633**	0.067**	0.0352	0.0364	0.0375	0.0372
	(0.04)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.18)	(0.19)	(0.15)	(0.18)
DHOMEO	0.798	0.8918	0.7458	0.8654	0.8547	0.8727	0.6195	0.7023	0.1854	0.5789
	(0.6)	(0.53)	(0.6)	(0.54)	(0.54)	(0.54)	(0.69)	(0.65)	(0.91)	(0.71)
DCGRAD	-6.8144***	-4.1744*	-4.369*	-4.0379*	-4.3048*	-4.2408*	-8.4136***	-7.2291***	-8.4427***	-7.2441***
	(0.01)	(0.09)	(0.07)	(0.1)	(0.08)	(0.09)	(0.00)	(0.01)	(0.00)	(0.01)
DHGRAD	-14.8809***	-12.1151***	-12.3388***	-12.2407***	-12.2593***	-12.0993***	-17.5918***	-15.9514***	-17.7986***	-15.9402***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DWHITE	-8.2744**	-8.576**	-8.2787**	-6.8336*	-8.4957**	-8.7224**	-9.2084**	-8.5682**	-8.8726**	-8.4037**
	(0.03)	(0.02)	(0.03)	(0.06)	(0.02)	(0.02)	(0.02)	(0.04)	(0.03)	(0.04)
DBLACK	-9.955***	-10.8093***	-10.5301***	-8.6809***	-10.7582***	-11.2594***	-10.992***	-10.1465***	-10.5447***	-9.8809***
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)
DASIAN	-10.0449**	-12.9886***	-12.47***	-11.2739***	-12.7854***	-13.2606***	-11.6905***	-11.9891***	-11.401***	-11.7154***
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
DHISP	-3.723	-5.4441	-5.0977	-3.7956	-5.3289	-5.464	-4.9681	-4.835	-4.651	-4.6695
	(0.32)	(0.12)	(0.15)	(0.26)	(0.13)	(0.12)	(0.21)	(0.21)	(0.24)	(0.23)
DPOV	-1.6707	-2.0844	-2.2035	-2.8781	-2.1236	-3.0137	-1.475	-2.5819	-0.3912	-2.1022
	(0.72)	(0.65)	(0.63)	(0.54)	(0.65)	(0.53)	(0.76)	(0.61)	(0.94)	(0.68)
DUNMP	1.8673	5.3184	5.0948	7.4732	5.1864	6.6717	6.9156	8.6337	5.237	8.2132
	(0.83)	(0.52)	(0.54)	(0.36)	(0.53)	(0.42)	(0.42)	(0.34)	(0.54)	(0.36)
DALLEST/DAREA	3.7939	5.8303**	5.6273**	5.6892**	5.6909**	5.6316**	17.7425	21.3137	16.2277	22.493
	(0.18)	(0.03)	(0.04)	(0.04)	(0.03)	(0.03)	(0.31)	(0.21)	(0.35)	(0.2)
PTAX	-0.19***	-0.1982***	-0.1976***	-0.2069***	-0.1992***	-0.1941***	-0.2221***	-0.2156***	-0.2056***	-0.215***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
FINSTI	0.3346	-1.4087***	-1.3929***	-1.3381***	-1.399***	-1.3822***	1.3681*	1.2787*	1.4472*	1.3137*
	(0.11)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.07)	(0.1)	(0.06)	(0.09)
FBRANCH/FINSTI	-3.0738***	-2.255***	-2.2069***	-2.2312***	-2.2485***	-2.4762***	-2.6224***	-2.8274***	-2.7862***	-2.7961***
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
FDEPO/FINSTI	-3.0738***						-0.0036	-2.8274***	-2.7862***	-2.7961***
	(0.00)						(0.37)	(0.00)	(0.00)	(0.00)
FALN		0.0425***	0.0423***	0.0413***	0.0423***	0.0426***				
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)				
FALAVE		-29.752***	-30.2232***	-26.0908***	-30.1226***	-30.6803***				
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)				
FALMIA/FALA			-2.1754*							
			(0.08)							
FALMIN/FALN			1.9719*							
			(0.09)							
FALIA/FALA				1.6983						
				(0.55)						
FALIN/FALN				-8.9101**						
				(0.03)						
FAMIA/FALA					-1.1306					
					(0.43)					
FAMIN/FALN					1.0553					
					(0.42)					
FLSMA/FALA						1.2357				
						(0.34)				
FLSMN/FALN						0.4453				
						(0.78)				
BLMIPB							1.3474***			
							(0.00)			
BLMIIB								-0.0027		
								(0.52)		
BLIPB									-0.0034	
									(0.41)	
BLIIB										-0.003
										(0.47)
Adjusted R2	0.45	0.51	0.51	0.52	0.51	0.51	0.52	0.51	0.52	0.51
F-statistic	15.52	18.38	16.64	17.66	16.47	16.69	16.80	15.94	17.05	15.95
Prob (F-statistic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Observations	304	304	304	304	304	304	263	263	263	263

Note: White heteroskedasticity-consistent standard errors and covariance, and p-values in parentheses. *, ** and *** denote significance at 10, 5, and 1% level, respectively.

Household Income

- There is no evidence of any relationship between household income and the total number of establishments in MSAs. The level of household income, however, correlates positively with the share of small establishments (0–10 employees) with the coefficients in 11 of 12 regressions significant at the 10 percent level or better. It correlates negatively with the share of establishments with 100 or more employees.

Table 12 Determinants of the proportion of all establishments with 1–10 employees in MSAs

	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
C	93.1138***	77.6937***	77.3634***	75.3165***	76.9685***	74.1037***	98.0181***	94.4051***	98.2193***	96.409***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DPOP	-0.2336**	-0.2445	-0.2489	-0.2459	-0.2462	-0.186	-0.4361**	-0.3977**	-0.4131**	-0.3949**
	(0.04)	(0.13)	(0.13)	(0.12)	(0.13)	(0.25)	(0.03)	(0.04)	(0.04)	(0.04)
DAGE2544	-64.0189***	-41.7806***	-41.4877***	-41.871***	-41.471***	-42.361***	-62.8361***	-64.0091***	-65.2091***	-64.6551***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DHINC	0.0837*	0.0685*	0.0705*	0.0626	0.0711*	0.0726*	-0.0052	-0.011	0.0013	-0.0079
	(0.06)	(0.09)	(0.08)	(0.12)	(0.07)	(0.06)	(0.92)	(0.83)	(0.98)	(0.88)
DHOMEO	-5.1658	-1.2687	-1.1446	-1.2697	-1.0955	-0.4928	-7.7863**	-8.0406**	-7.6305**	-8.2559**
	(0.14)	(0.67)	(0.7)	(0.66)	(0.71)	(0.87)	(0.04)	(0.03)	(0.05)	(0.03)
DCGRAD	1.0725	7.3529	7.4891	7.5467	7.9867*	9.7572**	-4.6631	-2.6662	-4.0077	-2.8131
	(0.84)	(0.11)	(0.1)	(0.1)	(0.08)	(0.04)	(0.44)	(0.64)	(0.5)	(0.63)
DHGRAD	0.5533	6.6116	6.7724*	6.3432	7.3187*	8.6924**	-4.2323	-1.9095	-3.0972	-1.9531
	(0.91)	(0.1)	(0.09)	(0.12)	(0.06)	(0.03)	(0.43)	(0.69)	(0.55)	(0.69)
DWHITE	-23.0425*	-15.6057	-15.7591	-12.6056	-15.9846	-16.336	-20.0117*	-18.6537*	-19.7203*	-18.3901*
	(0.06)	(0.23)	(0.21)	(0.29)	(0.19)	(0.13)	(0.09)	(0.06)	(0.07)	(0.07)
DBLACK	-25.1313**	-19.9986	-19.9302	-16.3247	-20.1597*	-20.663**	-21.687*	-19.6609**	-21.4489**	-19.2468**
	(0.04)	(0.11)	(0.11)	(0.16)	(0.09)	(0.05)	(0.05)	(0.04)	(0.04)	(0.04)
DASIAN	-20.4272	-16.7767	-17.1874	-13.8139	-17.7875	-19.211*	-16.1942	-16.7962	-16.2046	-16.1189
	(0.11)	(0.19)	(0.17)	(0.25)	(0.15)	(0.08)	(0.19)	(0.12)	(0.17)	(0.14)
DHISP	-20.1849	-16.4755	-16.6959	-13.6295	-17.0359	-16.6043	-16.8538	-16.249	-16.9178	-15.9548
	(0.11)	(0.2)	(0.18)	(0.25)	(0.16)	(0.12)	(0.15)	(0.1)	(0.12)	(0.11)
DPOV	-2.0024	-2.515	-2.1387	-3.8674	-2.2049	-7.4542	-3.9417	-7.3362	-3.2361	-5.8301
	(0.85)	(0.78)	(0.82)	(0.68)	(0.81)	(0.42)	(0.71)	(0.47)	(0.75)	(0.57)
DUNMP	5.8645	9.1675	9.6465	12.9711	9.8801	13.2707	-1.5469	3.1452	-2.2737	1.6654
	(0.71)	(0.5)	(0.47)	(0.34)	(0.47)	(0.31)	(0.92)	(0.84)	(0.88)	(0.91)
DALLEST/DAREA	37.0554***	31.8127***	32.0151***	31.515***	32.5208***	29.8309***	61.002*	72.7755**	58.8491*	74.0312**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.06)	(0.03)	(0.08)	(0.03)
PTAX	-0.1909*	-0.1514*	-0.1556*	-0.1686*	-0.1476*	-0.1169	-0.2106*	-0.1992*	-0.2018*	-0.1984*
	(0.05)	(0.08)	(0.08)	(0.06)	(0.1)	(0.15)	(0.06)	(0.07)	(0.06)	(0.07)
FINSTI	0.5794	0.3086	0.2737	0.4338	0.2509	0.0146	1.7491	1.5085	1.7819	1.615
	(0.22)	(0.74)	(0.77)	(0.65)	(0.79)	(0.99)	(0.24)	(0.31)	(0.23)	(0.27)
FBRANCH/FINSTI	-1.9647	1.1295	1.1058	1.1507	1.1079	-0.0222	-1.5584	-1.4913	-1.9898	-1.4802
	(0.24)	(0.41)	(0.42)	(0.39)	(0.42)	(0.99)	(0.38)	(0.37)	(0.27)	(0.38)
FDEPO/FINSTI	-1.9647						0.0075	-1.4913	-1.9898	-1.4802
	(0.24)						(0.47)	(0.37)	(0.27)	(0.38)
FALN		0.0055	0.006	0.0033	0.0066	0.0093				
		(0.76)	(0.74)	(0.86)	(0.72)	(0.58)				
FALAVE		-137.4752***	-136.5849***	-131.1443***	-135.5213***	-170.9063***				
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)				
FALMIA/FALA			2.6911							
			(0.31)							
FALMIN/FALN			-2.8907							
			(0.24)							
FALIA/FALA				4.473						
				(0.53)						
FALIN/FALN				-17.1149						
				(0.12)						
FAMIA/FALA					5.8771**					
					(0.04)					
FAMIN/FALN					-5.6563**					
					(0.03)					
FLSMA/FALA						-1.8321				
						(0.32)				
FLSMN/FALN						11.3279***				
						(0.00)				
BLMIPB							1.6144**			
							(0.02)			
BLMIIB								0.0116		
								(0.32)		
BLIPB									0.0063	
									(0.55)	
BLIIB										0.0103
										(0.36)
Adjusted R2	0.22	0.45	0.45	0.47	0.46	0.48	0.21	0.24	0.20	0.23
F-statistic	6.12	14.95	13.55	14.42	13.73	15.17	4.92	5.66	4.53	5.43
Prob (F-statistic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Observations	304	304	304	304	304	304	263	263	263	263

Note: White heteroskedasticity-consistent standard errors and covariance, and p-values in parentheses. *, ** and *** denote significance at 10, 5, and 1% level, respectively.

Home Ownership

- Homeownership correlates positively but marginally with total establishments in 5 of the 6 regressions. The results do not indicate any relationship between homeownership percentage and the size composition of establishments.

Table 13 Determinants of the proportion of all establishments with 11–100 employees in MSAs

	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
C	-7.1981	2.0116	1.9568	3.4213	2.0365	2.9359	-12.287**	-10.5271*	-13.3226**	-11.4774**
	(0.19)	(0.71)	(0.72)	(0.5)	(0.71)	(0.58)	(0.03)	(0.05)	(0.02)	(0.03)
DPOP	-0.1168	-0.0183	-0.0197	-0.0202	-0.022	-0.0545	0.0057	-0.0112	0.0249	-0.0126
	(0.12)	(0.89)	(0.88)	(0.87)	(0.86)	(0.67)	(0.96)	(0.92)	(0.83)	(0.91)
DAGE2544	32.0876***	18.6097***	18.6675***	18.6708***	18.6845***	18.9548***	35.3272***	35.788***	36.3909***	36.0906***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DHINC	0.0078	0.0164	0.0167	0.0196	0.0165	0.012	0.0537*	0.057*	0.0533*	0.0558*
	(0.76)	(0.45)	(0.44)	(0.38)	(0.45)	(0.58)	(0.07)	(0.05)	(0.07)	(0.06)
DHOMEO	1.9593	-0.2729	-0.2601	-0.3436	-0.3023	-0.27	2.7789	2.924	3.1579	3.0539
	(0.34)	(0.88)	(0.88)	(0.85)	(0.87)	(0.88)	(0.2)	(0.17)	(0.15)	(0.15)
DCGRAD	4.8999	0.0983	0.1091	0.0502	0.0189	0.1172	6.7583*	5.8213	6.9256*	5.8679*
	(0.12)	(0.97)	(0.97)	(0.99)	(0.99)	(0.97)	(0.06)	(0.1)	(0.05)	(0.1)
DHGRAD	7.2376***	2.5526	2.566	2.7943	2.4711	2.4685	8.9938***	7.9328***	9.4078***	7.9371***
	(0.01)	(0.24)	(0.24)	(0.2)	(0.25)	(0.27)	(0.00)	(0.01)	(0.00)	(0.01)
DWHITE	8.4366*	4.6491	4.6441	2.8819	4.7088	4.8717	9.4899**	8.8345**	9.2874*	8.6674**
	(0.05)	(0.35)	(0.36)	(0.52)	(0.34)	(0.3)	(0.05)	(0.04)	(0.06)	(0.04)
DBLACK	3.5434	1.2417	1.2821	-0.9368	1.357	1.8785	3.8717	2.8819	3.569	2.6151
	(0.39)	(0.8)	(0.79)	(0.83)	(0.78)	(0.68)	(0.38)	(0.46)	(0.43)	(0.51)
DASIAN	9.1397**	8.692*	8.6531*	6.9299	8.7936*	9.138*	9.4123*	9.7012**	9.1802*	9.3622**
	(0.05)	(0.09)	(0.09)	(0.14)	(0.08)	(0.06)	(0.07)	(0.04)	(0.08)	(0.05)
DHISP	3.4735	2.416	2.4014	0.7275	2.4858	2.4472	4.7315	4.4229	4.4656	4.2474
	(0.42)	(0.62)	(0.63)	(0.87)	(0.61)	(0.6)	(0.3)	(0.28)	(0.34)	(0.3)
DPOV	9.5649*	10.3635**	10.4323**	11.1373**	10.4551**	11.7852**	13.7282**	15.4207***	13.023**	14.7452***
	(0.08)	(0.04)	(0.04)	(0.03)	(0.04)	(0.02)	(0.02)	(0.01)	(0.02)	(0.01)
DUNMP	10.3572	6.854	6.9349	4.4638	6.8419	4.8765	6.028	3.7092	7.2009	4.3421
	(0.33)	(0.45)	(0.45)	(0.62)	(0.46)	(0.6)	(0.57)	(0.73)	(0.5)	(0.69)
DALLEST/DAREA	-17.6569***	-15.3258***	-15.3017***	-15.0627***	-15.3812***	-14.9941***	-6.8599	-12.7596	-6.1309	-13.7956
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.7)	(0.47)	(0.73)	(0.44)
PTAX	0.1365**	0.1157**	0.1149**	0.1296**	0.1143**	0.109**	0.1274**	0.1221**	0.1162*	0.1215**
	(0.01)	(0.04)	(0.04)	(0.03)	(0.04)	(0.05)	(0.04)	(0.04)	(0.06)	(0.04)
FINSTI	-0.0253	0.7539	0.7479	0.6742	0.7494	0.7264	-1.6041**	-1.4853*	-1.6596**	-1.5337**
	(0.91)	(0.17)	(0.18)	(0.21)	(0.18)	(0.21)	(0.04)	(0.05)	(0.03)	(0.04)
FBRANCH/FINSTI	5.5478***	3.431***	3.4304***	3.4502***	3.4448***	3.7687***	5.6606***	5.6022***	5.6958***	5.5803***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
FDEPO/FINSTI	5.5478***						-0.0027	5.6022***	5.6958***	5.5803***
	(0.00)						(0.62)	(0.00)	(0.00)	(0.00)
FALN		-0.0172	-0.0171	-0.0156	-0.0171	-0.0174				
		(0.22)	(0.23)	(0.25)	(0.23)	(0.24)				
FALAVE		90.8097***	90.9548***	87.0376***	90.7309***	93.0853***				
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)				
FALMIA/FALA			0.3689							
			(0.78)							
FALMIN/FALN			-0.4302							
			(0.72)							
FALIA/FALA				-5.1177						
				(0.12)						
FALIN/FALN				12.9234**						
				(0.02)						
FAMIA/FALA					-0.3203					
					(0.84)					
FAMIN/FALN					0.1343					
					(0.92)					
FLSMA/FALA						-1.6383				
						(0.2)				
FLSMN/FALN						-0.9503				
						(0.59)				
BLMIPB							-0.7146			
							(0.11)			
BLMIIB								-0.0048		
								(0.42)		
BLIPB									-0.0031	
									(0.56)	
BLIIB										-0.0043
										(0.46)
Adjusted R2	0.21	0.46	0.46	0.48	0.46	0.47	0.25	0.27	0.26	0.26
F-statistic	5.77	15.61	13.96	14.88	13.99	14.37	5.80	6.29	6.02	6.21
Prob (F-statistic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Observations	304	304	304	304	304	304	263	263	263	263

Note: White heteroskedasticity-consistent standard errors and covariance, and p-values in parentheses. *, ** and *** denote significance at 10, 5, and 1% level, respectively

Education

- We do not find any significant relationships between educational level and either total establishments or the share of establishments with at least one employee.. But the shares of the population with at least a college degree or no more than a high school diploma tends to correlate negatively with the share of establishments with no employees. This negative relationship is particularly strong in the case of the high school variable.

Table 14 Determinants of the proportion of all establishments with 100 or more employees in MSAs

	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)
C	-16.7986*	-8.9709	-8.7502	-6.6261	-8.4072	-5.7093	-18.9187*	-15.5099*	-19.4443**	-17.2865*
	(0.1)	(0.39)	(0.4)	(0.49)	(0.4)	(0.53)	(0.06)	(0.08)	(0.04)	(0.05)
DPOP	0.2096	0.3988***	0.4093***	0.4038***	0.4047***	0.3514**	0.3896*	0.3357	0.3653*	0.3331
	(0.18)	(0.01)	(0.01)	(0.00)	(0.01)	(0.02)	(0.06)	(0.12)	(0.09)	(0.12)
DAGE2544	51.6401***	41.1614***	40.8578***	41.2405***	40.8194***	41.6359***	46.3802***	48.6022***	49.687***	49.1726***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DHINC	-0.1506***	-0.1487***	-0.1497***	-0.1425***	-0.151***	-0.1515***	-0.0838	-0.0824	-0.0922*	-0.085*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.11)	(0.08)	(0.1)	(0.1)
DHOMEO	2.4085	0.6499	0.659	0.7478	0.543	-0.1098	4.3878	4.4143	4.2873	4.6232
	(0.46)	(0.83)	(0.83)	(0.81)	(0.86)	(0.97)	(0.21)	(0.2)	(0.22)	(0.18)
DCGRAD	0.842	-3.2768	-3.2292	-3.5589	-3.7009	-5.6336	6.3184	4.074	5.5248	4.1893
	(0.86)	(0.45)	(0.46)	(0.41)	(0.4)	(0.22)	(0.23)	(0.43)	(0.29)	(0.42)
DHGRAD	7.09*	2.9509	3.0004	3.1032	2.4695	0.9385	12.8303***	9.9281**	11.488***	9.9562**
	(0.07)	(0.42)	(0.42)	(0.4)	(0.5)	(0.8)	(0.00)	(0.01)	(0.01)	(0.01)
DWHITE	22.8803**	19.5326*	19.3937*	16.5573*	19.7715**	20.1868**	19.7302*	18.3874**	19.3055**	18.1264**
	(0.02)	(0.06)	(0.06)	(0.08)	(0.05)	(0.02)	(0.05)	(0.03)	(0.04)	(0.03)
DBLACK	31.5429***	29.5662***	29.1783***	25.9424***	29.5609***	30.0439***	28.8072***	26.9255***	28.4246***	26.5126***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
DASIAN	21.3324**	21.0732**	21.0044**	18.1579*	21.7793**	23.3336**	18.4724*	19.0841**	18.4255*	18.4721**
	(0.04)	(0.05)	(0.05)	(0.06)	(0.03)	(0.01)	(0.09)	(0.04)	(0.07)	(0.05)
DHISP	20.4344**	19.5036*	19.3922*	16.6976*	19.879**	19.6211**	17.0904*	16.6611**	17.1032*	16.3769**
	(0.04)	(0.06)	(0.06)	(0.07)	(0.05)	(0.03)	(0.09)	(0.04)	(0.07)	(0.05)
DPOV	-5.8919	-5.7641	-6.0902	-4.3918	-6.1267	-1.3173	-8.3115	-5.5027	-9.3957	-6.8129
	(0.56)	(0.56)	(0.54)	(0.66)	(0.54)	(0.9)	(0.42)	(0.58)	(0.35)	(0.49)
DUNMP	-18.089	-21.34	-21.6762	-24.9081*	-21.9085	-24.8188*	-11.3967	-15.4881	-10.1642	-14.2208
	(0.25)	(0.15)	(0.14)	(0.09)	(0.14)	(0.09)	(0.45)	(0.33)	(0.51)	(0.37)
DALLEST/DAREA	-23.1924***	-22.3171***	-22.3407***	-22.1415**	-22.8306***	-20.4685**	-71.8846*	-81.3296**	-68.9459*	-82.7286**
	(0.00)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.06)	(0.03)	(0.07)	(0.03)
PTAX	0.2444**	0.234**	0.2383**	0.2459**	0.2325**	0.202**	0.3053***	0.2928***	0.2912***	0.292***
	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)	(0.04)	(0.01)	(0.01)	(0.01)	(0.01)
FINSTI	-0.8887**	0.3463	0.3712	0.2301	0.3987	0.6412	-1.5131	-1.3019	-1.5695	-1.395
	(0.05)	(0.72)	(0.71)	(0.82)	(0.69)	(0.49)	(0.34)	(0.42)	(0.33)	(0.39)
FBRANCH/FINSTI	-0.5093	-2.3054	-2.3293	-2.3698*	-2.3042	-1.2703	-1.4798	-1.2834	-0.9197	-1.304
	(0.74)	(0.1)	(0.1)	(0.08)	(0.11)	(0.38)	(0.38)	(0.43)	(0.6)	(0.43)
FDEPO/FINSTI	-0.5093						-0.0012	-1.2834	-0.9197	-1.304
	(0.74)						(0.89)	(0.43)	(0.6)	(0.43)
FALN		-0.0308	-0.0313	-0.029	-0.0318	-0.0345*				
		(0.14)	(0.13)	(0.19)	(0.13)	(0.07)				
FALAVE		76.4174***	75.8533***	70.1975***	74.913***	108.5013***				
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)				
FALMIA/FALA			-0.8847							
			(0.78)							
FALMIN/FALN			1.349							
			(0.64)							
FALIA/FALA				-1.0536						
				(0.88)						
FALIN/FALN				13.1016						
				(0.19)						
FAMIA/FALA					-4.4263					
					(0.13)					
FAMIN/FALN					4.4668*					
					(0.1)					
FLSMA/FALA						2.2348				
						(0.25)				
FLSMN/FALN						-10.823***				
						(0.00)				
BLMIPB							-2.2472***			
							(0.00)			
BLMIIB								-0.0041		
								(0.67)		
BLIPB									0.0002	
									(0.99)	
BLIIB										-0.003
										(0.75)
Adjusted R2	0.36	0.44	0.44	0.46	0.44	0.46	0.38	0.38	0.35	0.38
F-statistic	11.17	14.18	12.84	13.68	12.93	14.05	9.94	10.09	8.91	9.86
Prob (F-statistic)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Observations	304	304	304	304	304	304	263	263	263	263

Note: White heteroskedasticity-consistent standard errors and covariance, and p-values in parentheses. *, ** and *** denote significance at 10, 5, and 1% level, respectively

Race/Ethnicity

- We generally do not find any consistent relationships between the race/ethnic variables and the total number of establishments. The relationships between these variables and the size of composition of establishments are more interesting. The regression results indicate that MSAs with a larger Hispanic share of the population are also those with a larger share of establishments

with 100 or more employees. But MSAs with a larger mix of white, African-American, and Asian-American populations tend to correlate positively with a larger share of big establishments and negatively with a larger share of the smallest establishments. There is also modest evidence that MSAs with larger Asian-American populations tend to have a larger share of establishments with 11–100 employees.

Poverty

- We did not find any relationships between the degree of poverty and the number of establishments. There is also no evidence suggesting a relationship between poverty and the share of either the smallest or biggest establishments in MSAs. Instead, the data indicate that MSAs with lower poverty rates tend to have a smaller proportion of medium (11–100 employees) size establishments.

Unemployment

- We do not find a relationship between unemployment rates within MSAs, and the total number of establishments or the size composition of establishments. Only in two of the six regressions for the share of establishments with more than 100 employees are the coefficients for the unemployment rate negative and marginally significant.

Land Area

- Although we find no relationship between the number of establishments and the land area in the MSAs, we do find a negative relationship between establishments per square mile and the share of establishments with more than ten employees. This relationship, however, is positive in the regressions for the share of establishments with fewer than ten employees.

Sales Tax Rate

- We find no relationship between the state sales tax rate and the number of total establishments in MSAs. But we do find that a higher tax rate tends to correlate negatively with the share of 0–10 employee establishments, and positively with the share of establishments with ten or more employees.

Financial Institutions

- After controlling for branches per institution, MSAs with more financial institutions tend to have more total establishments, but a smaller share of 0 employee establishments.
- Although we do not find a relationship between branches per financial institution within an MSA and the total number of establishments, we find the number of branches per financial institution tends to have a negative relationship with the share of 0 employee establishments, a positive relationship with the share of 11–100 employee establishments, and a negative but marginally significant relationship with the share of 100 or more employee establishments.

- After controlling for the number of institutions, deposits per institution correlates negatively with the share of 0 employee establishments and positively with the proportion of 11–100 employee establishments, and has no relationship to the other size or total establishment variables.

Loan Activity in Low- and Moderate-Income Communities

- MSAs with larger numbers of loans tend to have more establishments, and a larger share of zero-employee establishments.
- We do not find a relationship between the average size of loans within an MSA and the total number of establishments. But we do find that MSAs with higher average size loans tend to have a smaller share of 0–10 employee establishments and a larger share of eleven or more employee establishments.
- We find marginal evidence that the higher the share of loan amounts to businesses in low- and moderate-income communities, the smaller the share of zero-employee establishments. Yet the marginal evidence indicates that the higher the share of number of loans to businesses in low- and moderate-income communities, the larger the share of zero-employee establishments. We do not find that the share of the amount or number of loans to low- and moderate-income communities provides any explanation with respect to other size categories of establishments.
- We do not find any significant relationship between the share of loan amounts to businesses in low-income communities and the total number of establishments or the size composition of establishments. But the share of loan numbers to businesses in low-income communities has a negative and significant relationship to the share of zero-employee establishments, a negative but not significant relationship with the share of 1–10 employee establishments, a positive and significant relationship with the share of 11–100 employee establishments, and a positive but not significant relationship with the share of 100 or more employee establishments.
- The share of the total amount of loans to moderate-income communities is positively related to only the share of establishments with 1 to 10 employees, while the share of the number of loans to moderate-income communities is negatively related to the same size establishments. The share of the total number of loans to moderate-income communities also correlates positively with a larger share of establishments with more than 100 employees.
- While the share of total amount of loans to establishments with less than $1 million of receipts does not have a significant relationship with the total number or size composition of establishments, the share of the total number of loans to such establishments tends to have a positive correlation with the share of establishments with 1–10 employees. At the same time, the share of the total number of loans to establishments with less than $1 million in receipts tends to have a negative association with the share of establishments with 100 or more employees.

Loan Bias

- None of the four measures of loan bias has a significant association with the total number of establishments. But the loan bias measure for LMI communities based upon population correlates positively with establishments with 0 employees and those with 1–10 employees, and negatively with establishments with 100 or more employees. These significant results disappear, however, when the loan bias measure is based on income rather than population.

In summary, several factors matter for entrepreneurship as measured indirectly by the size of establishments in MSAs throughout the United States. The way in which these factors are related to entrepreneurship, however, varies depending on the size measure used. It is useful, therefore, to summarize the findings by establishment size.

7.1 Establishments with 0 Employees

One finds in MSAs that the greater the share of total establishments with zero employees, the lower the share of the population aged 25–44, the higher the household income, the smaller the percentage of the labor force with a college degree, and the smaller the share of the labor force with a high school diploma or less. In addition, one finds that the greater the share of establishments with zero employees, the greater the race or ethnic mix of the population, the lower the state sales tax rate, the larger the number of financial institutions, the lower the number of branches per institution, the lower the deposits per institution, the greater the number of loans, the lower the average loan size, the lower the share of the total amount of loans to businesses in low- and moderate-income communities in MSAs, the larger the share of the total number of loans to businesses in low- and moderate-income communities in MSAs, and the lower the share of the total number of loans made to businesses in low-income communities.

7.2 Establishments with 1–10 Employees

Our work suggests that the greater the share of total establishments with 1–10 employees, the lower the share of the population aged 25–44, the higher the household income, the higher the percentage of the labor force with a college degree (in two of six regressions), and the higher the share of the labor force that has a house school diploma or less (in three of six regressions). In addition, one finds that the greater the share of establishments with 1–10

employees, the lower the state sales tax rate, the lower the average loan size, the greater the share of the total amount of loans to businesses in moderate-income communities in MSAs, the lower the share of the total number of loans to businesses in moderate-income communities in MSAs, and the greater the share of the total number of loans made to establishments with receipts of less than $1 million.

7.3 Establishments with 11–100 Employees

The greater the share of total establishments with 11–100 employees, the greater the share of the population aged 25–44, the higher the higher the poverty rate, the higher the state sales tax rate, the higher the number of branches per institution, the higher the amount of deposits per institution, the higher the average loan size, and the larger the share of the total number of loans to businesses in low-income communities in MSAs.

7.4 Establishments with 100 or More Employees

One finds in MSAs that the greater the share of total establishments with 100 or more employees, the higher the population of the MSA, the higher the share of the population aged 25–44, the lower the household income, the lower the race or ethnic mix of the population, the lower the unemployment rate (this is a marginal result in two of six regressions), the higher the state sales tax rate, the larger the average loan size, the higher the share of the total number of the loans to businesses in moderate-income communities in MSAs, and the lower the share of the total number of loans made to establishments with receipts of less than $1 million.

7.5 All Establishments

The findings for all establishments are important because to the extent that a factor increases this variable, any trade-off between that factor's effect on the size composition of establishments and the number of establishments becomes less important. The reason, of course is that with more establishments, a smaller share of the total for any size category can experience an absolute increase in the number of establishments. In the case of other factors that are not significant for total establishments, but are significant in explaining the size composition of establishments, there are necessarily trade-offs (i.e., an

increase in the share of one size category within an MSA at the expense of a decrease in both the number and the share of other size categories). In this respect, only four factors seem to matter for the total number of establishments. These factors are: the share of population in the 25–44 age group, the homeownership rate, the number of financial institutions, and the total number of loans made in an MSA. All four correlate positively with the total number of establishments.

Clearly, the empirical results presented here emphasize the need to develop a more general microeconomic model, and to assemble better microdata (preferably panels) to understand more fully the key determinants of entrepreneurial activity in different geographical regions. Unfortunately, as discussed earlier with respect to the existing literature, there is an insufficient database, and no widely accepted microeconomic model is available to meet this need. This situation, however, should provide motivation for researchers and policy makers to remedy the deficiency so that more progress can be made in identifying what works best at eliminating stumbling blocks to entrepreneurship in low- and moderate-income communities.

8 Policy Recommendations

This paper conducts a selected review of the economic literature on entrepreneurship, and provides tentative empirical analyses of the determinants of entrepreneurship across MSAs. We find that the conclusions of previous researchers, and even our findings, in some instances are consistent with one another and in others contradictory. Nevertheless, based on the literature review, other papers not directly reviewed here, and our empirical analysis, we find sufficient agreement to draw several conclusions and policy recommendations aimed at increasing entrepreneurial activity, particularly in low- and moderate-income communities. These findings follow.

1. Construct a single, multiuse data set by creating a data consortium that pools information from different public and private data sets.

Researchers frequently use different measures of entrepreneurship and different data sets, limiting the ability to compare the work of different scholars and hampering an understanding of the factors that influence entrepreneurship, and thus the development of effective policies. As noted above, the term "entrepreneur" means different things in different studies. For example, a recent paper published by the Federal Reserve Bank of Kansas City (Low, Henderson, and Weiler, 2005) identifies entrepreneurs as the self-employed, and the Kauffman Foundation's Index of Entrepreneurial Activity (Fairlie, 2005) identifies entrepreneurs as business owners (as reported in the Current

Population Survey performed by U.S. Bureau of the Census for the Bureau of Labor Statistics).

A consortium could address the problem for policy makers when researchers use different definitions and control variables. Consortium participants might contribute data on a blind basis, with researchers and participants gaining access to the full pool of contributions. This would improve upon the information necessary to understand the best way to promote or to facilitate entrepreneurship.

2. Provide incentives through Capital Access Programs and other credit enhancement programs to decrease loan bias.

Our calculations of LI and LMI loan bias suggest that the financing received by businesses in many LI and LMI communities diverges from what some people, perhaps naively, might consider appropriate, even when accounting for income disparity. In general, our first measure of loan bias (based on population) indicates that businesses in LI and LMI communities receive a significantly smaller share of the total amount of loans than might be expected, given the LI and LMI shares of population. Our second measure of loan bias (based on income) suggests that this type of lending gap exists in a large number of MSAs. To the extent that this bias is not explained by economic factors, or is due to regulatory barriers, incentives provided through Capital Access Programs (in which lenders, borrowers, and the government each contribute to a reserve fund to cover loan losses) and other credit enhancement programs might help to decrease this loan bias. [7]

3. Increase the securitization of average-sized loans.

We and others find that financial variables are important to entrepreneurship. We specifically find that MSAs with fewer financial institutions and larger average loan sizes tend to have a smaller share of total establishments with fewer than 10 employees (potentially the most entrepreneurial establishments, or those most associated with new startups). One way to increase small business loan origination across MSAs might be to increase the securitization of such loans. This would enable small business lenders to sell portions of their loan portfolios and use the proceeds to originate more loans, as well as lower their capital requirements. [8]

[7] For further discussion of credit enhancement as a potential alleviator of the capital access "gaps" facing LMI businesses, see Yago, Zeidman, and Schmidt (2003).

[8] For further discussion of the role of securitization, see Yago, Zeidman, and Schmidt (2003).

4. Expand capital and other forms of support to African-American entrepreneurs.

Discrimination appears to persist, particularly related to capital access by African-American entrepreneurs. The continued difficulty of African-American-owned firms to gain financing, the smaller size of these firms, and the higher concentration of larger firms in MSAs with large African-American populations suggest the continuing need to extend capital and other forms of support to African-American entrepreneurs. This is particularly important when one considers that the number of these firms is growing faster than the rate of all firms, and the growth (or lack thereof) has an increasingly significant effect on local communities.

5. Decrease taxes.

Taxes and government regulations are significant impediments to entrepreneurship. Indeed, they rank very high among the barriers to entrepreneurship cited by entrepreneurs. The cost of workers compensation and health insurance, taxes, and a number of government regulations are factors that state and federal governments could modify to promote entrepreneurship. Well-meaning regulations often have unanticipated consequences. For instance, high bankruptcy exemptions are intended to benefit borrowers, but have been found to hurt them by decreasing lenders' willingness to provide capital. The relationship between lower sales taxes and greater entrepreneurship suggests one approach to mitigating this adverse effect would be to reduce tax levels. Of course, one must account for the fact that tax revenues help finance the infrastructure essential for the successful operation of businesses.

6. Support programs to expand understanding of what entrepreneurship requires.

There appears to be consensus in the literature that individuals can learn to become entrepreneurs. Well-developed training programs, with targeted outreach to LI and LMI communities, can expand entrepreneurship to a wider population. Data currently reflect businesses located in LI and LMI communities, but, unfortunately, tell us little about the individual entrepreneur. The existence of entrepreneurial firms in a region spurs the growth of more such firms in a cluster effect. Programs such as those supported by the Kauffman Foundation should produce greater understanding of entrepreneurship in communities, thereby increasing the likelihood of more new businesses being established throughout the country.

In summary, more work needs to be done to understand fully the determinants of entrepreneurial activity. This includes developing better microeconomic models that capture the different trade-offs associated with specific policy actions affecting entrepreneurial activity, and additional empirical analysis to determine which actions work best to promote such activity.

Appendix 1

Loans to Businesses in Low- and Moderate-Income Communities:
LI and LMI Shares of Population, Businesses' Share of Loans, and LI and LMI Loan Biases

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Yolo, CA	49.1%	41.8%	0.15	31.5%	0.1%	1.00
Dutchess County, NY	46.2%	18.8%	0.59	26.0%	8.8%	0.66
Vallejo-Fairfield-Napa, CA	46.1%	34.8%	0.25	24.7%	1.5%	0.94
New York, NY	45.9%	19.2%	0.58	31.0%	4.8%	0.84
Oakland, CA	45.3%	25.4%	0.44	28.3%	13.5%	0.52
Bryan-College Station, TX	45.1%	16.3%	0.64	29.5%	2.8%	0.90
Sacramento, CA	45.1%	29.6%	0.34	26.4%	7.2%	0.73
San Francisco, CA	44.9%	35.6%	0.21	27.2%	16.0%	0.41
Albany, GA	44.6%	29.9%	0.33	23.0%	15.1%	0.34
Tuscaloosa, AL	44.2%	18.8%	0.57	23.6%	2.6%	0.89
Riverside-San Bernardino, CA	43.8%	24.0%	0.45	28.4%	5.7%	0.80
Columbus, GA-AL	43.7%	37.7%	0.14	20.7%	12.0%	0.42
Yuba City, CA	43.6%	18.0%	0.59	19.5%	0.0%	1.00
Springfield, MA	43.5%	24.2%	0.44	24.6%	8.5%	0.66
Florence, SC	43.5%	22.5%	0.48	29.0%	8.1%	0.72
Muncie, IN	43.4%	21.8%	0.50	19.8%	2.7%	0.87
Huntington-Ashland, WV-KY-OH	43.4%	28.8%	0.34	26.5%	7.6%	0.71
Rocky Mount, NC	43.4%	8.4%	0.81	21.5%	1.2%	0.94
Missoula, MT	43.3%	37.2%	0.14	19.6%	0.0%	1.00
Auburn-Opelika, AL	43.2%	21.0%	0.51	29.6%	7.4%	0.75
Odessa-Midland, TX	43.1%	46.5%	-0.08	19.8%	5.6%	0.72
New Orleans, LA	43.1%	26.5%	0.38	29.0%	6.3%	0.78
Charleston, WV	43.1%	31.6%	0.27	28.0%	15.2%	0.46
Houma, LA	43.0%	39.7%	0.08	29.3%	0.0%	1.00
Fresno, CA	42.9%	27.4%	0.36	19.8%	3.4%	0.83
Utica-Rome, NY	42.9%	19.1%	0.55	27.5%	2.9%	0.89
Yakima, WA	42.9%	34.3%	0.20	18.4%	13.4%	0.27
Nassau-Suffolk, NY	42.9%	12.7%	0.70	24.2%	0.1%	1.00
Bakersfield, CA	42.8%	21.7%	0.49	28.2%	6.5%	0.77
Louisville, KY-IN	42.8%	29.0%	0.32	22.5%	7.0%	0.69
Lake Charles, LA	42.7%	21.5%	0.50	29.1%	2.0%	0.93
Lewiston-Auburn, ME	42.7%	20.4%	0.52	26.9%	8.3%	0.69

Appendix 1 (continued)

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Kalamazoo-Battle Creek, MI	42.7%	23.1%	0.46	22.5%	7.3%	0.68
Springfield, MO	42.6%	15.3%	0.64	17.6%	2.9%	0.84
Las Cruces, NM	42.6%	29.8%	0.30	25.3%	0.1%	1.00
Alexandria, LA	42.6%	22.0%	0.48	25.9%	5.1%	0.80
Sarasota-Bradenton, FL	42.6%	19.8%	0.53	20.4%	0.6%	0.97
Mobile, AL	42.5%	12.9%	0.70	28.5%	5.7%	0.80
Beaumont-Port Arthur, TX	42.5%	21.8%	0.49	28.3%	5.6%	0.80
Sharon, PA	42.5%	15.6%	0.63	17.3%	12.5%	0.28
Stockton-Lodi, CA	42.5%	33.6%	0.21	23.5%	6.5%	0.72
Greensboro-Winston-Salem-High Point,	42.5%	18.4%	0.57	21.5%	1.6%	0.93
Greenville, NC	42.5%	24.2%	0.43	21.5%	4.5%	0.79
Corvallis, OR	42.4%	23.3%	0.45	23.4%	0.0%	1.00
Providence-Fall River-Warwick, RI-MA	42.4%	21.7%	0.49	24.5%	4.7%	0.81
San Diego, CA	42.4%	25.1%	0.41	24.3%	1.9%	0.92
Corpus Christi, TX	42.3%	43.1%	-0.02	27.8%	6.1%	0.78
Bloomington-Normal, IL	42.3%	24.3%	0.43	24.7%	8.5%	0.65
Bangor, ME	42.2%	14.1%	0.67	27.5%	0.0%	1.00
Tallahassee, FL	42.2%	26.9%	0.36	28.3%	3.4%	0.88
Merced, CA	42.1%	24.5%	0.42	26.1%	0.0%	1.00
Dover, DE	42.1%	0.2%	0.99	21.5%	0.0%	1.00
Topeka, KS	42.1%	37.9%	0.10	21.0%	13.8%	0.34
Amarillo, TX	42.0%	25.3%	0.40	26.0%	8.8%	0.66
St. Joseph, MO	42.0%	25.9%	0.38	26.3%	19.0%	0.28
Wheeling, WV-OH	42.0%	23.9%	0.43	24.6%	2.3%	0.91
Orange County, CA	41.9%	34.8%	0.17	22.1%	4.6%	0.79
Los Angeles-Long Beach, CA	41.9%	31.5%	0.25	29.7%	12.5%	0.58
Decatur, AL	41.8%	11.1%	0.73	26.9%	2.0%	0.92
Dallas, TX	41.7%	21.4%	0.49	23.0%	4.6%	0.80
Lafayette, LA	41.6%	12.3%	0.71	26.8%	3.7%	0.86
Dayton-Springfield, OH	41.6%	27.2%	0.35	21.2%	10.1%	0.52
Pine Bluff, AR	41.5%	22.9%	0.45	24.7%	9.3%	0.62

(continued)

Appendix 1 (continued)

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Columbia, SC	41.5%	30.6%	0.26	21.2%	8.7%	0.59
Duluth-Superior, MN-WI	41.5%	34.4%	0.17	26.8%	21.3%	0.21
Grand Forks, ND-MN	41.5%	7.6%	0.82	25.0%	0.0%	1.00
Daytona Beach, FL	41.3%	20.5%	0.50	24.5%	4.6%	0.81
Hattiesburg, MS	41.3%	12.1%	0.71	24.5%	10.7%	0.57
Cumberland, MD-WV	41.2%	14.6%	0.65	23.8%	4.7%	0.80
McAllen-Edinburg-Mission, TX	41.2%	20.6%	0.50	19.1%	0.0%	1.00
State College, PA	41.2%	18.2%	0.56	27.6%	7.9%	0.71
Binghamton, NY	41.2%	25.7%	0.38	26.2%	6.2%	0.77
Gainesville, FL	41.2%	35.1%	0.15	25.9%	3.6%	0.86
Asheville, NC	41.1%	30.3%	0.26	25.2%	1.0%	0.96
Youngstown-Warren, OH	41.1%	13.9%	0.66	26.0%	6.5%	0.75
Lincoln, NE	41.1%	19.4%	0.53	19.7%	4.0%	0.80
Cleveland-Lorain-Elyria, OH	41.1%	16.1%	0.61	21.5%	7.5%	0.65
Panama City, FL	41.0%	18.6%	0.55	25.5%	9.3%	0.64
Ventura, CA	41.0%	33.2%	0.19	26.6%	3.9%	0.85
San Luis Obispo-Atasc.-Paso Robles, CA	41.0%	12.2%	0.70	21.7%	0.0%	1.00
Erie, PA	40.9%	22.2%	0.46	25.5%	13.2%	0.48
Lakeland-Winter Haven, FL	40.8%	24.6%	0.40	24.4%	3.7%	0.85
Raleigh-Durham-Chapel Hill, NC	40.8%	17.2%	0.58	23.3%	1.5%	0.94
Johnstown, PA	40.7%	7.8%	0.81	22.0%	0.2%	0.99
Elmira, NY	40.7%	30.3%	0.26	25.8%	8.6%	0.67
Salinas, CA	40.7%	26.7%	0.34	22.5%	9.6%	0.57
Knoxville, TN	40.7%	24.3%	0.40	25.8%	5.9%	0.77
Owensboro, KY	40.6%	39.4%	0.03	26.7%	18.3%	0.31
Pocatello, ID	40.6%	27.3%	0.33	25.9%	0.0%	1.00
Orlando, FL	40.6%	22.3%	0.45	19.4%	3.7%	0.81
Grand Junction, CO	40.5%	19.7%	0.52	24.6%	0.0%	1.00
Austin-San Marcos, TX	40.5%	16.8%	0.59	22.9%	4.0%	0.83
Peoria-Pekin, IL	40.5%	20.8%	0.49	20.5%	4.7%	0.77
El Paso, TX	40.4%	37.7%	0.07	22.9%	15.6%	0.32
Danville, VA	40.4%	20.3%	0.50	22.8%	7.0%	0.69

Appendix 1 (continued)

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Medford-Ashland, OR	40.4%	16.5%	0.59	25.0%	11.4%	0.54
Billings, MT	40.4%	23.3%	0.42	25.9%	10.4%	0.60
Huntsville, AL	40.4%	18.1%	0.55	21.8%	5.5%	0.75
Clarksville-Hopkinsville, TN-KY	40.3%	27.1%	0.33	23.1%	4.1%	0.82
Jackson, TN	40.3%	26.2%	0.35	26.5%	18.5%	0.30
Gadsden, AL	40.3%	26.4%	0.34	23.5%	0.0%	1.00
Pittsburgh, PA	40.3%	19.7%	0.51	25.7%	2.0%	0.92
Tucson, AZ	40.2%	30.9%	0.23	24.9%	5.0%	0.80
Minneapolis-St. Paul, MN-WI	40.2%	12.3%	0.69	18.4%	3.8%	0.79
Naples, FL	40.2%	3.0%	0.93	21.6%	0.4%	0.98
Oklahoma City, OK	40.2%	27.6%	0.31	25.1%	4.7%	0.81
Albany-Schenectady-Troy, NY	40.2%	19.8%	0.51	20.7%	7.3%	0.65
Jacksonville, FL	40.2%	22.0%	0.45	19.9%	4.7%	0.76
Sherman-Denison, TX	40.2%	35.1%	0.13	25.1%	16.2%	0.36
Columbia, MO	40.1%	29.9%	0.26	25.1%	18.2%	0.28
Appleton-Oshkosh-Neenah, WI	40.1%	7.9%	0.80	21.1%	2.1%	0.90
Wichita, KS	40.1%	29.0%	0.28	19.6%	7.4%	0.62
Fort Collins-Loveland, CO	40.1%	28.3%	0.29	22.9%	13.0%	0.43
Lawrence, KS	40.0%	15.5%	0.61	25.8%	0.7%	0.97
Champaign-Urbana, IL	40.0%	33.3%	0.17	26.6%	9.3%	0.65
St. Cloud, MN	40.0%	6.7%	0.83	19.6%	6.1%	0.69
Eugene-Springfield, OR	39.9%	35.1%	0.12	25.6%	11.6%	0.55
Madison, WI	39.9%	29.9%	0.25	21.9%	5.5%	0.75
Anniston, AL	39.9%	18.4%	0.54	23.7%	1.6%	0.93
Norfolk-Va. Beach-Newport News, VA-NC	39.9%	18.4%	0.54	19.4%	4.5%	0.77
Biloxi-Gulfport-Pascagoula, MS	39.9%	10.8%	0.73	24.9%	4.2%	0.83
Waterloo-Cedar Falls, IA	39.9%	27.9%	0.30	24.2%	9.0%	0.63

(continued)

Appendix 1 (continued)

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Chattanooga, TN-GA	39.9%	19.0%	0.52	25.0%	14.7%	0.41
Texarkana, TX-Texarkana, AR	39.8%	19.9%	0.50	23.7%	1.9%	0.92
Allentown-Bethlehem-Easton, PA	39.8%	10.4%	0.74	20.3%	2.3%	0.89
Las Vegas, NV-AZ	39.8%	20.0%	0.50	19.1%	2.2%	0.89
Pensacola, FL	39.8%	24.2%	0.39	24.4%	10.2%	0.58
Tyler, TX	39.7%	18.4%	0.54	25.3%	12.9%	0.49
Boise City, ID	39.7%	23.2%	0.42	18.4%	11.8%	0.36
Mansfield, OH	39.7%	25.7%	0.35	24.3%	4.9%	0.80
Chico-Paradise, CA	39.6%	20.4%	0.48	22.4%	0.0%	1.00
Spokane, WA	39.6%	49.1%	-0.24	24.5%	20.2%	0.18
Harrisburg-Lebanon-Carlisle, PA	39.6%	11.8%	0.70	18.9%	1.4%	0.93
Punta Gorda, FL	39.6%	6.3%	0.84	22.9%	0.0%	1.00
New London-Norwich, CT-RI	39.6%	15.4%	0.61	22.2%	3.1%	0.86
Baton Rouge, LA	39.6%	13.6%	0.66	26.3%	4.5%	0.83
Decatur, IL	39.6%	46.4%	-0.17	24.8%	25.2%	-0.02
Lynchburg, VA	39.6%	12.8%	0.68	24.7%	4.6%	0.81
Buffalo-Niagara Falls, NY	39.5%	23.3%	0.41	25.7%	6.6%	0.74
Augusta-Aiken, GA-SC	39.5%	21.4%	0.46	25.6%	5.9%	0.77
Myrtle Beach, SC	39.5%	12.1%	0.69	22.5%	0.7%	0.97
Casper, WY	39.5%	29.3%	0.26	24.5%	18.5%	0.24
Springfield, IL	39.5%	25.1%	0.36	19.4%	10.1%	0.48
Johnson City-Kingsport-Bristol, TN-VA	39.5%	16.7%	0.58	22.6%	2.2%	0.90
Montgomery, AL	39.4%	25.2%	0.36	25.4%	14.1%	0.45
Rochester, NY	39.4%	18.4%	0.53	20.5%	5.5%	0.73
Lubbock, TX	39.4%	35.6%	0.10	22.5%	16.0%	0.29
Monroe, LA	39.3%	22.5%	0.43	24.6%	13.9%	0.44
Flagstaff, UT-AZ	39.3%	17.4%	0.56	24.3%	4.7%	0.81
Rapid City, SD	39.3%	35.0%	0.11	22.5%	0.0%	1.00
Macon, GA	39.3%	49.9%	-0.27	25.8%	14.0%	0.46

Appendix 1 (continued)

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Tampa-St. Petersburg-Clearwater, FL	39.3%	21.6%	0.45	23.6%	0.8%	0.96
Kokomo, IN	39.3%	25.5%	0.35	19.9%	9.7%	0.51
Jackson, MI	39.2%	24.2%	0.38	20.5%	6.1%	0.70
Anchorage, AK	39.2%	29.6%	0.25	23.2%	7.4%	0.68
Salt Lake City-Ogden, UT	39.2%	37.2%	0.05	20.4%	8.0%	0.61
Fort Wayne, IN	39.2%	17.1%	0.56	18.5%	7.0%	0.62
Miami, FL	39.2%	28.4%	0.27	25.5%	9.3%	0.64
Athens, GA	39.2%	22.3%	0.43	24.4%	12.3%	0.50
San Jose, CA	39.2%	34.8%	0.11	24.0%	8.5%	0.65
Savannah, GA	39.0%	17.7%	0.55	24.9%	4.9%	0.80
Brownsville-Harlingen-San Benito, TX	39.0%	21.5%	0.45	29.6%	1.0%	0.97
Fayetteville-Springdale-Rogers, AR	38.9%	8.9%	0.77	23.4%	0.0%	1.00
Nashville, TN	38.9%	27.6%	0.29	19.2%	5.3%	0.72
St. Louis, MO-IL	38.8%	15.1%	0.61	19.8%	4.8%	0.76
Killeen-Temple, TX	38.8%	21.4%	0.45	21.6%	0.7%	0.97
Lafayette, IN	38.8%	40.6%	-0.05	24.2%	8.3%	0.66
Florence, AL	38.8%	16.0%	0.59	22.7%	2.2%	0.90
Benton Harbor, MI	38.8%	17.1%	0.56	25.0%	8.3%	0.67
Lansing-East Lansing, MI	38.7%	23.3%	0.40	19.9%	10.9%	0.45
Shreveport-Bossier City, LA	38.7%	36.7%	0.05	22.8%	20.1%	0.12
Victoria, TX	38.7%	38.2%	0.01	23.7%	0.9%	0.96
Greenville-Spartanburg-Anderson, SC	38.7%	15.5%	0.60	24.2%	5.2%	0.79
Jackson, MS	38.6%	22.1%	0.43	25.0%	13.0%	0.48
Jonesboro, AR	38.6%	9.0%	0.77	22.0%	0.0%	1.00
West Palm Beach-Boca Raton, FL	38.6%	19.9%	0.48	25.9%	2.7%	0.90
Pittsfield, MA	38.6%	31.0%	0.20	24.9%	13.8%	0.45
Wilmington, NC	38.6%	15.3%	0.60	24.2%	8.0%	0.67
Tulsa, OK	38.5%	24.0%	0.38	23.8%	2.0%	0.92
Fargo-Moorhead, ND-MN	38.5%	46.6%	-0.21	23.7%	0.0%	1.00

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Appendix 1 (continued)

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Cincinnati, OH-KY-IN	38.5%	17.8%	0.54	19.8%	6.8%	0.66
Charlottesville, VA	38.5%	23.9%	0.38	20.3%	2.5%	0.87
Reading, PA	38.5%	12.1%	0.69	19.3%	3.7%	0.81
Sioux Falls, SD	38.4%	37.6%	0.02	17.0%	0.0%	1.00
Bloomington, IN	38.4%	41.4%	-0.08	22.8%	0.6%	0.98
Columbus, OH	38.4%	22.9%	0.40	19.0%	10.0%	0.47
Lexington, KY	38.3%	28.8%	0.25	24.3%	3.9%	0.84
Hickory-Morganton, NC	38.2%	12.1%	0.68	22.6%	0.0%	1.00
Seattle-Bellevue-Everett, WA	38.2%	26.5%	0.31	20.8%	2.3%	0.89
Fayetteville, NC	38.2%	20.5%	0.46	23.1%	8.0%	0.65
Birmingham, AL	38.1%	25.7%	0.33	24.7%	9.4%	0.62
Richland-Kennewick-Pasco, WA	38.1%	26.6%	0.30	19.3%	0.0%	1.00
Phoenix-Mesa, AZ	38.0%	30.0%	0.21	18.3%	8.5%	0.53
Hartford, CT	37.9%	15.6%	0.59	22.2%	4.0%	0.82
Omaha, NE-IA	37.9%	16.3%	0.57	17.9%	3.6%	0.80
Evansville-Henderson, IN-KY	37.9%	22.9%	0.40	23.7%	1.2%	0.95
Fort Smith, AR-OK	37.9%	18.1%	0.52	21.2%	4.3%	0.80
Dothan, AL	37.7%	28.4%	0.25	22.5%	2.2%	0.90
Rockford, IL	37.7%	16.6%	0.56	18.8%	6.7%	0.65
Portland, ME	37.7%	25.2%	0.33	18.9%	5.3%	0.72
Waco, TX	37.7%	24.7%	0.34	22.6%	4.9%	0.78
Honolulu, HI	37.7%	29.7%	0.21	21.3%	2.5%	0.88
Santa Fe, NM	37.6%	40.1%	-0.06	25.5%	0.0%	1.00
Sioux City, IA-NE	37.6%	38.6%	-0.02	22.2%	27.5%	-0.24
Great Falls, MT	37.6%	32.3%	0.14	20.2%	6.6%	0.67
Toledo, OH	37.6%	19.2%	0.49	23.9%	9.9%	0.58
Albuquerque, NM	37.6%	30.1%	0.20	23.3%	2.5%	0.89
Syracuse, NY	37.6%	22.2%	0.41	24.0%	8.5%	0.65
Charleston-North Charleston, SC	37.6%	18.3%	0.51	23.7%	4.1%	0.83
Charlotte-Gastonia-Rock Hill, NC-SC	37.6%	24.5%	0.35	23.7%	8.5%	0.64
Ocala, FL	37.6%	6.7%	0.82	19.1%	0.8%	0.96
Saginaw-Bay City-Midland, MI	37.6%	24.1%	0.36	23.2%	8.2%	0.65
Glens Falls, NY	37.5%	6.4%	0.83	22.2%	0.0%	1.00

Appendix 1 (continued)

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Indianapolis, IN	37.5%	20.5%	0.45	24.7%	6.2%	0.75
Little Rock-North Little Rock, AR	37.5%	20.9%	0.44	23.2%	1.6%	0.93
Pueblo, CO	37.5%	24.6%	0.34	20.4%	10.8%	0.47
Roanoke, VA	37.4%	19.5%	0.48	22.7%	9.8%	0.57
Elkhart-Goshen, IN	37.4%	8.9%	0.76	17.1%	2.9%	0.83
Sumter, SC	37.4%	42.6%	-0.14	21.1%	0.0%	1.00
Altoona, PA	37.4%	15.2%	0.59	21.0%	10.1%	0.52
Lima, OH	37.3%	15.3%	0.59	22.8%	7.3%	0.68
Rochester, MN	37.3%	4.9%	0.87	19.9%	0.0%	1.00
Memphis, TN-AR-MS	37.3%	14.6%	0.61	24.1%	5.7%	0.76
Milwaukee-Waukesha, WI	37.3%	11.7%	0.69	25.0%	5.0%	0.80
San Angelo, TX	37.3%	33.3%	0.11	20.6%	20.6%	0.00
San Antonio, TX	37.3%	21.4%	0.43	20.6%	4.2%	0.79
Barnstable-Yarmouth, MA	37.2%	13.7%	0.63	24.5%	0.0%	1.00
Yuma, AZ	37.1%	29.0%	0.22	18.8%	0.0%	1.00
Joplin, MO	37.1%	16.7%	0.55	19.8%	0.0%	1.00
Iowa City, IA	37.1%	25.4%	0.32	24.3%	9.9%	0.59
Santa Barbara-Santa Maria-Lompoc, CA	37.1%	45.3%	-0.22	24.7%	0.1%	0.99
Santa Cruz-Watsonville, CA	37.1%	25.2%	0.32	24.7%	0.0%	1.00
Santa Rosa, CA	37.1%	18.2%	0.51	24.7%	0.0%	1.00
Bellingham, WA	37.1%	20.2%	0.45	23.2%	0.0%	1.00
Jamestown, NY	36.9%	18.8%	0.49	20.0%	8.2%	0.59
Janesville-Beloit, WI	36.9%	14.5%	0.61	23.4%	2.9%	0.88
Modesto, CA	36.8%	21.2%	0.42	23.2%	0.7%	0.97
Atlanta, GA	36.8%	18.3%	0.50	20.1%	2.9%	0.86
Bismarck, ND	36.8%	26.6%	0.28	22.2%	0.0%	1.00
Reno, NV	36.7%	40.0%	-0.09	24.1%	0.4%	0.99
York, PA	36.7%	13.5%	0.63	23.4%	4.9%	0.79
Scranton-Wilkes-Barre-Hazleton, PA	36.7%	12.0%	0.67	20.7%	3.2%	0.85
Wausau, WI	36.7%	7.2%	0.80	23.6%	0.0%	1.00
Redding, CA	36.7%	10.6%	0.71	20.1%	0.0%	1.00
Enid, OK	36.7%	21.2%	0.42	20.1%	0.0%	1.00

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Appendix 1 (continued)

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Eau Claire, WI	36.7%	9.3%	0.75	21.3%	0.0%	1.00
Kansas City, MO-KS	36.6%	20.4%	0.44	23.6%	5.0%	0.79
Visalia-Tulare-Porterville, CA	36.6%	18.3%	0.50	20.1%	0.0%	1.00
Cheyenne, WY	36.6%	42.6%	-0.17	21.2%	0.0%	1.00
La Crosse, WI-MN	36.6%	53.2%	-0.45	21.6%	16.3%	0.24
Portland-Vancouver, OR-WA	36.5%	20.7%	0.43	23.6%	1.3%	0.94
Canton-Massillon, OH	36.5%	13.3%	0.64	22.1%	4.0%	0.82
Richmond-Petersburg, VA	36.5%	24.3%	0.33	23.8%	8.7%	0.63
Longview-Marshall, TX	36.4%	26.8%	0.26	20.9%	6.4%	0.69
Terre Haute, IN	36.4%	29.6%	0.19	19.9%	4.7%	0.76
Parkersburg-Marietta, WV-OH	36.4%	26.5%	0.27	19.3%	0.0%	1.00
Laredo, TX	36.3%	20.3%	0.44	27.0%	0.0%	1.00
Davenport-Moline-Rock Island, IA-IL	36.2%	27.8%	0.23	21.8%	6.7%	0.69
Melbourne-Titusville-Palm Bay, FL	36.2%	30.8%	0.15	21.4%	0.4%	0.98
Grand Rapids-Muskegon-Holland, MI	36.1%	21.8%	0.40	23.6%	7.9%	0.66
South Bend, IN	36.1%	25.6%	0.29	21.7%	7.8%	0.64
Green Bay, WI	36.0%	19.0%	0.47	23.2%	8.5%	0.63
Lawton, OK	35.8%	47.4%	-0.32	20.4%	3.5%	0.83
Cedar Rapids, IA	35.8%	20.1%	0.44	22.9%	9.4%	0.59
Des Moines, IA	35.8%	54.2%	-0.51	22.9%	12.2%	0.47
Abilene, TX	35.8%	29.3%	0.18	19.1%	0.2%	0.99
Williamsport, PA	35.8%	14.9%	0.58	18.7%	0.0%	1.00
Lancaster, PA	35.7%	7.2%	0.80	22.6%	0.6%	0.97
Dubuque, IA	35.7%	23.6%	0.34	20.1%	17.9%	0.11
Fort Lauderdale, FL	35.5%	21.5%	0.39	20.0%	7.4%	0.63
Fort Myers-Cape Coral, FL	35.5%	10.4%	0.71	20.0%	0.1%	0.99
Fort Pierce-Port St. Lucie, FL	35.5%	22.3%	0.37	20.0%	3.0%	0.85
Fort Walton Beach, FL	35.5%	11.4%	0.68	20.0%	0.0%	1.00

Appendix 1 (continued)

MSA	LMI Share of Population	LMI Share of Amount of Loans	LMI Loan Bias: Amount of Loans	LI Share of Population	LI Share of Amount of Loans	LI Loan Bias: Amount of Loans
Provo-Orem, UT	35.4%	7.7%	0.78	22.2%	1.7%	0.92
Burlington, VT	35.4%	16.7%	0.53	23.1%	8.4%	0.64
Sheboygan, WI	35.3%	7.5%	0.79	22.1%	0.0%	1.00
Colorado Springs, CO	35.2%	39.8%	-0.13	22.2%	3.0%	0.87
Goldsboro, NC	35.1%	15.9%	0.55	19.2%	1.0%	0.95
Wichita Falls, TX	34.6%	36.5%	-0.05	18.7%	23.6%	-0.26
Jacksonville, NC	33.6%	8.1%	0.76	15.8%	0.0%	1.00

Source: Milken Institute based on U.S. Census 2000, CRA 2001, and FDIC 2001.

Appendix 2

Explanation of Terms Used in Entrepreneurship Studies
(See http://www.census.gov/csd/susb/defterm.html)

Establishment–A single physical location where business is conducted or where services or industrial operations are performed.

Employment–Paid employment consists of full- and part-time employees, including salaried officers and executives of corporations, who were on the payroll in the pay period including March 12. Included are employees on sick leave, holidays, and vacations; not included are proprietors and partners of unincorporated businesses.

Annual Payroll–Total annual payroll includes all forms of compensation, such as salaries, wages, commissions, bonuses, vacation allowances, sick-leave pay, and the value of payments in kind (e.g., free meals and lodgings) paid during the year to all employees.

Receipts–Receipts (net of taxes) are defined as the revenue for goods produced or distributed, or services provided, including revenue earned from premiums, commissions and fees, rents, interest, dividends, and royalties. Receipts excludes all revenue collected for local, state, and federal taxes. Receipts are acquired from the Economic Census data for establishments in industries that are in-scope[?] to the Economic Census; receipts are acquired from IRS tax data for single-establishment businesses in industries that are out-of-scope of[?]the Economic Census; payroll-to-receipts ratios are used to estimate receipts for multiestablishment businesses in industries that are out-of-scope of[?]the Economic Census. Statistics of U.S. Businesses has receipts for 1997 only.

Enterprise–A business organization consisting of one or more domestic establishments under common ownership or control. The enterprise and the establishment are the same for single-establishment firms. Each multiestablishment company forms one enterprise-the enterprise employment and annual payroll are summed from the associated establishments.

Firm–A business organization consisting of one or more domestic establishments in the same state and industry under common ownership or control. The firm and the establishment are the same for single-establishment firms. For each multiestablishment firm, establishments in the same industry within a state will be counted as one firm; the firm employment and annual payroll are summed from the associated establishments.

Enterprise Size–Designations are determined by the summed employment of all associated establishments. The enterprise size group 0 includes enterprises for which no associated establishments reported paid employees in the mid-March pay period but paid employees at some time during the year.

Establishment Births–Establishments with no employment in the first quarter of the initial year, and positive employment in the first quarter of the subsequent year.

Establishment Deaths–Establishments with positive employment in the first quarter of the initial year and no employment in the first quarter of the subsequent year.

Establishment Expansions–Establishments with positive first-quarter employment in both the initial and subsequent years, and increase employment during the period between the first quarter of the initial year and the first quarter of the subsequent year.

Establishments Contractions–establishments with positive first-quarter employment in both the initial and subsequent years and decrease employment during the period between the first quarter of the initial year and the first quarter of the subsequent year.

Metropolitan Statistical Area (MSA)– An integrated economic and social unit with a large population nucleus. Each MSA consists of one or more counties or statistically equivalent area meeting published standards of population and metropolitan character; in the six New England states (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont), cities and towns (rather than counties) are used as the component geographic units.
Legal Form of Organization (LFO)

a. Corporations–Enterprises legally incorporated under state laws
b. Partnerships–Unincorporated enterprises owned by two or more persons having financial interest in the business

c. Sole Proprietorships–Unincorporated enterprises owned by one person
d. Nonprofit Organizations–Enterprises with nonprofit status (tax-exempt)
e. Other (Associations, Trust, Joint Ventures, Estates, etc.)–Enterprises formed by another legal form of organization
f. Unknown–Enterprises with an unknown legal form of organization

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The Role of Morris Plan Lending Institutions in Expanding Consumer Microcredit in the United States

David Mushinski and Ronnie J. Phillips

> *Economic theory supposes that an entrepreneur, confronted with an unmet social need, will take profit-making action. Annoyed by the darkness, he or she will light a candle. In consumer finance at that time and place, [Arthur J.] Morris was this man of theory come to life.*
>
> James Grant, *Money of the Mind,* 1992.

Abstract This paper examines the rise of the Morris Plan banks, in the early part of the twentieth century, in providing consumer credit. Morris Plan banks emerged at a time when formal consumer credit markets were virtually non-existent. Credit unions appeared in the United States at the same time. Within twenty years of their appearance, Morris Plan banks dominated consumer lending. The demise of Morris Plan banks began with the full recovery of banking after the Great Depression. This paper analyzes the structure of Morris Plan lending in light of the recent literature concerning joint-liability credit institutions. Our analysis suggests that the success of the Morris Plan lending structure may be attributed partly to how it alleviated informational asymmetries and costs associated with lending. The analysis also suggests that the Morris Plan structure grew faster than credit unions because it imposed less joint liability on borrowers than did credit unions. Ultimately, the emergence of Morris Plan banks during this period is an interesting historical example of an institution arising organically within the private sector to meet a credit need, and disappearing after alternative institutional forms, which were less costly to borrowers, emerged as consumer credit mark ets matured.

In late 1987, the assets of thirteen Colorado industrial banks were frozen by the state banking regulator. With the prospect of the bankruptcy of the private deposit insurance fund to which the banks subscribed, the *American Banker* lamented "one of the curiosities of the financial services business, seem to be on

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a downward slide into oblivion." (Welch 1987, p. 9) Further reflection suggests that industrial banks, or Morris Plan thrifts, as they typically were known, were more than a curiosity. Morris Plan banks in the United States are a little-studied example of an early institution that was successful ins making unsecured credit available to low- and middle-income individuals who could not obtain loans from commercial banks.[1]

Morris Plan banks were at the forefront of an explosion of consumer credit that started at the beginning of the second decade of the twentieth century and were the prominent institution for providing consumer credit through the 1920s. When Morris Plan banks first appeared in 1910, few institutions existed for provision of consumer credit to low- and middle-income individuals. The primary provider of consumer credit was the loan shark. Other institutions designed to provide consumer credit were also being introduced at that time. For example, credit unions, transplanted from Europe, were appearing. Against this backdrop, Morris Plan banks became the leading provider of consumer credit in the United States for two decades. By 1931, there were 109 Morris Plan banks operating in 142 cities with an annual volume of loans of about $220 million.

This paper examines the structure and history of the Morris Plan banks in the U.S., analyzes how they alleviated the market failures that produce credit rationing, and considers why they grew faster than credit unions during this period. Like the modern-day Grameen Bank in Bangladesh, the Morris Plan arose organically in response to a perceived need. Unlike many modern institutions that provide microcredit, Morris Plan banks developed as a profit-making institution within the private sector. They came into existence at a time when there were not adequate institutions to supply consumer credit, and, within a matter of years commercial banks had adopted their basic lending principles.

Their demise begins with the full recovery of banking after the Great Depression. By that time, however, the basic Morris Plan idea of providing small consumer loans to individuals had been fully incorporated into commercial bank lending practices. Today there are still two chartered banks in the U.S. with Morris Plan in their name, but they are small community savings banks and no longer operating strictly on the Morris Plan principles.[2]

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[1] Industrial banks still exist in the United States, notably in California and other western states, but they no longer operate on Morris Plan principles and structure. Industrial banks do not accept demand deposits, but can sell certificates of deposit and NOW accounts, and therefore are regulated by the Federal Deposit Insurance Corp. (see Kuehner-Hebert 2000). As a result of the passage of the Gramm-Leach-Bliley Act in 1999, several nonbank corporations such as Wal-Mart and Target, have sought to open financial institutions with industrial bank charters. Though the charters are issued by the state banking agency, if the institutions also wish to have federal deposit insurance, they must be approved by the FDIC as well. See United States General Accounting Office (2005), Ergungor and Thomson (2006) and West (2004).

[2] The two institutions are the Morris Plan Bank of Burlington, North Carolina, and the Morris Plan Company of Terre Haute, Indiana.

In retrospect, the success of Morris Plan banks was due to their reducing the transaction costs associated with the lending process, and alleviating adverse selection and enforcement problems that in recent years have been identified as sources of credit market failures. The Morris Plan lending structure required a loan applicant to find two cosigners who were well acquainted with the borrower, and who were of similar economic standing (i.e., they had similar and steady earning power). The cosigner requirement imposed a type of joint liability whose effect was to reduce transaction costs and problems of adverse selection and enforcement. Evidence supports the presence of these incentives in the Morris Plan lending structure.

The rise of Morris Plan banks is also interesting because they came into prominence during a period in which an alternative lending institution that used joint liability—credit unions—was being introduced to the United States. Credit unions were an institutional transplant that had become popular and successful in Germany. The contrast of two institutions using different levels of joint liability is interesting. We argue that the joint liability imposed under the credit union contract was greater than that of the Morris Plan contract, and that part of the success of the Morris Plan bank was a result of its lower liability on borrowers. Evidence regarding the contract terms of these two institutions, and those of loan sharks, comports with theoretical predictions of the literature regarding joint-liability institutions.

The rest of this paper is organized as follows. Section 1 reviews the state of consumer credit at the beginning of the twentieth century, describes the Morris Plan lending structure, and discusses the emergence of Morris Plan banks. The next section addresses three issues. We first analyze the Morris Plan structure in light of recent theoretical analyses of microcredit institutions. We then review empirical data in light of those theoretical analyses. That discussion is followed by an analysis of why Morris Plan banks prevailed over credit unions during this period. Our conclusion follows.

1 The Democratization of Credit in the Early Twentieth Century

The emergence of the Morris Plan came in the middle of the Progressive Era in American history. The policies of President Teddy Roosevelt to promote resource conservation, antitrust actions by government to break up large corporations, and a general concern for the plight of the common man continued through the presidency of Woodrow Wilson. President William Howard Taft had created the postal savings system for small, often foreign-born, savers, and in New York, the Russell Sage Foundation began its Remedial Loan program. The loan shark was viewed as a despicable character who exploited the poor solely for his own profits. There was a great campaign in New York, and indeed throughout the country, to end the menace of the loan shark. Pawnshops, which provided small, collateralized loans, were also an alternative for small borrowers (Caskey 1994).

Although the loan shark was reviled, and modern-day economists would consider the microlending area a market failure, the remedy for this failure was threefold. The first addressed market failure by providing philanthropic means of supplying credit. The resulting institutions, such as the Provident Loan Society, never intended to make a profit. A second approach, less philanthropic but not necessarily profit-oriented, was the creation of credit unions, the first of which was established in the U.S. in 1909. The third approached the lending needs of the poor as both a profit opportunity and a way to improve their standard of living by establishing a means for them to save. At a time when institutions providing both lending and saving services to poor people virtually nonexistent, a new type of institution emerged: the industrial bank. The earliest and best known of the industrial banks were established under the Morris Plan. From 1909–1917, Morris Plan institutions grew more rapidly than credit unions, as depicted in Figure 1.

As the story is told, Arthur J. Morris, a Virginia lawyer, found it troubling that a securely employed worker seeking a small loan was denied access to credit from local banks, and was forced to borrow from loan sharks. Morris thought that a country that denied bank loans to a large part of its population had a "weak spot" in its banking system. He began to study banking laws in the U.S. in the hope that some type of "banking institution could be evolved that would correct the existing evils and supply credit to the needy" (Herzog, 1928, pp. 12–13). Morris's study led him to establish a set of principles for lending to the poor. They were:

1. Character, plus earning power, is a proper basis of credit.
2. Loans made on this basis of credit must carry the privilege of repayment over a period long enough to match the earning power of the borrower.

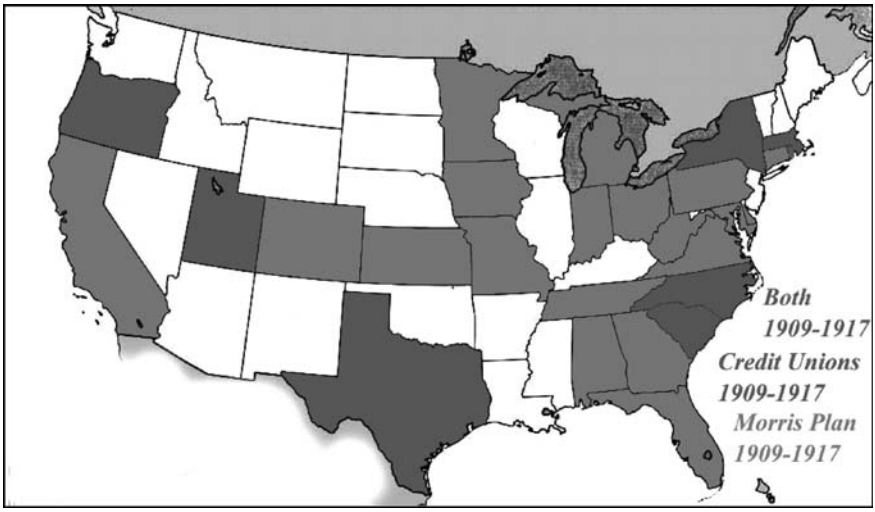

Fig. 1. Spread of Morris Plan Institutions and Credit Unions from 1909–1917.
Source: Derived from Herzog (1928) and Clark (1931).

3. Money so borrowed should always be for some constructive and useful purpose (Herzog, 1928, p. 17).

A key implication of the first principle is that collateral was not necessarily integral to lending. The second principle ensured that loan repayments coincided with receipt of a paycheck.

Developed from these principles, Arthur Morris's original plan of lending operated as follows. A loan applicant had to find two people with income similar to his to cosign the loan. The cosigners "need have no financial resources but must, in turn, have character and steady earning power, in short, they must be as good as the borrower" (Herzog, 1928, p. 19). Despite the legal obligation of cosigners to repay the loan, banks generally did not expect to recover defaulted amounts from cosigners (Herzog, 1928, p. 20). Indeed, Arthur Morris believed that the Morris Plan structure would fail if cosigners became the primary sources of repayment (Herzog 1928, p. 20), No collateral was required for a loan, and the limit on their maturity was one year.

The formal lending process may be presented with an example. Consider a borrower who sought a $100 loan. An interest rate would be set and a fee deducted from the loan amount—out of the $100, for example, the borrower could expect to pay perhaps $8–$6 for interest, plus a $2 fee. The borrower would subscribe to $92 worth of what were called Class C installment certificates. The borrower did not pay back the loan directly, but, over the course of the year, would purchase the certificates. At the end of the loan period, the borrower exchanged the certificates for cash to pay back the loan. This process is illustrated in Table 1.

A cash loan creates a liability for the borrower of $100. Interest and fees totaling $8 are deducted. Over time, as the net worth of the borrower increases, he purchases Class C certificates. At the end of the life of the loan, the Class C certificates are redeemed to liquidate the loan.

If a borrower failed to purchase the Class C certificate, a small fine was imposed, and a notification of delinquency was sent. If the borrower fell a week behind in payments, the cosigners were notified, and if payment remained delinquent, the cosigners were responsible for making the payments, or the

Table 1 Balance Sheet Changes Under Morris Plan Lending

Morris Plan Bank		Borrower	
Cash-$100 Loan $100		Cash $100	Loan $100
Interest & Fees-$8	Net worth-$8	Interest & Free-$8	Net worth-$8
Cash $100	Class C certificates $100	Class C certificates $100	Net worth + $100
Loan-$100	Class C certificates-$100	Loan + $100	
		Class C certificates-$100	

full note became due. If all methods of collecting failed, the final recourse was legal action to recover the amount of the loan from the borrower and cosigners (Herzog, 1928, pp. 21–22).

The initial capital of the Morris Plan institution was provided by issuing Class A stock certificates, which carried voting privileges. Additional capital was provided by issuing Class B 5 percent investment certificates, sold to customers. Sometimes, Morris Plan institutions secured loans from commercial banks (Herzog, 1928, p. 22). The Class C, or installment, certificates also served as a source of funds. Morris Plan institutions that were chartered and regulated banks also used time deposits as a source of funding.

The first Morris Plan institution was the Fidelity Savings and Trust Company of Norfolk, Virginia, established March 23, 1910. In 1911, the Atlanta Loan and Savings Company became the second Morris Plan institution, and in 1912, it was followed by institutions in Baltimore, Maryland; Washington, D.C.; and Richmond, Virginia. The Fidelity Corporation of America was formed to hold stock in Morris Plan institutions, but these resources were inadequate, given the demand for Morris Plan institutions (Herzog, 1928, pp. 24–25).

In 1914, the Industrial Finance Corporation (IFC) was established with the financial backing of several prominent businessmen and philanthropists: Julius Rosenwald, Dr. E.R.L. Gould, Andrew Carnegie, and Vincent Astor. The purpose of the IFC was to aid the establishment of a nationwide system of Morris Plan institutions. With an authorized capital of $7 million ($5 million preferred stock, $2 million common), the IFC acquired all of the assets of the Fidelity Corporation of America. The IFC enjoyed wide support in the business community, including the *Wall Street Journal* and *Banker's Magazine*. The latter noted, in referring to the establishment of the IFC: "This enterprise is certainly a laudable one, and backed up by men of capital and successful business experience, it is reasonably certain to accomplish the ends for which it is designed. ... We are rapidly building up a financial and banking system in this country—the Federal Reserve banks, land credit banks, and the loan association just referred to, all constitute important links of the chain" (quoted in Herzog, 1928, p. 29).

The IFC subscribed to the stock of every new Morris Plan institution, taking 10 percent to 25 percent stock in each. For the relatively few in which the IFC did not hold stock, the new Morris Plan companies paid a franchise fee for the Morris Plan rights. Subsequently, the stock of the Morris Plan institutions owned by the IFC, and all Morris Plan-related activities, were taken over by the Morris Plan Corporation of America. The IFC's three subsidiaries are engaged in insurance, automobile financing, and securities. A trade association was formed in 1919 to promote Morris Plan institutions. This association later changed its name to the Consumer Bankers Association and still exists today. The corporate structure is presented in Figure 2.

Credit unions emerged at the same time as Morris Plan banks. In 1910, one Morris Plan bank and one credit union existed in the United States (Robinson

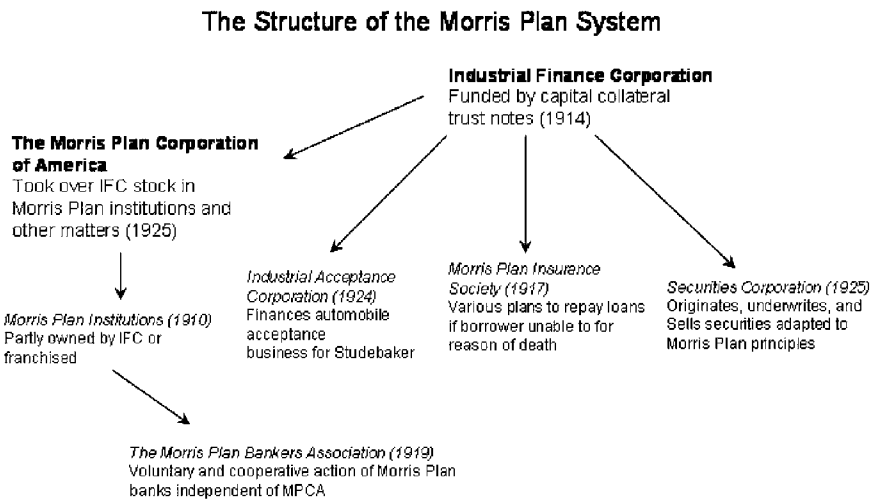

Fig. 2 The Structure of the Morris Plan.
Source: Derived from Herzog (1928).

and Nugent, 1935, pp. 151 and 153). By 1928 there were 106 Morris Plan banks (Clark, 1933, p. 68) and by 1930 there were 1,017 credit unions (Robinson and Nugent, 1935, p. 153) in the United States. While the number of credit unions grew faster over the 1910–1930 period, Figure 3 indicates that the annual loan volume of Morris Plan banks was substantially greater over this period.

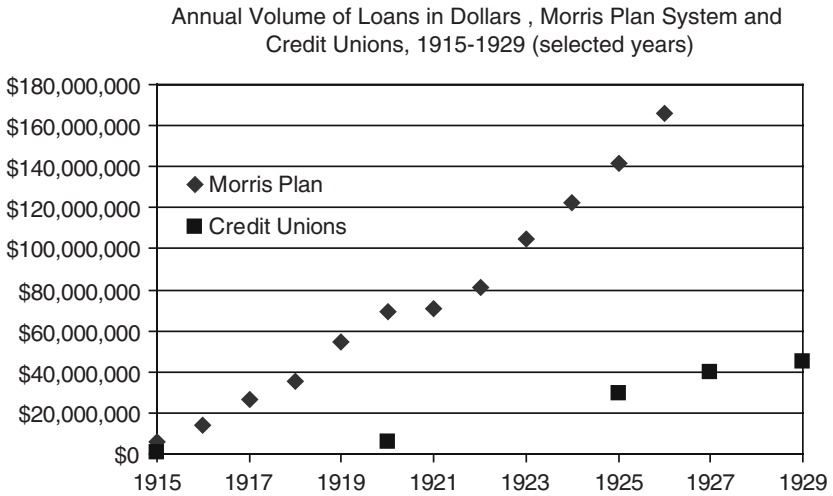

Fig. 3 Annual Volume of Loans in Dollars, Morris Plan System and Credit Unions, 1915–1929 (selected years)

By 1924, commercial banks in New York began to offer small consumer loans. As bank charters were altered by states, and eventually by federal legislation, the size of consumer lending by Morris Plan banks was dwarfed by commercial banks that offered the additional convenience of accepting demand deposits. In addition, credit cards and consumer installment credit superseded the uniqueness of Morris Plan institutions, and the demand for their loans. By the post-World War II period, the Morris Plan banks, although still active, were only a small segment of consumer lending.

2 Analysis of Morris Plan Lending

This section considers the Morris Plan lending structure in light of recent analyses of non-market credit institutions. Our analysis also provides evidence that supports recent theoretical analyses of joint-liability lending institutions. We first analyze how the Morris Plan lending structure alleviates the asymmetric information and transaction costs that produce credit rationing. We then analyze the Morris structure, credit unions, and loan sharks in light of recent literature on non-market credit institutions. We conclude by considering why the Morris Plan structure became more prominent than credit unions during this period.

2.1 Analysis of the Morris Plan Lending Structure in Light of the Microcredit Literature

In recent decades, non-market credit institutions that alleviate rationing as a consequence of asymmetric information and transaction costs have been analyzed. Because Morris Plan lending involved joint-liability lending without security, analyzing the microfinance literature of other institutions offering joint-liability lending for unsecured loans is useful in understanding the success of the Morris Plan structure. Of course, these institutions were designed to provide credit to microentrepreneurs. Even though Morris Plan loans were made primarily for consumption purposes, many of the results in the microfinance literature are useful for the present analysis.

The Grameen Bank credit group structure and credit cooperatives are examples of prominent joint-liability institutions. The Grameen Bank credit-group structure makes small amounts of credit available to groups of microentrepreneurs. The groups are composed of five people who self-select and live in the same community. Groups must undertake a certification process that requires group meetings, business training, and forming business plans. Once a group is certified, loans are made in a sequence determined by the credit group. No new loans can be made if any member is delinquent.

Credit unions may take a variety of forms (e.g., Banerjee, et. al., 1994). Within the United States, state laws define how credit unions function. Credit unions were organized, generally, "within groups of people who had some common interest, such as labor unions, employee associations, fraternal orders, or neighborhood groups" (Robinson and Nugent, 1935, p. 96). Credit unions sold shares to members and, when appropriate, issued dividends on those shares. Membership was determined by membership within the group served by the credit union and ownership of at least one share in the credit union. Members were eligible to receive unsecured loans. At times, cosigners were required on those loans.

The key characteristic of the Morris Plan lending structure was the cosigner requirement. Requiring cosigners on a loan helped reduce Morris Plan banks' costs of reviewing a loan application, alleviate the banks' informational asymmetries, and lower their monitoring costs. The cosigner requirement reduced bank costs of loan review at the time of application Herzog (1928, pp. 19–20) noted that "[t]he cosigners' endorsement meant the saving of extra time and expense in sifting evidence bearing upon the prospective borrower's character."

Requiring applicants to find cosigners also alleviated adverse-selection problems. Co-signers who were required to cosign the note would presumably do so for people who were likely to repay the loan. The cosigner aspect of the Morris Plan lending structure is similar to the Grameen Bank requiring credit group members to find several other people willing to form a credit group with them. Ghatak (1999) and Van Tassel (1999) have shown that lenders can sort groups composed solely of high-type (low-risk) individuals (*high-type groups*) from groups composed of low-type (high-risk) individuals (*low-type groups*) through their choice of joint liability in a lending contract. Joint liability is more costly for low-type individuals because they are more likely to face a default by a group member. Low-type individuals, therefore, prefer contracts with low levels of joint liability. In light of this observation, a lender can separate high-type groups from low-type groups by offering two different contracts to each group. Low-type groups will prefer contracts with low joint liability and higher interest rates, and high-type groups will prefer contracts with high joint liability and lower interest rates (Ghatak 1999). Van Tassel (1999, p. 14) finds that lenders offer contracts with no joint liability to low-type individuals and contracts with some joint liability to high-type individuals, With this sorting of groups, lenders will make loans that otherwise would not have been made, improving efficiency (Guinnane 1994, 202).

The foregoing equilibrium that separates high- and low-type groups depends on an assortative-matching finding. The assortative-matching result states, basically, that the joint-liability characteristic of group lending induces equilibrium, in that borrowers of the same type form groups (Ghatak 1999, p. 29). Both Ghatak (1999) and Van Tassel (1999) found that joint-liability contracts would induce such matching.

We would not necessarily expect assortative matching to arise naturally when an applicant must find cosigners for consumption loans. The

assortative-matching result arose in the context of providing credit to micro-entrepreneurs for productive purposes. In the production context, the returns of each group member depended on the other group members.; joint liability affected the decisions of all members. In the consumption loan setting with cosigners, the returns of the borrower do not depend on the cosigners, so an applicant does not necessarily have the incentive to seek out cosigners of the same type; the borrower would be willing to find anyone to be a cosigner. Thus, the joint liability that induces assortative matching and enables lenders to separate low- and high-type groups may not necessarily arise.

The need for assortative matching to induce a separating equilibrium may explain the Morris Plan requirement that cosigners be of the same standing as the loan applicant. Such a requirement, especially in terms of employment, imposes on cosigners the possibility of real loss. When faced with possible real losses from cosigning, cosigners presumably would cosign only if an applicant was a high type, or likely to repay the loan. This requirement, then, may have created the type of joint liability need to achieve the separating equilibrium.

The separating equilibrium identified by Ghatak (1999) and Van Tassel (1999) may explain part of the success of the Morris Plan structure. Given the assortative matching required by the Morris Plan, the joint liability and interest rates offered may have induced only high-type individuals to seek loans, with the costs of cosigning on the loan of a low-type individual too great for that individual to obtain co-signers.

The costs to an applicant of finding cosigners might also alleviate adverse selection problems. Conlin (1999) has noted that the group-certification process of the Grameen Bank credit groups may reduce adverse selection problems because the costs of group certification may be less burdensome to high-type individuals than to low-type individuals. Under these circumstances, the greater costs of group certification for low-type individuals may induce them not to form groups. While Conlin did not apply his idea to the group-formation process, the idea would seem transferable to group formation. The costs to an individual of finding cosigners would be expected to be lower for high-type individuals. Requiring two cosigners, rather than one or three, may have served to separate the high-types from the low-types while not making the loan application process too burdensome for the high-type individuals.

Cosigners also served to lessen both the bank's costs of loan monitoring and enforcement of loan repayment.[3] In the event of delinquency of at least a week, the bank would contact cosigners in the hope that they would rectify the default

[3] Analyses of microfinance institutions such as the Grameen Bank credit groups have focused on the extent to which the joint liability in a credit groups reduces moral hazard problems (e.g., Stiglitz, 1990). These analyses focus on how group members might affect the productive outcomes of fellow group members. Because the present analysis focuses on consumption credit provided to employed individuals, the moral hazard analyses are not directly relevant.

(Herzog, 1928, pp. 22, 68). The lower monitoring costs of using endorsers to check up on a borrower is apparent (Armendáriz de Aghion 1999).

Analyses of the enforcement of loan repayment concern a borrower's *willingness* to repay a loan. These analyses consider the situation where a borrower has the funds to repay a loan but may not apply them to the loan. Besley and Coate (1995) analyzed the impact of both joint liability and social sanctions on borrower willingness to repay loans. They observed that joint liability had opposing effects. In the event that a party has a high return, that party can repay the loan of a defaulting member. On the other hand, if a group member has a moderate return, leaving her unable to repay the loan and the loan of a defaulting member, she might choose to default. Thus, the equilibrium depended on a group member's production outcome. Besley and Coate (1995) found that, in the absence of social sanctions, group lending dominated individual lending at low interest rates (pp. 8–9. When social sanctions were introduced into the model, they found that group lending dominated individual lending if social sanctions were sufficiently high (Besley and Coate, 1995, p. 13). They concluded by noting that "[t]he idea of drawing on the punishment capability of some agents to improve upon outcomes, may be of wider significance in contract design in situations where market and non-market institutions interact" (Besley and Coate, 1995, p. 16).

The enforcement ideas cited by Besley and Coate (1995) would only be stronger in the Morris Plan setting. The Besley and Coate model involved two producers who could realize from good to bad production outcomes. Default occurred when neither party could repay his loan (i.e., both had bad outcomes) or when one party could not repay both loans. The Morris Plan provided loans to individuals who were working and whose cosigners were working. In some sense, therefore, all parties to the loan were likely to attain outcomes where the loan could be repaid. In this context, we would expect joint liability to induce an equilibrium with loan repayment. Of course, social sanctions were also present under the Morris Plan structure. The cosigners obtained by loan applicants would necessarily be well acquainted with the applicant and could, upon delinquency, impose social sanctions on the applicant. For example, a letter carrier named Ed Stephens obtained two endorsers who were fellow letter carriers (McBlair, 1913, p. 14). These possible social sanctions, while not without cost to a borrower, would only increase the likelihood of repayment.

2.2 The Place of Morris Plan Lending in Providing Consumer Credit

We have observed that Morris Plan lending was one of several types of lending institutions for the provision of unsecured consumer credit that were present around 1910. Loan sharks were a major source of consumer credit. While loan sharks would accept any security they could get for a loan, they would make

unsecured loans as well for people who had little or no security (Moulton 1930, p. 681; Clark 1933, p. 175). Credit unions were emerging as a possible alternative to Morris Plan lending. Robinson and Nugent (1935) observed that "[a]t the close of the year 1910, the credit union and Morris Plan of Industrial Banking were little more than potential forces" (p. 96). While credit unions also grew between 1910 and 1930, the Morris Plan emerged as the largest provider of consumer credit. We will analyze all three lending institutions in light of the theoretical literature regarding micro-credit institutions.[4]

Our comparison of the Morris Plan lending structure with credit unions and loan sharks is informed, in part, by the adverse selection analyses of Ghatak (1999) and Van Tassel (1999). We recall that they explained the success of group lending in terms of a trade- off between joint liability and interest rates charged, with lenders separating high-type individuals from low-type individuals by offering contracts of differing joint liability and interest rates. They modeled joint liability as the cost of having to repay all or a portion of another person's loan. We use their basic insight regarding the joint liability-interest rate trade-off, but expand the costs of joint liability to include all costs of such a contract. Those costs may include social sanctions and any pecuniary losses arising from nonpayment of a loan. Inclusion of these as the "costs of joint liability" makes sense because they may differ across contractual forms, and should affect an individual's decision to apply for a loan under a given institutional form.[5]

The joint liability-interest rate dichotomy provides a means of comparing these three lending structures.[6] Because joint liability is a critical instrument in the contract structure, we analyze the institutions in terms of the joint liability imposed under each. This discussion under the loan-shark contract is brief; there was no joint liability. So the core of our discussion focuses on the relative joint liability of credit unions and the Morris Plan lending structure. We subsume the discussion of the Morris Plan lending structure within the discussion of credit unions.

Guinnane (1994, p. 214) has noted that two groups generally may exist under credit-group lending. The first group consists of a borrower and cosigners, while the second group consists of the whole credit union. The extent and costs of joint liability that arise under each group differs. For the first group, the costs of joint liability to a borrower arise from economic loss and social sanctions subsequent to loan default. In the context of consumer credit, a

[4] Robinson and Nugent (1935, p. 156) observed that no commercial banks entered the field covered by the Morris Plan until 1924.

[5] We do not discuss the cost of lost access to future credit because it exists in both cases.

[6] Van Tassel (1999, pp. 17–18) found that if lenders were permitted not to offer a loan if it generated no profit, an equilibrium could arise in which different lenders specialized in different types of lending. This result might explain the apparent specialization of these three types of lenders.

borrower without collateral would incur no direct economic loss, but would expect costs to arise from social sanctions imposed by cosigners.

Several costs of joint liability arise from membership in the second, larger, group: the credit union. In becoming a credit union member, an individual exposed her stock interests to loss, and her rights to dividends to reduction or loss if the individual or a credit union member failed to repay her loan.[7] Because credit unions were composed of individuals closely associated in their daily lives, a group member who defaulted on a loan could become the object of social sanctions by people with whom she worked every day. Further, default on a loan affected the overall health of the credit union. Overall, joint liability was broader in that one's liability extended to a larger group of people. On the other hand, the impact of an individual member of any given default was less.

In examining the relative costs of joint liability arising from credit union loans and the Morris Plan structure, we argue that the costs of joint liability were greater under credit unions as compared to Morris Plan lending. We note at the outset that not all credit union loans required cosigners. In 1933, the Credit Union Bureau estimated that 50 percent of all of its loans required no cosigners, while 30 percent of its *secured* loans required cosigners (Clark, 1933, p. 96). Cosigner contracts required two cosigners (Clark, 1933, p. 95). In light of the fact that not all credit union loans involved cosigners, a discussion of the relative strength of joint-liability lending under both credit unions and the Morris Plan must analyze credit union loans with and without cosigners. In the case of credit union loans with cosigners, joint liability was clearly stronger because it included the type of joint liability arising under Morris Plan lending plus the broader form of joint liability arising from credit union membership.

We argue that the costs of joint liability arising from credit union loans with no cosigners would be higher than those under Morris Plan loans. We have noted that the economic loss to a Morris Plan borrower from default was, effectively, zero. For credit unions, default entailed losing one's share(s). The credit union member also exposed herself to loss in the event of default of other credit union members. That loss was not present in Morris Plan lending. For both lending structures, default prompted social sanctions. In the Morris Plan case, the sanctions came from the cosigners, with whom the borrower may or may not interact daily. In the credit union case with no cosigners, the sanctions came potentially from all its members, with whom the borrower might interact every day. The power of the sanctions from one person probably varied. The social sanctions from one credit union member because of default would not be as powerful as those from a cosigner. Of course, the aggregate social sanctions might be larger in the credit union case compared with the cosigner case, because more people would be affected by a default.

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[7] Dividends were important. Froman (1935, p. 294) notes that dividend rates were typically 7 percent before 1930. We also note that because credit unions were corporations, members had limited liability for the obligations of the credit union.

Table 2 Comparison of contract terms of three lenders

Institution	Loan Cost to Borrower[a](%)	Loan Amount[b](Dollars)
Loan Shark	240–480	
Morris Plan	17–35	225
Credit Unions	37086	50–125

[a] Source: Moulton (1930, p. 691). See also: Clark (1933, pp. 119, 128–129) for similar numbers.
[b] Source: Clark (1933, pp. 72 and 97).

We now review empirical data in light of the foregoing theoretical analysis of the Morris Plan lending structure and the comparative analysis of the three lending institutions. We first consider the borrower's interest rates, and the costs of the loan. The joint-liability analyses of Ghatak (1999) and Van Tassel (1999) imply that the lender's interest rates should be highest for loan sharks and lowest for credit unions. Table 2 identifies average costs to a borrower on loans made by these three types of lenders obtained from Moulton (1930). The average cost measures seek to make the costs of the different lending structures comparable by accounting not only for differences in interest rates charged but also any deductions from the loan amount taken at the time of borrowing and differences in the timing of payments. We were only able to obtain loan shark cost measures for wage assignments and chattel mortgage loans. We report costs for wage assignments. Since unsecured loans would have the greatest risk among all of the loans made by loan sharks, the reported costs are likely lower than the actual rates for unsecured loans. The borrower costs reported in Table 2 comport with theoretical predictions. Loan sharks have, by far, the highest costs. Morris Plan lending is in the middle, and credit unions have the lowest interest costs.[8]

Our theoretical discussion has implications for the expected typical loan term under these various lending structures. In analyzing credit cooperatives in Germany, Guinnane (2001) observed that we might expect credit cooperatives to provide smaller loans to members with whom they were more familiar, because the fixed costs of loan review would be lower for such members. In the present context, we would expect credit unions to have better information about borrowers than Morris Plan lenders because of credit unions' greater familiarity with a loan applicant. Thus, we might expect credit unions to provide smaller loans than the Morris Plan banks. In his analysis of consumer credit lenders, Clark observed that "[m]ost of the loans made by credit unions average much lower in amount than those made by the industrial banks ...." (Clark 1933, p. 96) He noted that the average loan in the states with credit

[8] See also: Froman (1935, pp. 294–295) for an analysis of the interest rates charged by 1,010 credit unions in 1927. Neifeld (1931, 325) contains similar costs to borrowers.

unions was, at that time, $50–125, while the average small loan for Morris Plan banks was $225. (Clark 1933, pp. 72 and 97).[9]

Moving away from a comparison of Morris Plan lending and credit unions, some evidence indicates that the Morris Plan lending structure alleviated informational asymmetries. If we expect the presence of cosigners to alleviate informational asymmetries and lower the costs of loan review, we might expect smaller loan amounts for cosigner notes as compared to unsecured, single-name notes. Data from eight Morris Plan banks in Indiana between 1936 and 1938 that provided both types of loans indicated that cosigner loans were, on average, smaller than unsecured loans (Saulnier 1940, p. 86). In 1937, for example, the average cosigner loan was $172, and the average unsecured loan was $249. Data of a large Morris Plan bank for the 1936–1939 period also supported these findings (Saulnier 1940, p. 87).

2.3 Why the Morris Plan Lending Structure Grew Faster than Credit Unions

Figure 3 indicates that the Morris Plan grew at a substantially faster rate than credit unions during this period. Of course, the Morris Plan structure faded away as less costly loans became available, but it's interesting to ask why the Morris Plan lending structure prevailed over credit unions at one time.

A discussion of why the Morris Plan structure prevailed should start with an observation made when the Morris Plan first appeared and which is made in current discussions of microcredit in the United States. Americans are, generally, individualists. Peter Herzog (1928) observed that "such a plan [the cooperative principle] is not fitted for application to such a degree of success in America [as compared to Europe] ... Here we find the idea of cooperation to be a relatively new thing. The idea of individual independence ... continues to be the predominating feature of American thought" (p. 16). Ghatak and Guinnane (1999), observed, with regard to transplanting the Grameen Bank credit group structure to the United States, that "people in Bangladesh derive more of their identity from membership in groups such as the family than do Americans, who very much express individualism."[10] This characteristic of Americans may explain why the Morris Plan, which evolved organically in the United States

[9] Saulnier (1940) noted that limited evidence was available regarding loan size. He presented anecdotal evidence regarding loan size for specific Morris Plan companies (pp. 83–90). His reported numbers are consistent with those of Clark. Davis (1914) observed that industrial banks "[i]n general ... are unable to loan money profitably in amounts smaller than $50 ...." (p. 6)

[10] Of course, this view of Americans is a generalization. An exception to this perception of Americans may be Native American reservations in the United States. Pickering and Mushinski (2001) observed that ties among individuals in traditional kinship groups were prevalent especially on the Pine Ridge Indian Reservation.

in response to a perceived need, grew faster than an institutional transplant that arose under different circumstances.

American individualism affects the efficacy of lending structures in alleviating informational asymmetries and transaction costs. Individualism implies, generally, that a given person will have less information about her neighbors and co-workers. Less information about other people makes joint liability costlier for an individual. Greater costs of joint liability will cause people to choose a lending structure with lower levels of joint liability. Thus, we might expect people to choose, when possible, the Morris Plan lending structure over credit unions.[11] The seeds for the demise of the Morris Plan lending structure lay also in the individualism of Americans. Once the consumer credit market matured, and lending contracts arose with no joint liability, or less than the Morris Plan, we would expect people to choose the contract with less joint liability. As noted earlier, the Morris Plan lending structure faded away after the second world war, prompted by the growth of consumer lending by commercial banks, installment credit, and credit cards.[12]

Laws in the United States regarding credit unions also may have had an impact on the success of credit unions in the United States. State laws limited credit unions to a defined membership, such as all the employees in a firm or all of the members of some organization. Under these circumstances, an individual in need of consumer credit would be less likely to obtain a loan from a credit union. Indeed, any one who was not a member of a group that had formed a credit union could not obtain a credit union loan. American individualism may have been an impediment to the initial formation of credit unions, and it's possible that the existing laws regarding credit unions reflected the individualism of Americans—with little experience in cooperation, the drafters of the legislation could not appreciate the subtleties of cooperative action.

3 Conclusion

The emergence of Morris Plan banks in the early twentieth century is an example of an institutional structure appearing organically and through the private sector to satisfy a consumer need. When analyzed in light of the recent

[11] We must recognize that some loan shark contracts had no joint liability. That people chose the Morris Plan over loan sharks is a testament to the severity of the terms of the loan shark contract.

[12] Pickering and Mushinski (2001) found evidence of a similar movement away from a costlier credit structure on the Pine Ridge Indian Reservation. They noted that after the federal government mandated direct deposit of federal funds into bank accounts, some group members with such direct deposits obtained bank loans for their microenterprises rather than credit-group loans. The banks loans, supported by direct deposits as security, imposed fewer costs on borrowers because, for example, individuals were not exposed to possible social sanctions and or attended regular meetings.

literature on microcredit institutions, the Morris Plan lending structure appears to have been devised by someone informed by its content. The Morris Plan appears to have avoided adverse selection and enforcement problems while lowering bankers' lending costs. The lending structure also appears to have been attuned to the nature of Americans. Indeed, the contrasting experiences of credit unions and Morris Plan banks during this period has lessons for the creation of financial institutions that offer microcredit. In designing microcredit institutions, lenders should consider the social and cultural context into which the institution is to be introduced. In the present context, the Morris Plan structure was more attuned to the a typical American individuality than were credit unions. This is a point has not been lost on researchers (e.g., Ghatak and Guinnane (1999), Conlin (1999), and Pickering and Mushinski (2001)).

Appendix: 1 Morris Plan Loan Agreement, 1913

Morris Bank of Nashville
$_____Nashville, TENN., _____ 19_____ weeks after date, for value received, we, the undersigned, jointly and severally promise to pay to the order of the MORRIS BANK OF NASHVILLE, at its office in the City of Nashville, the sum of ____ Dollars ($___), in gold coin of the United States, having deposited herewith as collateral security Installment (Class C) Investment Certificate of said Bank, No. ___, and _____
And the makers further promise whenever required by the said Bank, to increase the amount of security for this obligation until satisfactory to the Bank, and should this security be not increased when so required, or should default be made in the payment of any installment due to the said Bank on the certificate herewith hypothecated, or in the event of the default in the observance of any other regulation of said Bank, then this obligation, at the option of the Bank, shall become due and payable, whether due according to its face or not.

And for the purpose of enforcing the payment of this obligation, the said Bank shall have full power and authority to sell, assign, collect, compromise, transfer, and deliver the said obligation, whether original or additional, or so much thereof as may be requisite. Such sale may be made wherever the said Bank may direct, and may be public or private, with or without advertisement, and with or without notice to or demand on the makers, or any of them, and said Bank may become the purchaser of any or all said collateral at any such sale.

If, before the obligation is paid and the collateral herewith hypothecated is released, the makers, or any of them, shall become liable to the said Bank on any other obligations, then the collateral herewith hypothecated, or the proceeds thereof to the extent that they are not required in paying this obligation, shall be held by the said Bank as collateral security and applied by it upon the terms

herein set forth on such other obligations of the makers as the Bank may elect; and the makers, and each of them, do hereby appoint the President or the Attorney of this Bank their true and lawful attorney in fact to assign or transfer any or all of the above mentioned securities substitutes therefor.

The makers hereby constitute and appoint the Attorney of this Bank, with the power of substitution, their true and lawful attorney in fact for them and in their name, place and stead to acknowledge service of any and all legal process in any action or suit brought for the collection of this obligation, and to acknowledge and confess judgment upon such obligation, including a reasonable fee for the services of such attorney, hereby ratifying and confirming the acts of said attorney in fact, as full as if done by them in person.

If at the maturity of this note all installment payments and fines, if any, for the period shall have been paid on the Installment (Class C) Investment Certificates hypothecated herewith, then the maker hereof who hypothecated the same may surrender to the Bank the said certificate and with the cash received therefrom discharge the obligation provided notice of such intention be given to the Bank within ten days before the maturity of this note.

It is understood and agreed, however, that the Bank shall not be compelled to resort first to the collateral hypothecated for the security of this obligation, but may at its election require said obligation to be paid by any maker or makers hereon, and to this agreement said maker or makers hereby specifically give their assent, and upon the payment of this obligation by the said makers, or any of them, this note, together with the collateral aforesaid, shall be transferred to the maker or makers who pay this note without recourse against the Bank.

And each of us, whether principal, surety, guarantor, or other party hereto, hereby severally waives any or all benefit or relief from any exemption laws of any State now in force or hereafter to be passed as against this debt or any renewal thereof; and each further waives demand protest and notice of demand, protest and nonpayment.

SIGNATURES: ADDRESSES:

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Policies to Expand Minority Entrepreneurship: Closing Comments

Michael S. Barr

1 Introduction

This has been a productive conversation. In my closing comments, I want to shift our focus somewhat, from entrepreneurship in low-income communities to minority entrepreneurship generally. I want to do so because many minority entrepreneurs are connected to or hire from low-income communities, and because minority entrepreneurs face critical barriers even when they attempt to create and grow firms outside of distressed communities. In this comment, I want to highlight key barriers and suggest five steps for Congress, the banking regulators, and business leaders that may help the United States benefit more fully from the talents of minority entrepreneurs.

2 Minority Entrepreneurship

2.1 Trends in Minority Entrepreneurship

Despite significant gains in minority entrepreneurship over the past decade, African-American-owned firms and Hispanic-owned firms are underrepresented relative to their proportion of the U.S. population. According to the most recent data, in 2002 there were more than four million minority-owned firms, employing nearly five million people, with more than $700 million in revenues.[1] Minority-owned firms constituted more than 17 percent of all U.S. firms,

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[1] U.S. Census Bureau, 2002 Economic Census, Survey of Business Owners (SBO).

G. Yago et al. (eds), *Entrepreneurship in Emerging Domestic Markets*.

employed 4 percent of U.S. workers, and earned 3 percent of business revenues.[2] African-American-owned firms constituted 5 percent of all firms; Hispanics, 7 percent; and Asian Americans nearly 5 percent.[3] African Americans and Hispanics each constituted more than 12 percent of the population, and Asian Americans, 3.6 percent.[4] In 2002, African-American-owned businesses had $93 billion in revenues; Hispanic firms had $226 billion in revenues; and Asian-American-owned firms had $343 billion in revenues. Three-quarters of minority-owned firms have no paid employees. African-American- and Hispanic-owned firms overwhelmingly have no paid employees.[5]

From 1997–2002, minority-owned firms grew at a much faster rate than U.S. firms as a whole. The number of U.S. firms grew 10 percent, and receipts grew 22 percent over the period. At the same time, Hispanic-owned firms grew 31 percent in number, and 22 percent in receipts; African-American-owned firms grew 45 percent in number, and 30 percent in receipts; Asian-American-owned firms grew 24 percent in number, but only 13 percent in receipts.[6] Almost all of the growth occurred in firms with no paid employees; Hispanic firms with paid employees actually declined in number.

Despite overall growth for minority-owned firms, however, minority-owned firms failed at a higher rate than other firms. Minority-owned firms with employees in 1997 "had lower survival rates than non-minority-owned employer establishments" in the four years following. The survival rate for non-minority firms was 72.6 percent; 61 percent for African-American-owned firms; 68.6 percent for Hispanic owned firms; and 72.1 percent (close to the non-minority average) for Asian-American-owned firms.[7]

Minority entrepreneurship is growing, but still lags far behind the rates for whites. There likely are myriad reasons for these differences. Broader societal factors that influence minority entry and success in business, such as the significant gap in wealth between minority households and white households,[8] and the effects of our educational system, are far beyond the scope of this comment.

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[2] Ibid.

[3] Ibid.

[4] See U.S. Census Bureau, http://quickfacts.census.gov/qfd/states/00000.html.

[5] U.S. Census Bureau, 2002 SBO, *supra*.

[6] Ibid.

[7] Ibid.

[8] The median African-American household has about six to seven times less wealth than the median white household: $19,000 compared to $120,900. Ana M. Aizcorbe et al., *Recent Changes in U.S. Family Finances: Evidence from the 1998 and 2001 Survey of Consumer Finances*, 89 Fed. Res. Bull. 1, 7–8 (2003). "The net worth of black and Hispanic *college* graduates is similar to the net worth of white *high school* graduates, and the net worth of black and Hispanic high school graduates is similar to the net worth of white high school dropouts." John Karl Scholz and Kara Levine, "U.S. Black-White Wealth Inequality: A Survey," 4 (2003), http://www.ssc.wisc.edu/~scholz/Research/Wealth_Survey_v5.pdf.

But the next section describes financial and market barriers that affect minorities who pursue entrepreneurial endeavors.

2.2 Barriers to Minority Entrepreneurship

Minority entrepreneurs, like other entrepreneurs, need access to credit and equity to create and grow their businesses. They need access to business relationships that invite new opportunities. They need access to financial, technical, and managerial talent that enable businesses to thrive. In these areas, minority entrepreneurs may face significant barriers.

Small businesses in general have a harder time getting access to credit than larger firms in part because it is more difficult for them to demonstrate creditworthiness. Despite gains over the past decade in financial innovation and technology that make it possible for large banks to generate credit scores for small-business loans and sell government-guaranteed, real-estate secured, and other small business loans on secondary markets,[9] small-business borrowers still rely disproportionately on a relatively small number of local lenders. They can provide credit based on judgment, relationships, and local knowledge.[10] Relationship lending is critical for small firms.[11] For minority firms, evidence suggests that this sometimes presents significant barriers to accessing credit.

A number of studies have determined that minority-owned small businesses have a more difficult time getting access to credit than other businesses even after controlling for a wide variety of factors related to creditworthiness.[12] For example, one study found that African-American business owners receive smaller bank loans than similarly situated whites after controlling for net worth, education, age, and other factors.[13] In the study, smaller loan size was

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[9] See, e.g., Zoltan Acs, *The Development and Expansion of Secondary Markets for Small Business Loans,* in J. Blanton et al., eds., "Business Access to Capital and Credit," a Federal Reserve System Research Conference, 8–9 March 8–9 1999.

[10] See, e.g., Arnoud W.A. Boot, *Relationship Banking: What do we Know?* 9 J. of Fin. Intermediation 7, 9–12 (2000).

[11] See, e.g., Brian Uzzi and James Gillespie, "What Small Firms get Capital and at What Cost: Notes on the Role of Social Capital and Banking Networks," in *Business Access to Capital and Credit*, *supra*.

[12] See Michael S. Barr, et al., "The Community Reinvestment Act: Its Impact on Lending in Low-Income Communities in the United States," in E. Mayo and C. Guene, eds., *Banking and Social Cohesion* (2001).

[13] Timothy Bates, "Commercial Bank Financing of White- and Black-Owned Small Business Startups", 31*Quarterly Review of Economics & Business* 64 (1991); Timothy Bates, "Unequal Access: Financial Institution Lending to Black- and White-Owned Small Business Startups", 19*Journal of Urban Affairs* 487 (1997).

found to be an important determinative of higher failure rates for African-American-owned firms.[14] A follow-up study found that, all other things being equal, African-Americans received only $0.92 worth of additional credit for every additional dollar of equity they put into their businesses, while white borrowers received $1.17.[15] White borrowers were able to leverage their education and experience into better loans, while black applicants with similar educational backgrounds and experience were not.[16]

Another study found that African-American-owned firms, controlling for firm creditworthiness, firm size, age and business location, industry type, and education of owners, were about 25 percent more likely to be denied a loan than white-owned businesses.[17] In addition, African-American firms paid more in interest, even after accounting for business credit histories.[18] Moreover, African-American-owned firms and Hispanic-owned firms were much more likely to report not applying for a loan for fear of rejection, even after controlling for firm creditworthiness.[19] Controlling for a wide range of factors relating to the risk of borrowers and the market structure of the banking sector, another study found that African-American-owned firms and Hispanic-owned firms were one-third more likely to be turned down for business loans than their similarly situated white counterparts.[20] The study also found that, all else being equal, Hispanic firms (but not African-American firms) paid higher interest rates than white borrowers as a function of market concentration.[21] African-American-owned businesses, white-owned businesses, and Hispanic-owned businesses had similar demand for credit.[22]

A final study adds further controls for the economic health of local communities.[23] In this study, African-American-owned firms again were found to have lower approval rates than white firms, but the differences were smaller than in other studies. The study found no statistically different disparities between Hispanic-owned and white-owned firms.[24] As their authors are aware, each

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[14] Ibid.

[15] Bates, *Unequal Access supra.*

[16] Ibid.

[17] David Blanchflower, Phillip Levine, and David Zimmerman, "Discrimination in the Small Business Credit Market," NBER Working Paper No. 6840, December 1998.

[18] Ibid.

[19] Ibid.

[20] Ken Cavalluzzo and Linda Cavalluzzo, *Market Structure and Discrimination: The Case of Small Business,* 30 Journal of Money, Credit, and Banking 771 (1998).

[21] Ibid.

[22] Ibid.

[23] Raphael Bostic and Patrick Lampani, "Racial Differences in Patterns of Small Business Finance: The Importance of Local Geography," *Business Access to Capital and Credit*, *supra.*

[24] Ibid.

study suffers from limitations of available data,[25] and more research is warranted to further our understanding of minority firms' access to credit.

In addition to credit, businesses need equity, both for business formation and expansion. Equity provides the patient capital firms need in the early stages of development before they can generate sufficient cash flow, and gives firms leverage to access credit. Equity is also critical to weathering downturns in the economy. And such capital is essential to expand businesses rapidly to capture gains from innovation and new market opportunities. The U.S. venture capital industry is the envy of the world for its ability to translate innovative ideas from new firms into commercial reality.[26]

Yet venture capital, critical for the rapid growth of small firms, is likely to be harder to attract for minority entrepreneurs than credit. Even during the heyday of venture capital's growth in the late 1990s, venture capital funding was highly concentrated in a few sectors and geographic regions.[27] High technology, Internet, biomedical, and related firms focused in a handful of geographic areas attracted the bulk of venture capital funding. Most small businesses, including minority-owned firms, rely, instead, on banks, finance companies, credit cards, and their family and friends for financing. In that regard, the significant wealth gap affects comes into play in reducing the ability of many minority firms to start new businesses with the equity they need. Minority-owned firms are not a core focus of most venture capital firms.

Yet when minority firms are able to access venture capital, their performance has proved strong.[28] Venture capital firms focused on minority-owned businesses had 20 percent returns in the 1990s, on a par with private equity funds generally.[29] Two dozen minority-focused venture capital firms had raised a total of more than $1.3 billion in equity by 2000, a peak year for venture capital. The money came mostly from pension funds, but also from banks, insurance companies, and other sources.[30] These funds have invested in a more diverse range of sectors than the venture capital industry as a whole.[31]

Business relationships and expertise are just as critical to business formation and growth as is access to capital.[32] Business relationships contribute to new

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[25] See, e.g., Richard W. Lang, *The Conference on Business Access to Capital and Credit: An Overview,* ** What's this? >> Business Access to Capital and Credit, *supra*.

[26] See Ronald J. Gilson, *Engineering a Venture Capital Market: Lessons from the American Experience,* 55 Stanford L. Rev. 1067 (2003).

[27] See generally, National Venture Capital Association at http://www.nvca.org.

[28] Timothy Bates & William Bradford, Minorities & Venture Capital: A New Wave in American Business (Kauffman Foundation, 2003).

[29] Ibid.

[30] Ibid.

[31] Ibid.

[32] See U.S. Department of the Treasury, "BusinessLINC: Business-to-Business Relationships that Increase the Economic Competitiveness of Firms" (1998).

economic opportunities as well as to a firm's reputation in the market. Business relationships provide opportunities for sharing business expertise, and for managerial development.[33] Minority entrepreneurs need connections to business networks that provide these benefits, but many minority entrepreneurs often find themselves outside such networks.

3 Policies to Expand Minority Entrepreneurship

These barriers to minority entrepreneurship may be amenable to change. Despite remaining problems, the growth of minority entrepreneurship and the expansion of access to capital during the 1990s suggest that positive market developments for minority entrepreneurs can be catalyzed further by both policy and concerted action by the private sector. This comment outlines five key steps that Congress, the banking regulators, and business leaders can take to open up opportunities for minority entrepreneurs.

3.1 New Markets Tax Credit

In the bipartisan Community Renewal Tax Relief Act of 2000,[34] Congress enacted a New Markets Tax Credit (NMTC) to spur new equity investments for business growth. Private investment funds compete for allocations from the Treasury Department, authorizing the funds to issue as much as $15 billion of equity on which investors may claim tax credits worth 39 percent of their investment. The NMTC leaves investment decisions in the hands of market participants. Investment funds that receive allocations raise private funds, mostly from passive institutional investors, just as in the venture capital industry generally, and then invest or lend to businesses in low- and moderate-income communities. Unlike many federal programs, these communities are drawn broadly so that large areas of the United States are eligible. Under a recent change, these investment funds also may invest in minority-owned or other firms that otherwise lack adequate access to loans or equity investments, regardless of location.[35]

The NMTC draws on the strength of America's venture capital and commercial real estate industries. Equity raised using the NMTC can spur growth of minority businesses and should be expanded. Congress extend the NMTC for another five years,[36] and should provide greater flexibility to investment funds

[33] Ibid.

[34] Pub. L. No. 106-554 (December 21, 2000).

[35] American Jobs Creation Act of 2004, Pub. L. No. 108-357, §221 (October 22, 2004).

[36] See S. 1800 and H.R. 3957 (introduced September 29, 2005).

to offer deeper credit allocations to investors in order to broaden the range of investment strategies these funds can profitably pursue.

3.2 Capital Access Programs

State-run capital access programs (CAPs) have a strong track record of expanding access to credit for small businesses.[37] Under these programs, operated by about 20 states, small businesses pay an insurance fee that goes into a loan loss reserve fund held at the originating bank; the insurance premium is matched by the state CAP. The bank makes its own underwriting, pricing, and insurance decisions. Since they were first launched in 1986, state CAPs have enabled more than $1.5 billion in small-business loans to be made at low cost and low risk, reaching significant numbers of minority entrepreneurs.[38] As one banker put it: "CAP borrowers typically are emerging businesses lacking the kind of track record they would normally need to establish eligibility for a conventional loan. Often they need working capital, but lack the necessary collateral, or the principals have insufficient personal assets. They are unlikely to be able to attract venture capital or private equity. But these businesses often are the backbone of their communities. Supporting them is the right thing to do, and a CAP loan is often the right way to meet their needs."[39]

Despite the success of CAPs in supporting small-business growth, many states are finding it difficult to maintain the programs in the face of severe state budget constraints. The federal government could bolster state-run CAPs by providing funding to states for initiating or increasing their programs, and reaching out to minority entrepreneurs. For example, if the federal government were to provide a 2 percent match into state-funded loan loss reserves, a $1 billion federal government investment over the next five years would leverage $50 billion in bank loans to small businesses.

3.3 Data Collection for the Community Reinvestment Act

Under the Community Reinvestment Act (CRA), banks and thrifts are examined and rated on their performance in providing loans, investments, and

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[37] See U.S. Department of the Treasury, "Capital Access Programs: A Summary of Nationwide Performance" (2001).

[38] Ibid. at 16.

[39] Thomas Doherty, *Make No Little Plans: How a Midwest Bank Uses a Capital Access Program to Help Small Businesses,* Office of the Comptroller of the Currency, Community Developments, Winter 2003.

services in their entire community.[40] Bank regulators also take account of CRA performance during merger reviews. It is likely that CRA has helped to increase lending to small businesses.[41] One study found, for example, that CRA increases the number of small businesses that can access credit by 4 percent to 6 percent.[42] Moreover, the study determined that the increased lending to small businesses induced by CRA provided benefits to the real economy in the form of increased payrolls and reduced bankruptcies without any evidence that such lending either crowded out other financing available to small businesses or adversely affected bank profitability or loan performance.[43]

Despite these and other gains from CRA, recent regulatory changes could undermine progress.[44] Under a banking agency joint rule, banks and thrifts with less than $1 billion in assets are considered "small" for purposes of CRA and exempt from small-business lending disclosure requirements and full-scope CRA review. Even banks and thrifts that are part of mammoth holding companies would be considered small if the bank or thrift itself held less than $1 billion in assets. Under current law, banks and thrifts are considered small if they have assets of only $250 million or less, and are independent, or are part of a holding company with less than $1 billion in bank and thrift assets. Dramatically increasing the asset threshold, and considering institutions small even if they are affiliated with large holding companies are misguided policies.

Small businesses rely disproportionately on smaller banks for retail services and lending in their local communities. Thus, it makes little sense to stop collecting small-business data from these smaller banks, or evaluating institutions on their small-business lending and retail services. Even more problematic is the plan to ignore the asset size of the holding company in defining a bank as "small." Holding companies provide scale economies and expertise to their subsidiaries in complying with bank regulations.

CRA small-business data collection should be enhanced by including information about loan applications that are denied, distinguishing better among the sizes and types of loans made (for example, small-business credit card accounts compared with capital equipment loans), and providing more precise information about the geographic location where loan proceeds are used. And the new community development test for intermediate-sized banks must take account explicitly of small business lending.

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[40] See 12 U.S.C. §2901–2908.

[41] See Michael S. Barr, "Credit Where it Counts: The Community Reinvestment Act and Its Critics," 80 *New York University Law Review* 513 (2005); Jonathan Zinman, "The Efficacy and Efficiency of Credit Market Interventions: Evidence from the Community Reinvestment Act" (Harvard Univ. Joint Ctr. For Housing Studies, Working Paper CRA02–2, 2002).

[42] See Zinman, *supra,* at 20.

[43] Ibid. at 3–4.

[44] See Michael S. Barr, *Credit Where It Counts: Maintaining a Strong Community Reinvestment Act,* Brookings Institution Metropolitan Program Research Brief, May 2005.

3.4 Fair Lending Disclosure

Under the Home Mortgage Disclosure Act, creditors are required to report on the race, ethnicity, gender, and income of home mortgage borrowers and loan applicants in order to advance the goal of equal opportunity in home mortgage lending. There is evidence that such disclosures have contributed to increased home ownership opportunities for minority households over the past decade.[45]

By contrast, Federal Reserve Board regulations under the Equal Credit Opportunity Act (ECOA) bar creditors from even voluntarily recording the race, ethnicity, and gender of small business and consumer borrowers and loan applicants. This rule is an unwarranted restriction on the ability of lenders to obtain the information they need to serve minority small-business borrowers.[46] Banks that want to design programs to serve minority entrepreneurs cannot track progress in their programs compared to other lending.

The inability to measure whether new marketing or products are reaching minority small businesses is a significant barrier to expanding minority access to business credit. Moreover, the lack of available data on small business and consumer lending undermines the ability of fair lending enforcement agencies to monitor and enforce ECOA. The Federal Reserve Board has the authority to alter their regulations to permit creditors to record such data, and twice has taken up the issue, but has declined to lift the prohibition.[47] The board should finalize the rule it proposed previously to permit creditors to keep track of such information as a means of expanding access to credit to minority entrepreneurs.[48]

3.5 Business-to-Business Partnerships

Business relationships between minority-owned small- and medium-sized businesses and larger firms can be mutually beneficial. Minority-owned firms may be cut off from business opportunities because they lack connections to business networks. Greater levels of engagement between executives of larger firms and minority-owned businesses can increase opportunities for minority firms to

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[45] See Barr, *Credit Where it Counts, supra*.

[46] See Letter from U.S. Department of the Treasury, U.S. Department of Justice, U.S. Department of Housing and Urban Development, Office of the Comptroller of the Currency, Office of Thrift Supervision, U.S. Small Business Administration, Federal Trade Commission, and Office of Federal Housing Enterprise Oversight, to Board of Governors of the Federal Reserve System, November 15,1999.

[47] See Board of Governors of the Federal Reserve System, Final rule, Equal Credit Opportunity, 68 Fed. Reg. 13143, March 18, 2003.

[48] Board of Governors of the Federal Reserve System, Proposed rule, Equal Credit Opportunity, 64 Fed. Reg. 44582, August 16, 1999.

form partnerships and generate new business, and larger corporations can benefit from a diversified supplier base, flexible production, and innovations by smaller firms. Access to business opportunities and relationships can enhance business credibility and growth potential, thereby increasing minority firms' access to both debt and equity for expansion.

The National Urban League, the Business Roundtable, and the Kauffman Foundation launched a partnership recently to open one-stop business advice centers in a number of communities around the country. This effort builds on BusinessLINC, an initiative led by the Business Roundtable and launched by President Clinton and then Treasury Secretary Robert E. Rubin. It links Fortune 500 and other large companies with smaller firms.[49] These linkages provide smaller firms with business opportunities, advice, and technical assistance. These are not government programs, but private-sector-led, market-tested initiatives to bring the experience of larger corporations to minority-owned firms, which are often cut off from business networks. BusinessLINC has established more than 20 chapters. Cleveland's has launched a $25 million venture fund with support from local corporate leaders, including Sandy Cutler, the chief executive of Eaton Corporation. The most important factor in these programs is the engagement of the chief executives of major companies. As Ramani Ayer, chairman and CEO of the Hartford Financial Services Group, has said, "This program is the right thing to do from a corporate responsibility standpoint. And frankly, it is the smart thing to do from a competitive standpoint. Shareholders clearly benefit from our ability to partner with the brightest, most creative talent available, which we might just miss without this type of outreach program."

4 Conclusion

Minority entrepreneurs are playing an increasingly important role in the United States, but may face important barriers. Access to capital, business expertise, and market opportunities are essential for entrepreneurs to succeed. Congress should expand the New Markets Tax Credit and fund state-run Capital Access Programs. Banking regulators should maintain a strong Community Reinvestment Act and enhance fair lending disclosure. Business leaders should look to minority entrepreneurs for new partnerships that enhance shareholder value and strengthen community. Targeted policy initiatives and the focused attention of America's business leaders can contribute to the growth of minority entrepreneurship in the years ahead.

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[49] See Michael S. Barr, "Access to Financial Services in the 21st Century: Five Opportunities for the Bush Administration and the 107th Congress," 16 *Notre Dame Journal of Law, Ethics & Public Policy* 447, 455 (2002); BusinessLINC Report, *supra*.

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